BERBERAPA PROBLEMA STUDI SOSIAL

Where Did Social Studies Go Wrong?

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Foreword, by Chester E. Finn, Jr.

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FOREWORD

Chester E. Finn, Jr.

Untuk waktu yang sangat lama, kemunduran tentang studi sosial di U.S. sekolah-sekolah menyerupai kemunduran Kekaisaran Romawi: diperpanjang, tak dapat ditawar-tawar, dan menyedihkan, tetapi bukan sesuatu yang orang bisa banyak lakukan tentangnya.

Bukti yang ada mengumpulkan bahwa Anak Amerika sedang muncul dari K-12 pendidikan dan kemudian, aduh menakutkan, dari perguruan tinggi dengan pemahaman atau pengetahuan yang sedikit tentang sejarah negeri mereka, geografi planet mereka, fungsi pemerintah mereka, atau ekonomi pentingnya tentang pekerjaan.

Bukti yang terkumpulkan bahwa, dalam bidang studi sosial iu sendiri, orang yang fanatik telah mengambil alih rumah sakit gila itu. Para pemimpinnya adalah orang-orang yang mempunyai banyak dari derajat tingkat agung dan sebutan yang mengesankan tetapi yang tidak menguasai apapun rasa hormat untuk peradaban Barat yang telah ditundukkan untuk pandangan Evolusi America sebagai masalah untuk ras manusia bukannya harapan umat manusia terbaik terakhir; yang pooh-poohed tulang;rangka sejarah berdasar fakta dan menurut urutan waktu sebagai bagaimanapun juga privileging

pilihan dan pria putih di atas terhimpit;malang dan yang lemah yang melihat studi geografi dalam kaitan dengan merampas hutan hujan, bukannya menempatkan London atau Sungan Mississippi pada suatu peta; yang menafsirkan " pelajaran kewarga negaraan" seperti terdiri atas sebagian besar aktivism politis dan layanan belajar" bukannya pemahaman bagaimana hukum dibuat dan kenapa penting bagi tinggal di suatu masyarakat yang diatur di depan hukum; yang menakutkan studi ekonomi yang serius itu mungkin memberi keuntungan secara tak wajar ke kapitalisme (sama halnya perhatian berlebihan ke demokrasi mungkin memimpin anak muda mudah dipengaruhi untuk menilainya suatu cara atas mengorganisir masyarakat); dan siapa yang, setidak-tidaknya, membenarkan anak-anak itu lebih kaya belajar sekitar lingkungan mereka dan "penolong masyarakat" dibanding perbuatan mengagumkan dengan pahlawan dan penjahat di dalam masa yang jauh dan tempat lamunan tempat.

Masalah studi sosial menampakkan sia-sia. Dan demikian aku dan banyak orang lain menyimpulkan bahwa pembaharu pendidikan sungguh serius baik menasihatkan untuk menaruhnya pada suatu rakit dan mendorongnya ke dalam air dalam di suatu tempat dalam hutan hujan yang dirampas atau terdampar pada suatu gletser peleburan yang disebabkan oleh gas asam-arang yang berlebihan berasal dari masyarakat makmur yang ditaruh di suatu tempat jauh sekali dan berharap ia akan lenyap.

MENEMPATKAN STUDI SOSIAL KE SAMPING

Seperti baru-baru ini ketika September 10, 2001, kita dengan Yasan Thomas B. Fordham sedang memuntahkan tangan kita dalam frustratasi dan tiik balik ke tantangan lain. Hal ini, di samping usaha yang lebih awal mahabesar oleh kita dan yang terdahulu kita Jaringan Keunggulan Bidang pendidikan untuk mendiagnosis dan menyembuhkan permasalahan studi sosial. Kita telah membantu dengan pekerjaan the *Bradley Commission* atas Sejarah di Sekolah dan peluncuran *National Council* atas Pendidikan Sejarah. Kita telah bekerja dengan the *National Geographic Society* untuk kembali start ke geografi sebagai mata pelajaran di sekolah yang sah. Kita telah melayani di atas kapal dan panitia di luar hitungan. Kita telah mengevaluasi standard status studi sosial. Kembali 1987, Diane Ravitch dan aku telah menulis Apa yang kita 17-tahun lamanya mengetahui?, yang membantu pembeberan luas tentang ketidak-tahuan historis antar sekolah menengah yunior dan senior. Kita telah menerbitkan buku atas kemunduran kemanusiaan di U.S. sekolah-sekolah dan harus berbuat apa tentang mereka. Kita bekerjasama dengan Freedom House dan American Federation of Teachers di tahun 1987 untuk menulis dan peredaran Pendidikan untuk Demokrasi: Suatu Pernyataan Prinsip-prinsip, Petunjuk untuk Memperkuat Pengajaran Nilai-Nilai Demokratis. Kita telah mendukung Penerbitan Deparlu AS itu] tentang Apakah Demokrasi Itu? (lihat http://usinfo.state.gov/products/pubs/whatsdem/). Dan terus menerus.

Kita telah mencoba. Sebagian terbesar, bagaimanapun, kita telah gagal. Kekuatan yang disusun di sebelah lain sangat nyata, terlalu kukuh universitas mereka menempatkan dan perintah mereka memposisikan status departemen pendidikan. Kerajaan yang nampak diperuntukkan untuk merosot sampai jatuh. Dan dengan demikian, sebagian terbesar, kita meneruskan perjalanan ke lain isu, ke pendidikan mngubah pertempuran di mana

kita memandang sepintas suatu kesempatan lebih baik bagaimana membuat suatu perbedaan. Yang bukan paling sedikit tentang ini adalah suatu usaha bersegi banyak untuk membawa lebih banayak aneka pilihan ke dalam pendidikan, dan bukan paling sedikit pertimbangan untuk itu adalah hukuman kita yang lebih membuka dan penyerahan berbeda sistem akan memungkinkan pendidik dan orang tua yang memperhatikan sejarah, geografi, dan pelajaran kewarga negaraan untuk menemukan jalan memberikannya kepada anak-anak dan para murid mereka. Masalah yang lebih besar studi sosial, bagaimanapun, nampak sia-sia.

Kemudian datang serangan teroris 11 September (dan skala terkecil rekan imbangan dari Yaman ke Nairobi ke Riyadh), segera yang diikuti oleh tanggapan "para pemimpin" tentang studi sosial. Secara alami, pertanyaan yang telah dengan seketika muncul, dari apa untuk mengajar anak-anak tentang peristiwa menakutkan ini. Dan jawaban yang hina, dari triwulan, bidang studi sosial khususnya dan penetapan pendidikan secara umum, adalah mengajarnya untuk merasakan baik sekitar diri mereka, untuk memaafkan pelanggar mereka, bukan untuk menyalahkan seseorang (agar tidak didorong kearah merasa kebencian atau merugikan), untuk menghargai keaneka ragaman, dan untuk mempertimbangkan kemungkinan Amerika adalah dirinya sendiri yang bertanggung jawab untuk kejahatan besar ini mengunjungi di atasnya.

Para guru tidaklah dihimbau untuk menjelaskan kepada tuntutan/beban yang muda mereka mengapa beberapa orang-orang tidak baik membenci kebebasan dan mencari untuk menghapuskan demokrasi; mengapa Amerika, karena apa yang mewakili, menjijikkan mereka yang akan memperbudak pikiran, menaklukkan wanita-wanita, dan membunuh mereka yang berbeda dengan diri mereka; mengapa Amerika Serikat adalah berharga pemeliharaan dan pertahanan; dan bagaimana nenek moyang kita menjawab serangan sebelumnya atas negeri mereka khususnya dan kebebasan secara umum. Bukan mengajar seperti itu berbagai hal, adalah pesan itu. Mereka adalah jingoistik, premodern, doktriner, salah. Dengan demikian dicirikan mandarin tentang studi sosial.

Ini adalah, karena kita dan banyak lain Orang Amerika, yang keterlaluan, karena dtandai/signaled bahwa studi sosial bukanlah beberapa keamanan yang menjadi hancur rongsokan suatu kurikuler kerajaan, tetapi sebagai gantinya menjadi dengan niat terbaiknya untuk menjadi yakin suatu kekuatan di dalam sekolah kita yang memiliki berharga yang akan, tidak dikendalikan, mencegah generasi muda dari pelajaran sejarah bangsa kita dan dengan begitu mengikis masa depan America's. Bisa kita lakukan segalanya tentang itu? Aku tidak membenarkan bahwa mereka akan berhasil. Tetapi aku tidak bisa singgah bercermin itu jika kita tidak mencoba.

TUJUAN BAGUS, KEKUATAN HASIL-HASILNYA

Suatu penyokong peristiwa terbaru membuat usaha namun lebih uurgen, gagasan ini satu samasekali yang diharapkan baik dan pengakuan lain patut dipuji. The No Child Left Behind (NCLB) tindakan 2001 transaksi/giliran studi sosial sebagian besar dengan mengabaikan hal itu untuk pendidikan seluruh negara sistem akuntabilitas yang baru. Hal ini tidaklah dimaksud, mengetahui menyenangkan/surga, sebagai tindakan bermusuhan. Pengarang NCLB adalah

patriot semua dan administrasi Bush telah mengerjakan usaha dapat dipuji untuk menyalakan kembali pendidikan kewarganegaraan dan memperdalam pemahaman historis. Melainkan, Pengarang NCLB's nampak untuk mempunyai kesimpulan bahwa negeri akan maju untuk start dengan cara mempermainkan pandai membaca dan math (dan secepatnya ilmu pengetahuan), dengan yang berharga (dan, membandingkan studi sosial, lebih sedikit kontroversi) pelajaran-pelajaran sebelah kiri untuk kemudian. Sementara itu, pergi memberi alasan di Washington, pelajaran yang lain bisa dengan aman dipercayakan ke negara, masyarakat, sekolah, dan pendidik. NCLB tidak sangat ingin mengambil alih keseluruhan kurikulum. Barangkali pengarangnya adalah juga menghalangi oleh perdebatan alami studi sosial dalam fakta-faktanya, kesukarannya bahwa beberapa negara pasti mempunyai persetujuan atas standard akademis untuk bidang suka mengomel, dan serangan balasan dari hiruk-pikiuk suatu dekade yang lalu atas standard sejarah nasional.

Dalam suatu kasus/setidaknya, penghilangan studi soaial dan lebih penting lagi, tentang sejarah, geografi, dan civic dari NCLB adalah sedang dimulai untuk mempunyai efek yang mengganggu. Adalah menyebabkan negara beberapa dan sekolah untuk turun bermain pelajaran-pelajaran dalam kebaiakan di mana mereka akan dipegang di depan umum dibandingkan dengan dan dapat dipertanggungjawabkan satu sama lain. Sebagai;Ketika] kaum tua kebenaran mutlak pendidik ditaruh itu, apa yang diperoleh diuji adalah apa yang didapatkan diajar. Telah kita dengar laporan dari bidang sejarah sedang menjadi dilalaikan dalam kaitan dengan tekanan untuk mendapatkan semua orang pandai mathematik dan membaca. Kesulitan hal itu adanya untuk membayangkan sejarah yang menjadi lebih sedikit perhatian dibanding sebelumnya di U.S. sekolah, ini adalah sungguh pasti tak satupun hal yang baik.

Lebih dari itu, sebagai studi sosial karam di bawah mata para gubernur yang waspada, pembuat undang-undang, para pemimpin bisnis, dan yang lain cenderung untuk mengambil suatu pandangan akal-sehat tentangnya, hal itu menjadi pernah digenggam dengan kuat oleh para pemimpin bidangnya, yaitu oleh para profesor sekolah, pengarang buku teks, negara dan para supervisior studi sosial lokal, dan macam mereka. Dengan kata lain, mereka yang sudah membawa bidang ini ke masa kini kekejatuhan /kehancuran adalah sumber utama gagasan yang tidak baik yang mendominasi hal itu yang diperuntukkan untuk memperoleh bahkan kendali lebih besar tentangnya, hanya oleh karena ruang hampa menciptakan ketika suatu status meletakkan fokus para pemimpin yang seperti laser ketika] tantangan secara langsung yang diajukan oleh NCLB: pembacaan, mathematik, dan ilmu pengetahuan, untuk memastikan, tetapi juga "para guru yang sangat berkwalitas," yang disamakan menguji sistem, dan lain sulit dan ambisius melakukannya.

Untuk mengikhtisarkan: di seluruh waktu kita kebanyakan kebutuhan warganegara kita dan warganegara masa depan untuk belajar apa maknanya;menjadi bansa Amerika dan mengapa Amerika adalah berharga untuk bertahanan, untuk menjadi lebih menyadari akan dunia mereka tinggal dan konflik yang mengayun-ayun itu, untuk menyerap perbedaan antara demokrasi dan totalitarianisme dan antara masyarakat bebas dan masyarakat doktriner, bagian dari kurikulum sekolah yang di atasnya kita harus mempercayakan untuk bantuan telah berubah menjadi suatu rintangan. Adalah bukan memperoleh pekerjaan yang dilaksanakan. Adalah berpendapat salah. Hal itu bahkan menjadi mempersulit persoalan. Namun kita sedang mempercayakannya pernah lebih secara pasti kepada tangan dari mereka yang membawanya pada status menyesal ini . Kunci ke Roma diserahkan kepada Goths dan Huns. Itu adalah merepotkan jujur. Dan [selagi/sedang] suatu yayasan/pondasi pribadi kecil seperti yang ini tidak bisa berharap untuk membalikkan . seperti (itu) kekuatan perkasa, kita dapat sedikitnya meminjam[kan bantuan ke mereka yang akan mengambil pada tantangan itu

FIGHTING BACK (MEMBERI PERLAWANAN)

Demikian, kita buat suatu dana kecil untuk sebuah kelompok kecil tapi berani studi sosial "yang bertentangan" seperti mereka memasukkan diri mereka, yang mencari untuk menjelaskan apa yang salah dengan bidang mereka dan bidang untuk untuk disarankan bagaimana itu bisa ditata di atas suatu jalan yang berbeda. Jiwa-jiwa berani ini, yang dipimpin oleh Lucien Ellington dari Universitas Tennessee di Chattanooga dan James Leming dari *Saginaw Valley University*, dirindukan untuk menyelamatkan studi sosial. Dengan demikian kita berkata pasti, kita telah memeberikan suatu bantuan sedikit. Mereka akan menjadi bersiul ke dalam suatu badai? Tentu saja. Perlukah mereka meskipun begitu didukung untuk mencoba? Tentu pasti. Mereka tidaklah sendiri, betapapun. Setelah merindukan pengalaman dalam bidang itu, mereka diyakinkan para guru studi sosial seperti kekhawatiran mereka tentang status bidang dan kelaparan untuk dorongan dan arah tentang bagaimana cara mengubah itu. Bila ada pendidikan bagus dapat muncul dari yang membahayakan waktu ini, merupakan suatu pengenalan dinyalakan kembali oleh banyak Orang Amerika bahwa sekolah mempunyai sebuah peran yang penting untuk memainkan dalam persiapan tentang warganegara patriotik dan berpengetahuan banyak.

Tuan-Tuan Ellington dan Leming dan para rekan kerja mereka sudah melakukan suatu pekerjaan yang bagus menjelaskan di mana dan bagaimana serta mengapa studi sosial berlalu serba salah. Aku haruslah tidak mencoba untuk meringkas analisis mereka. Ijinkan aku, meskipun demikian, untuk mencatat bahwa volume ini adalah salah satu dari beberapa usaha memperbaharui dengan Thomas B. Fordham Foundation (dan yang bergabung *Thomas B. Fordham Institute*) untuk membuka jendela studi sosial dan membiarkan angin sejuk beberapa untuk sampai meletup. Usaha pertama kita, ketika "hari ultah" pada tanggal 9/11 berdekatan dengan bulan September 2002, adalah untuk menerbitkan (pada web saja) suatu koleksi tentang esei pendekberjudul 11 September: Apakah Anak-Anak Kita perlu Mengetahui? Kita sekarang memperbaharui, memperluas, dan menerbitkan kembali uraian itu, kedua-duanya pada web dan hard copy, seperti suatu volume singkat diberi judul Teroris, Despot, dan Demokrasi: Apakah Anak Kita Perlu Mengetahui?.

Dengan dukungan dari Lynde dan Bradley Foundation, Fordham Institute adalah juga di tengah-tengah dua studi yang penting. Satu adalah suatu analisa segar standar studi sosial untuk menentukan bagaimana mereka menangani sejarah U.S. Di sisi lain adalah suatu tinjauan ulang yang kritis ttg buku teks sekolah menengah secara luas digunakan di (dalam) Amerika dan sejarah dunia. Lebih jauh berikut ini. Kita tidak bisa menjadi percaya usaha bahwa usaha kecil kita akan mempunyai dampak yang diinginkan atas masalah yang mahabesar, akan tetapi, secara kebetulan, kita tidaklah sendiri. Sejumlah organisasi lain dari National Endowment untuk Humanitas the Bill of Rights Institute di the Albert Shanker Institute menaikan/memulai atas melengkapi pertanyaan-pertanyaan untuk membaharui lagi kesedihan sudut kelas bangsa Amerika ini.

Apakah ini rombongan pembaharu mencari (meskipun mereka menekankan dan susunan kata boleh berbeda) adalah untuk membawa dasar itu kembali ke studi sosial. Khususnya, ketika kita mencatat 16 tahun yang lalu dalam Pendidikan untuk Demokrasi, tiga ajaran penting harus mendasari manapun kurikulum studi sosial pantas untuk anak bangsa Amerika:

1. Demokrasi adalah format pemerintah manusia pernah yang paling pantas.
2. Kita tidak bisa mengambil survival-nya atau *spread-or-* nya kesempurnaan dalam praktik— diterima secara benar.
3. Demokrasi bertahan tergantung pada pewarisan kepada masing-masing generasi baru visi politik persamaan hak dan kebebasan yang mempersatukan kita sebagai Orang Amerika dan suatu kesetiaan kpd institusi politis Pendiri kita yang dipasang untuk memenuhi visi itu.

Untuk melindungi bangsa kita dan warisan politisnya, pendidikan ahli menulis Jefferson untuk semua warganegara untuk memungkinkan semua orang untuk menilai untuk sendirinya apa yang akan mengamankan atau membahayakan kebebasan nya". Ini adalah sebagai benar hari ini ketika pernah sebelumnya. Di dalam suatu dunia yang tumbuh yg lebih berbahaya, sesungguhnya, hal itu menjadi benar dan yang lebih mendesak dari yang pernah ada. Di dalam iklim politis masa kini, kita wajib mengevaluasi ulang apa yang ancaman kita adalah, yang musuh Jerman PD I kita adalah, dan bagaimana kita perlu bekerja keras untuk melindungi jalan hidup kita. Adalah hal penting bahwa kita memperlengkapi para putra dan para putri kita dengan perkakas mereka akan perlu memahami masa lalu dan bersiap-siap menghadapi yang masa depan. Titik penting bukanlah untuk cuci otak anak-anak. Hal itu adalah untuk memberi orang dewasa besok suatu konteks bidang pendidikan sesuai di dalam mana mereka dapat memahami dunia di sekitar mereka dan membentuk pendapat mereka sendiri tentang itu. Untuk itu mutakhir kita mempunyai dedikasi usaha ini.

Washington, DC
August 2003

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Introduction, Passion without Progress

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Passion without Progress/Keinginan Besar Tanpa Kemajuan:

What's wrong with social studies education?

"That evil is half-cured whose cause we have found."
-St. Francis de Sales

Satu-Satunya penafsiran yang mungkin status pendidikan studi social titk balik abad 21 adalah bahwa bidang ini adalah hampir mati. Bukti untuk penilaian yang suram ini ada di mana-mana. Tidak hanya di tingkatan yang pemahaman publik tentang sejarah kita dan tradisi budaya secara mengkawatirkan rendah, hanya kesediaan orang-orang muda untuk mengambil bagian hidup politis umum kita adalah juga merosot. Ranking para siswa untuk pelajaran studi social sebagai salah satu dari paling sedikit mereka menyukai pokok dan buku teks studi social sebagian besar dangkal dan hambar. Sekolah pendidikan sering nampak lebih tertarik akan memproduksi para guru studi sosial dengan ideologi yang benar dibanding memproduksi instruktur berkompeten. *The federal government recently refused to fund programs to improve social studies education and, nationally, efforts are increasing to replace social studies in the school curriculum with history and the social sciences.* Pemerintah pusat baru-baru ini menolak untuk membiayai program untuk meningkatkan pendidikan studi sosial dan, secara nasional, usaha sedang terus meningkatkan guna menempatkan kembali studi sosial dalam kurikulum sekolah dengan sejarah dan ilmu-ilmu sosial.

1. American society is morally bankrupt; 2. an elite band of university professors, infused with a passion for social justice, knows best how to reform our flawed society; and, 3. classrooms in our nation's public schools are an essential battleground for this societal transformation.

Mengapa pendidikan studi sosial sedemikian sulit atau mendalam gangguannya? Para kontributor percaya pada satu alasan bahwa sistem kepercayaan (keyakinan) yang dominan studi social professoriate yang melatih para guru masa depan di perguruan tinggi dan departemen pendidikan. Ahli teori ini sudah menciptakan dan mempromosikan suatu filosofi pendidikan studi social yang telah terbukti kedua-duanya melalui pendidikan tidak efektip dan

bertentangan dengan nilai-nilai kebanyakan orang Amerika. Perspektif dari ahli teori studi social ini menyandarkan pada tiga pendapat: (1). Masyarakat Amerika secara moral pailit/bangkrut; 2. suatu kelompok elit para profesor universitas, menanamkan suatu keinginan besar untuk keadilan, mengetahui terbaik bagaimana cara mengubah masyarakat kita yang cacat/rusak; dan, 3. kelas di sekolah publik bangsa kita adalah suatu perjuangan penting untuk transformasi bermasyarakat ini. Keinginan para ahli teori untuk perubahan sosial dan kecenderungan mereka untuk menggunakan masyarakat sekolah sebagai alat untuk melakukannya, niscaya satu alasan mengapa studi sosial krisis. Hal itu telah mengakibatkan dalam suatu bidang yang menjauhkan diri dari isi substansi dan suatu fokus subordinat pada praktek efektif untuk pendidikan dan perbaikan politik.

Keinginan kebanyakan profesor pendidikan studi sosial untuk perubahan sosial yang radikal dan keyakinan mereka bahwa sekolah harus menjadi suatu instrumen untuk mencapai perubahan itu adalah, tentu saja, bukan satu-satunya alasan studi social ada dalam gangguan. Pertimbangan lain meliputi: suatu permusuhan pada pihak manapun pendidik pada semua tingkat kepada macam pengetahuan dasar Orang Amerika biasa berpikir penting untuk anak-anak mereka untuk belajar, pengabaian isi studi social dalam negara banyak orang oleh karena suatu fokus eksklusif atas literasi huruf dan kemampuan dalam matematika untuk menyiapkan para siswa untuk test distandardisasi, dan kebutuhan sertifikasi guru studi sosial yang lemah mengakibatkan sejarah dan para guru ilmu sosial yang mengetahui pokok sedikit. Bagaimanapun, dalam buku ini kita eksklusif memusatkan pada penggunaan untuk ungkapan E.D Hirsch's, "dunia yang dipikirkan" tentang para pemimpin studi social. Suatu pemikiran bahwa dunia di atas semuanya, ditanamkan dengan dugaan yang tradisional sejarah dan isi ilmu sosial dan pembelajaran metoda harus dihapus dalam rangka lebih baik menyiapkan orang-orang muda untuk mengubah masyarakat kita.

Social studies education scholarship over the past 20 years has focused on such politicized and often superficial topics as peace studies, the environment, gender equity issues, multiculturalism, and social and economic justice. Although there may be some value in the study of such issues, when they dominate the curriculum, students learn less academic content. Serious issues that classroom teachers should be considering, such as what constitutes appropriate history and social science content and effective subject-matter centered pedagogy, are either transformed by political correctness or largely neglected. (Para ahli pendidikan studi sosial pada masa 20 th lalu telah memusatkan pada seperti politisi dan sering juga topik-topik dangkal (superficial) seperti; kajian perdamaian, lingkungan, isu persamaan jender, multikulturalisme, dan keadilan sosial dan ekonomi. Walaupun mungkin ada beberapa nilai dalam studi itu seperti isu-isu ketika mereka mendominasi kurikulum, para siswa belajar lebih sedikit isi akademis. Isu-isu serius bahwa para guru kelas harus mempertimbangkan, seperti apa yang mendasari isi ilmu sosial dan sejarah sesuai dan efektif mata pelajaran memusatkan pada ilmu mendidik, adalah yang manapun ditransformasi kebenaran politis atau sebagian besar melalaikannya).
Buku ini adalah suatu analisis kritis sebagian besar dari ahli studi sosial sebagaian dihargai dan dengan keras-keras senjata ampuh preskripsi (nasihat) untuk sekolah-sekolah. *As a group, the essays that follow provide readers a cogent understanding of some of the important reasons why today's social studies is a muddled, ineffectual curricular and pedagogical wasteland rather than a coherent, content-based body of important knowledge that is effectively taught and thoroughly learned. (*Sebagai kelompok, uraian yang diikuti memberikan pembaca ke suatu pemahaman yang yakin sebagian dari pertimbangan yang penting mengapa studi sosial kini adalah sesuatu yang campur-aduk, kurikuler yang tidak efektif dan gurun (tanah kosong) pedagogis, bukannya sesutu yang koheren, content-based pada body pengetahuan penting yang secara efektif diajar dan secara menyeluruh dipelajari). Pada setiap uraian kita, pengarang juga menyarankan solusi beberapa untuk meningkatkan sejarah, kewarganegaraan, dan pendidikan ilmu sosial di sekolah.

Melalui kedekatan/ketelitian asosiasi dengan penetapan studi sosial dan tahun-tahun refleksi atas struktur kepercayaan dominan bidang ini, kita sudah menjadi diyakinkan studi sosial adalah di dalam krisis. *The first step in resolving that crisis is to understand its nature.* Tahap pertama masuk pemecahan bahwa krisis adalah untuk memahami sifat-alaminya. Buku ini dimaksudkan untuk membantu pemahaman itu. Penyokong pada buku ini bukanlah naïf orang luar atau pendatang baru dalam bidang ini. Dengan satu perkecualian, kita adalah semua Dewan Nasional untuk anggota studi sosial dan sudah memegang lokal, negara, dan posisi kepemimpinan nasional dalam organisasi.

- "Diane Ravitch adalah profesor riset pendidikan pada Universitas New York dan memegang Ketua Jabatan Brown dalam kebijakan pendidikan di Brookings Institution di Washington, DC, di mana dia juga mengedit Brookings Papers pada Kebijakan Pendidikan. Sebagai tambahan, dia adalah sesuatu yang membedakan mengunjungi pengikut di Hoover Institutioni, di mana dia bertindak sebagai suatu anggota Koret Task pada pendidikan K-12, dan suatu perwalian Thomas B. Fordham Foundation. Ravitch telah menulis secara ekstensif pada pendidikan dan pembaharuan sekolah, mencakup pekerjaan yang paling terbaru, The Language Police, yang telah menikmati sambutan kritis yang terbesar. Dalam volume ini, Dr. Ravitch menyajikan suatu sejarah studi sosial yang ringkas sebagai ciptaan abad 20 ini membelok dari studi sejarah ke dalam suatu pokok/ pelajaran tak berbentuk berdasar pada tingkah [yang] dari mereka yang mengajarnya dan mengabdikan sedikitnya sebanyak kepada perubahan masyarakat seperti pendidikan untuk anak-anak.

- "J. Martin Rochester adalah seorang yang membedakan mengajar, ia profesor di Universitas Missouri-St. Louis dan pengarang suatu buku terbaru pada pembaharuan bidang pendidikan yang telah menarik perhatian nasional. Profesor Rochester dengan kritis meneliti pendidikan civic dan mengidentifikasi kemungkinan penyebab yang sangat mengejutkan tingkat buta huruf politis yang sekarang ini ada di Amerika Serikat itu. Rochester menguji hubungan yang langsung antara injunction (tidak dipersimpangan jalan) progresif untuk "mengajar untuk warganegara aktip" dan menyajikan negara pendidikan kewarganegaraan saat ini di sekolah U.S. Ia menunjukkan bagaimana pengarang metode buku teks studi sosial secara sistematis mencemarkan nama baik keperluan para siswa untuk benar-benar memperoleh substansi pengetahuan pemerintah dan politik.
- Jonathan Burack, seorang guru sejarah sekolah menengah sejarah, mempunyai untuk pengalaman 20 tahun memproduksi materi kurikulum sejarah sekolah menengah. Catatan Burack bagaimana suatu ideologi pendidikan global antara para penulis buku teks dan kurikulum jaman ini sedang merusak sejarah dunia yang berkwalitas di dalam sekolah bangsa kita. Ia mempertunjukkan hal mudah merembes/menyebar epistemologi kultural postmodern relativist di sekolah bangsa kita dan membantah permusuhan itu ke kultur Barat dan nilai-nilainya bersikap suatu ancaman kepada pengembangan penghargaan generasi yang berikutnya tentang Exceptionalism Amerika. Para siswa hari ini belajar sedikit studi sosial di kelas tentang peranan budaya Barat yang telah berkontribusi terhadap dunia kontemporer ini.
- "Universitas Tennessee pada Chattanooga Program Asia co-Director (pembatu direktur) dan Profesor pendidikan Lucien Ellington adalah pendiri editor jurnal, *Education About Asia* (Pendidikan Tentang Asia), dan mempunyai penulis (authored) tiga buku atas Jepang. Jana Eaton mengajar komparatip politik pada *Unionville* (Pa.) sekolah menengah dan telah mememenangkan banyak penghargaan pengajaran yang

mencakup pemilihan seperti sebuah *USA Today All-American Teacher*. Dokumen Ellington dan Eaton bagaimana separatis radikal mendominasi multicultural pendidikan dan dugaan kemajuan itu bahwa jalan untuk mengajar sekitar kultur lain adalah dengan menekankan aspek negatifnya tentang sejarah dan masyarakat Amerika. Mereka menjelaskan domiansi/kekuasaan post-modernism dan relativism antar pendidik studi sosial universitas yang mengkhususkan pendidikan multicultural. Ellington dan Eaton menetapkan bahwa gagasan yang dipromosikan oleh ahli teori multiculturalberlandaskan penghalang ke para siswa belajar isi akurat tentang kultur lain dan memperlemah kohesi sosial bangsa Amerika."

- "Pusat Universitas Wisconsin-Milwaukee untuk Pendidikan Ekonomi, Direktur Mark Schug telah mengajar untuk lebih 30 tahun di pertengahan, sekolah menengah, dan tingkatan universitas. Ia adalah juga pengarang pada 180 artikel dan membukukan pada ekonomi dan pendidikan studi sosial. Profesor Schug meninjau ulang badan yang mengesankan mendukung riset untuk pembelajaran teacher-centered (lawan pendidikan student-centered) dan, melalui suatu analisis buku teks metode studi sosial terkemuka, menunjukkan pencemaran bidang ini atau inattention (tidak atensi) pada metoda ini . Ia juga menghubungkan prejudis progresif melawan terhadap pembelajaran *teacher-pimpinan* untuk hasil yang tak terukur yang diperoleh oleh banyak perguruan tinggi pendidikan dalam pelatihan jurusan mereka untuk mengajar secara efektif.

- Bruce Frazee adalah seorang profesor pendidikan pada Universitas Trinity, seorang Koordinator Pengetahuan Inti nasional, dan seorang pengarang kedua-duanya adalah suatu teks perguruan tinggi dan suatu seri studi sosial sekolah dasar. Samuel Ayers, yang dipersatukan Lubbock Christian University Daerah Sekolah Independen, adalah Texas 1999-2000 Pengurus Dasar Tahun itu. Frazee dan Ayers menyelidiki implikasi kurikulum "berkembangnya Liingkungan" dan konstructivisme pada pendidikan studi sosial. Mereka mempertunjukkan bagaimana kedua-duanya kurikulum ilmu kemasyarakatan bangsa dasar paling populer dan sekarang yang terpanas mengajar mode dalam pendidikan dasar kekurangan manapun memaksa dasar riset. Walaupun kedua-duanya mengembangkan horizon (ufuk) dan constructivism berisi bahasa menggiurkan dan image idealistik, ketika mereka diterapkan hasil itu pada umumnya kehilangan nilai isi dan anak-anak terlibat dalam aktivitas sepele.

- "James Leming pegangan Carl A. Gerstacker mengepalai pendidikan pada Saginaw Valley State University. Ia adalah seorang anggota pembentuk direktur Dewan Nasional untuk studi social dan presiden yang lampau Konsorsium Pendidikan Ilmu-ilmu Sosial. Leming menyelidiki hubungan antara dua penghargaan ideal ilmu dalam tinjauan studi social; perubahan social dan tatanan berpikir tinggi. Ia menunjukkan bagaimana impul untuk menggunakan kelas itu sebagai suatu agen perubahan sosial hanya dapat dikejar jika meliputi antipati ke arah tradisi dan, terutama, sejarah tradisional. Melalui suatu pengujian relevan riset kelas, Leming mempertunjukkan ketiadaan suatu surat perintah empiris untuk usaha untuk mengajar anak-anak sekolah jenis "tatanan berpikir lebih tinggi" yang diperlukan untuk analisis kebijakan. Ongkos penekanan ini adalah sering pengabaian tentang mutu isi yang tinggi."

Hal itu adalah kritis bahwa semua orang Amerika setuju terhadap argumen Thomas Jefferson's bahwa kelangsungan hidup demokrasi tergantung, pada sebagian, atas keberadaan suatu massa kewargaan yang kritis yang memahami sejarah dan membaca isu-isu publik buku ini. Pekerjaan berisi bukti banyak/luas ini bahwa kepercayaan dari banyak profesor pendidikan studi sosial bekerja melawan terhadap kewarganegaraan publik dan melek huruf historis. Pengarang buku ini dipersatukan dalam pertentaangan dengan keadaan status quo studi social. Secara nasional, ada sedang ada pertumbuhan bukti akademis, perhatian warganegara, dan para pemimpin politis dari kedua belah pihak berbagi perhatian bahwa sejarah dan pendidikan ilmu sosial dalam sekolah bangsa diperlukan pembaharuan. Dalam tahun ini National Endowment untuk ceramah/kuliah buku tahunan Kemanuasiaan Jefferson, Pulitzer Prize-Winning sejarawan mengenai presiden David McCullough yang mengutuk cara yang ditempuh oleh macam ketepatan politis mengarahkan volume ini telah melepaskan Sejarah Amerika yang masa kini para siswa belajar tentang segala pesan seperti mengapa kita perlu menghargai yang ideal dan pengorbanan sudah buat negeri ini besar. *He called the emerging national historical amnesia, rooted squarely in vapid politically correct accounts of our history, a threat to liberty* (Ia menyebutnya memunculkan manesia historis nasional, berakar dengan tepat/secara jujur dalam kehambaran yang secara politis mengoreksi laporan tentang sejarah kita, suatu ancaman untuk kebebasan:")

" Sesuatu yang sedang berangsur-angsur akan habis pada memori nasional kita.... Karena/untuk sesuatu yang cuma-cuma, orang-orang pemerintahan sendiri, sesuatu yang lebih dari suatu keakraban samar-samar dengan sejarah adalah penting jika kita adalah untuk berpegang pada dan mendukung kebebasan kita." Bukti substansiil yan disajikan dalam volume ini bahwa penganut gerakan pembaharuan progresif umumnya studi sosial sebagian besar professoriate hanya satu lagi perkataan berulang-ulang perasaan yang menciptakan studi sosial pada awal abad yang 19th. Hal itu adalah harapan pengarang bahwa suatu pengujian kritis dari apa yang kita pertimbangkan sebagai yang sebagian besar diragukan dan melalui pendidikan dysfunctional dugaan/ide-ide ahli teori akan lebih lanjut merangsang suatu debat nasional pada kebutuhan akan isi berkwalitas di area sekolah itu curricula yang kita sebut studi soaial. Para siswa kita dan bangsa kita tidak layak apapun lebih sedikit.

James S. Leming and Lucien Ellington

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Chapter 1, A Bief History of Social Studies

PDF version

Sebuah Sejarah Singkat Ttg Studi Sosial

Diane Ravitch

Ketika seseorang membaca esei ini, pertanyaan definisi bergema. Apa yang dimaksud studi sosial? Atau, apa studi sosial itu? Apakah itu sejarah dengan perhatian ke peristiwa sekarang? Apakah hal itu suatu penggabungan sejarah, geografi, civics, ekonomi, sosiologi, dan semua ilmu-ilmu sosial lain? Apakah itu suatu sesuatu yang tidak sebanding tentang pelajaran-pelajaran seperti pendidikan karier, studi kesukuan, studi jenis kelamin, pendidikan konsumen, studi lingkungan, pendidikan damai, pendidikan karakter, dan pendidikan obat-obatan? Apakah itu suatu bidang yang menggambarkan tujuannya dalam kaitan dengan menanami ketrampilan seperti pengambilan keputusan, hubungan hubungan antar pribadi, dan pemikiran kritis, seperti halnya pengembangan " kritis" sikap seperti kesadaran global, kesadaran lingkungan-mental, multikulturalisme, dan hak persamaan jender? Dari waktu ke waktu, semua telah menjadi di atas, dan para pemimpin bidang sudah sering berjuang dengan tujuan dan mereka dan definisi sendiri. Sedangkan para guru studi sosial beberapa melanjutkan untuk mengajar sejarah tradisional, para pemimpin bidang cenderung untuk melihatnya sebagai payung lebar yang menutup bidang pelajaran, disiplin, dan ketrampilan-keterampilan.

Di atas masa abad lalu, pengajaran sejarah dengan kronologis secara mantap dipindahkan oleh studi sosial. Dan untuk kebanyakan dari abad, penetapan studi sosal dengan bernafsu mencari untuk mengurangi status sejarah menurut urutan waktu, dalam kepercayaan bahwa itu memiliki bidang keberagaman bagaimanapun juga sejarah model kuno lebih pandai daripadanya. Dengan diberikan kekenyalan tentang definisi nya, bidang studi sosal telah siap menggambarkan kembali tujuannya untuk menemui apapun juga permintaan sociopolitis usianya. Sebagai konsekwensi, hal itu kasus sekarang bahwa semua para guru sejarah adalah juga para studi sosial, tetapi ada banyak para guru studi sosial yang tidak mengajar sejarah dan yang belum pernah belajar sejarah.

Sejarah, sekali lagi merupakan suatu pelajaran inti kajian tiap kelas mulai sekolah dasar, hilang jabatan tingginya dari tahun ke tahun. *When social studies was first introduced in the early years of the 20th century, history was recognized as the central study of social studies. By the 1930s, it was considered primus inter pares, the first among equals. In the latter decades of the 20th century, many social studies professionals disparaged history with open disdain, suggesting that the study of the past was a useless exercise in obsolescence that attracted antiquarians and hopeless conservatives*. *(In the late 1980s, a president of the National Council for the Social Studies referred derisively to history as "pastology.")* Ketika studi sosial pertama diperkenalkan pada awal tahun abad 20, sejarah telah dihargai sebagai pusat kajian studi sosial. Dengan pada tahun 1930-an *primus inter pares*, yang pertama di antara persamaan. Kemudian dekade abad 20, banyak para profesional studi sosial mengabaikan sejarah dengan penghinaan terbuka, mengusulkan bahwa studi masa lalu adalah suatu latihan sia-sia di dalam keusangan yang menarik keantikan dan konservatif sia-sia. (Di akhir tahun 1980-an seorang presiden National Council studi sosial menunjuk secara mengejek ke sejarah sebagai "pastology").

Suatu abad yang lalu, studi sejarah telah dipertimbangkan suatu pelajaran modern. Pada awal dekade abad 20, kebanyakan sekolah menengah di Amerika Serikat menawarkan suatu urutan empat tahun dalam sejarah yang mencakup sejarah kuno, Sejarah Eropa, Sejarah Inggris, dan Sejarah Amerika. Kebanyakan juga menawarkan atau memerlukan suatu pelajaran dalam pelajaran kewarga negaraan. Bahkan waktu studi sejarah nampak untuk dengan kuat berlabuh sekolah, buku teks sejarah mulai untuk meningkatkan (di) atas model statis abad 19, yang cenderung untuk berjalan dengan susah payah melalui hafalan oleh murid-murid yang tumpul tentang peristiwa politis. Sejarawan seperti Charles Beard, Edward Eggleston, dan David Saville Muzzey mencari untuk menyertakan politis, sosial, dan peristiwa ekonomi ke dalam mereka menandakan sebagai sejarah.

Bahkan kelas yang dasar menawarkan suatu percampuran yang kaya tentang material historis, seperti biografis dari orang terkenal (dan kadang-kadang wanita-wanita), cerita sejarah, cerita pahlawan, dongeng, legenda, dan hikayat. Para guru untuk kelas awal sering mengambil pelajaran untuk belajar sekitar dongeng, legenda, dan berceritera, mengetahui bahwa hal ini adalah suatu corak penting tentang pekerjaan mereka. Sebagai konsekwensinya, banyak harapan sebagian besar anak-anak tiba di kajian di Yunani Dan Roma di sekolah menengah dengan suatu kosa kata dengan baik tidak kekurangan persediaan figur penting dan dongeng klasik.

Sampai 1913, sejarah adalah sejarah dan "studi sosial" hampir yang tak dikenal. Di dalam tahun, suatu committee /panitia pendidikan melaporkan atas reorganisasi kurikulum yang sekunder yang menempatkan sejarah ke dalam bidang studi sosial yang baru. Laporan ini, secepatnya diterbitkan sebagai bagian dari *Cardinal Principls of Secondary Education*, telah ditulis di bawah jabatan ketua *Thomas Jesse Jones*, seorang karyawan sosial dan pembaharu terkemuka yang telah mengajar studi sosial di Hampton Institute di Virginia untuk Orang Amerika -Afrika dan Orang Indian Amerika. *Jones was one of the first to use the term "social studies." He was a strong believer in useful studies, such as industrial and trade education. He was very much part of the progressive avant garde that believed that academic studies were necessary for college preparation but inappropriate for children who were not college-bound, that is, children of workers, immigrants, and nonwhites.* (*Jones* adalah salah seorang dari yang pertama untuk menggunakan istilah "studi sosial". Ia adalah seorang yang percaya kuat dalam studi bermanfaat, seperti industri dan pendidikan perdagangan. Ia sangat banyak bagian dari yang progresif perintis bahwa kepercayaan studi akademis itu adalah penting bagi persiapan perguruan tinggi tetapi yang tidak sesuai untuk anak-anak yang bukan/tidak college-bound (loncatan perguruan tinggi), bahwa hal itu adalah, anak-anak para pekerja, imigran, dan bukan orang kulit putih). Para ahli pendidikan terkemuka, seperti Jones dan David Snedden dari Universitas Keguruan, pendidikan dipandang sebagai format karya sosial dan berpikir bahwa anak-anak harus belajar hanya pelajaran yang akan menyediakan ketergesaan dan kegunaan di masa depan hidup mereka.

The Jones report on social studies, incorporated into the famous Cardinal Principles report of the National Education Association in 1918, suggested that the goal of social studies was good citizenship and that historical studies that did not contribute to social change had no value. Jones melaporkan pada atas studi sosial, menyatukan dengan Laporan Cardinal Principles yang terkenal Asosiasi Pendidikan Nasional tahun 1918, mengusulkan bahwa tujuan studi sosial adalah good citizenship dan studi historis itu tidak berperan untuk perubahan sosial, dan tidak punya nilai. Ini melaporkan, ketika nampak dan selama bertahun-tahun setelah itu, telah dipertimbangkan sangat tinggi pikiran progresif modern. Hal itu mempunyai suatu membinasakan dampak pada pengajaran sejarah dan memberi suatu kuat menaikkan tegangan ke penggantian nya dengan studi sosial. Sejak itu adalah susah untuk berargumen bahwa studi sejarah kuno, Sejarah Eropa, atau Sejarah Inggris mendukung perubahan sosial atau bagi meningkatkan kesiap-siagaan siswa untuk suatu lapangan kerja, pelajaran ini mulai untuk menetes jatuh ke luar dari kurikulum itu. Mereka telah dipertimbangkan juga "yang akademis," terlalu dipindahkan dari kebutuhan siswa segera. Mereka tidak membuat apapun kontribusi ke efisiensi sosial. Panitia yang bertanggung-jawab menyusun kembali kurikulum yang sekunder tidak melihat apapun nilai dalam tujuan muskil seperti merangsang imajinasi siswa, kebangkitan kecurigaan mereka, atau mengembangkan intelektual mereka.

Hal itu adalah di dalam spirit efisiensi sosial bahwa bidang studi sosial telah dilahirkan. Beberapa aktivis bidang pendidikan (seperti Thomas Jesse Jones) yang berpikir bahwa tujuan studi sosial adalah untuk mengajar anak muda untuk menyesuaikan untuk (dan menerima) menempatkan yang sesuai mereka dalam hidup. Beberapa pikiran bahwa tujuan studi sosial adalah untuk mengajar mereka dengan fakta yang relevan kepada institusi dalam masyarakat mereka sendiri.

Beberapa di antaranya lebih menyukai untuk mengajarnya ketrampilan bermanfaat yang akan menyaipak mereka untuk dunia kehidupan berkeluarga nyata, pekerjaan, permasalahan kesehatan, dan isu-isu lain yang mereka akan hadapi ketika mereka meninggalkan sekolah.

Penekanan pada manfaat ini mengobral dengan murah pengajaran sejarah dalam sekolah menengah. Di tingkat kelas dasar, pengajaran sejarah telah dihukum oleh sukses yang tersebar luas di tahun 1920-an dan 1930-an dari apa yang telah disebut pergerakan aktivitas itu. Ahli teori bidang pendidikan mengeluh bahwa mengajar sekitar pahlawan dan cerita sejarah tak lain hanya "lamunan". Mereka menginginkan sekolah itu untuk hadapi "secara realistis" dengan permasalahan dunia. Mereka mendukung sekolah itu untuk memasyarakat para siswa mereka dengan memusat aktivitas mereka di rumah, keluarga, lingkungan, dan masyarakat. Mereka berkata bahwa sekolah perlu/haraus mengajar masa kini, bukan masa lalu. Satu pernyataan setelah yang lain mulai untuk menghapuskan sejarah dari tingkat sekolah dasar dan untuk menggantikannya dengan mengembangkan lingkungan (rumah, lingkungan, tetangga, masyarakat). Seluruh gagasan yang para siswa ingini mempunyai kesenangan belajar sekitar lama kematian para raja, ratu, perompak, pahlawan, penjelajah, dan petualang (laki-laki) telah dihadapkan dengan diremehkan oleh pembaharu bidang pendidikan terkemuka sebagai format anangan-angan khayal tak dapat diterima dari masalah nyata masyarakat. Sosialisasi, bukan pengayaan intelektual, adalah permintaan 1930s dan untuk banyak dekade setelah kelas/tingkat dasar.

Sepanjang 1930-an, suatu laporan nasional setelah yang lain meminta dengan tegas bahwa studi sosial perlu/harus menggantikan sejarah menurut urutan waktu dan orang-orang yang muda itu perlu belajar masalah-masalah sosial dan pribadi dengan segera dibanding dengan yang jauh, masa lampau tidak relevan. Sungguh pasti banyak para guru sejarah tetap bertaut pada pelajaran mereka. Tetapi dari waktu ke waktu, seperti para guru menjadi lebih sedikit banyak dan, seperti mereka mengundurkan diri, orang yang lain masuk seperti/ketika para guru studi sosial yang telah dilatih untuk menekankan kebutuhan kaum muda yang segera, peristiwa sekarang, dan permasalahan sosial hari ini, bukannya studi masa lalu.

In the rise of social studies and in the diminished status of history in the schools, historians were not innocent bystanders. When it was proposed in the 1920s and 1930s that the study of history should be reserved for college-bound students, snobbish historians were inclined to agree. They too thought that their field should be the preserve of the elite, not a study that was appropriate for the average citizen in a democracy. Di (dalam) kenaikan ilmu kemasyarakatan dan di (dalam) status sejarah yang disusutkan di (dalam) sekolah, sejarawan bukanlah penonton tidak bersalah. Ketika diusulkan 1920s dan 1930s [bahwa/yang] studi sejarah harus disediakan untuk college-bound para siswa, snobbish sejarawan telah ditundukkan untuk setuju. Mereka terlalu pikir bahwa bidang mereka harus merupakan cagar alam pilihan, tak satu studi pun yang adalah sesuai dengan rata-rata warganegara di (dalam) suatu demokrasi.

Karena masa lalu 15 atau kira-kira beberapa tahun, telah ada suatu usaha untuk menghidupkan kembali pengajaran sejarah di sekolah itu. Seperti di States-Notably, California, Virginia, Texas, Alabama, dan Massachusetts-Have menciptakan standard sejarah patut dicontoh untuk para guru mereka. Banyak pernyataan, bagaimanapun, keberlanjutan untuk penggolongan sejarah tetapi satu suatu kebanyakan disiplin-disiplin meliputi dalam seluruh tujuan, sulit untuk mendefinisikan studi sosial. Mengetahui bagaimana kontroversial banyak diskusi sejarah adalah nampaknya akan banyak pernyataan lebih menyukai untuk menghindari definisi manapun harapan dan tujuan pelajaran-pelajaran, menemukan adalah jauh lebih mudah untuk mundur kepada suatu suatu pengaburan digeneralisasikan dan menghamburkan tujuan.

Sebagai pertunjukkan penyajian uraian esei ini, bidang studi sosial masa kini adalah penuh dengan kebingungan. Hal itu karena sifat erbukanya, sangat ketiadaan definisi, mengundang penangkapan dengan ideologi dan oleh mereka yang mencari untuk memaksakan pandangan

mereka di dalam kelas itu. Di sini juga dapat terjadi pada pengajaran sejarah, tetapi sedikitnya para siswa boleh menghadapi membandingkan versi sejarah dari para guru berbeda dan buku teks, seperti halnya dari program pada televisi dan dari pembacaan mandiri mereka. Satu harapan yang para siswa akan muncul dari studi sejarah mereka, dengan mengabaikan pandangan tentang buku teks dan para guru mereka, dengan suatu perancah tentang pengetahuan berdasar fakta tentang Amerika Serikat dan lain peradaban dunia yang di atasnya mereka boleh membangun di masa datang.

Akhirnya, mereka yang kita tolak pengajaran paham dan propaganda di dalam kelas harus mengenali bahwa penyimpangan ini boleh terjadi pada bidang manapun, apakah itu disebut studi sosial atau sejarah. Tujuan kita harus meminta dengan tegas bahwa pertemuan para siswa berbagai pandangan; bahwa buku teks dan para guru mereka mengenali kemungkinan kemungkinan keliru dan ketidak-pastian; dan para siswa itu memperoleh suatu badan pengetahuan yang padat seperti halnya perkakas dan disposisi untuk memandang pengetahuan itu secara skeptis dan secara analitis. Ini bukanlah tujuan sederhana, dan seperti pada uraian yang berikut mempertunjukkan, kita adalah jauh untuk menuju keberhasilan mereka.

BAB II

The Training of Idiots

Civics education in America's schools

J. Martin Rochester

"Together, we will reclaim America's schools, before ignorance and apathy claim more young lives." ("Bersama-sama, kita akan mereklamasi Sekolah America, sebelumnya ketidak-tahuan dan kelesuan mengakui hidup yang lebih muda")
—President George W. Bush, Inaugural Address, 2001

THE PROBLEM

Di masa lampau Yunani, kata "idiot" merujuk kepada perorangan yang tidak mengambil apapun minat di dalam peristiwa publik, dalam kehidupan polis. Amerika telah lama berdiam dengan idiot (orang bodoh), tetapi angka-angka mereka sepertinya adalah bertumbuh.1 Yang terus meningkat, lulusan sekolah menengah menyerupai siswa yang dulu diminta, " Apa yang lebih buruk, ketidak-tahuan atau kelesuan?" dan menjawab, "Aku tidak mengetahui dan aku tidak mempedulikan!" Hal itu dapat diperdebatkan yang mana yang lebih mengkawatirkan, fakta bahwa orang-orang muda dilepaskan dari politik atau bahwa mereka sakit diberitahukan tentang hal itu. Kondisi-Kondisi ini akan nampak saling berhubungan: semakin sedikit terkait tentang politik, semakin sedikit mungkin satu adalah untuk memerlukan banyak waktu untuk menjadi diberitahukan; dan semakin sedikit diberitahukan satu adalah, semakin sedikit pengertian seseorang tentang kecenderungan dan kemanjuran politis untuk "mendapat/kan dilibatkan." Lebih sedikit dengan jelas bukan lebih ketika datang kepada apa yang telah lewat hari ini untuk pendidikan studi sosial di Amerika Serikat, bidang bahwa itu adalah tanggung jawab utama untuk mengembangkan kaum muda Amerika kebiasaan pikiran yang paling awal mereka tentang sistem politik mereka. Tujuan esei ini adalah untuk menyelidiki bagaimana profesi studi sosial mungkin dapat mendukung mengurangi tersebarnya “kebodohan" dan untuk menyarankan apa yang dapat dilakukan untuk menanamkan suatu keseluruhan penduduk yang lebih ditautkan dan pencerahan.

Permasalahan dalam ketidakberpengetahuan kewarganegaraan dan ketidak tahuan apa yang dilakukan adalah tidak terbatas pada orang-orang muda. Mengenai dimensi keikutsertaan, seperti seorang penulis melaporkan, *"only a small percentage of the American people are actively engaged in the political process. . . . Less than one percent of the population runs for office at any level of government, and only about half of all voting-age Americans bother to go to the polls" (Dye, 2001, p. 138)*"hanya suatu persentase kecil dari Orang-Orang Amerika dengan aktip disibukkan dengan proses politik .... Kurang dari satu persen populasi berlari untuk kantor pada manapun tingkatan pemerintah, dan hanya sekitar separuh dari semua usia

(pemungut suara) Orang Amerika terganggu untuk pergi ke tempat pemungutan suara" (Dye, 2001, p. 138). " Separuh" menggunakan pemilihan presiden; tahun pemilihan cenderung untuk menarik hanya sekitar sepertiga orang yang mempunyai hak pilih mengenai presiden. Pemilihan Presiden sendiri telah menjadi kemunduran dalam dekade terbaru, dari 60 persen di tahun 1960-an untuk barusaja (hampir tidak) 50 persen baru-baru ini. Bahkan Bush-Gore yang dekat pada tahun 2000 berlomba mengatur untuk menarik suara hanya 50 persen, sedangkan pada 1996 kontestan Clinton-Dole memperlihatkan 49 persen, perolehan yang paling rendah sejak tahun 1924. (Orang-orang lebih tertuju mengamati "Siapa yang menembak J.R.? "Peristiwa Dallas dan peristiwa akhir Cheers, MASH, dan Seinfeld Seinfeld dibanding memilih presiden Amerika Serikat).

Jumlah keseluruhan, "masa lalu empat dekade menandai kecenderungan untuk menurun yang terpanjang dalam pemberian suara dalam sejarah bangsa" (Patterson, 2002a).2 Sama suram seperti statistik ini, mereka melihat sehat dan kuat dibanding ke lain indikator partisipasi politik, seperti kurang dari lima persen populasi menghadiri pertemuan-pertemuan politis, membuat kontribusi kampanye, atau pameran mengancingkan dan stiker bemper (sangat besar), dan dengan kasar 30 persen pernah mendiskusikan politik (Dye, 2001:138; juga lihat Burns et al., 1995: 275; Verba dan Nie, 1972; dan Milbrath dan Goel, 1977).

Joseph Nye and Robert Putnam have commented on the growing cynicism toward politics and government along with the worsening alienation from civil society generally. In an article entitled "In Government We Don't Trust," Nye (1997, p. 99) stated: "American confidence in government has declined. In 1964, three-quarters of the American public said that they trusted the federal government to do the right thing most of the time. In recent years . . . only one-quarter to one-third do" (also see Nye, Zelikow, and King, 1997). Joseph Nye dan Robert Putnam sudah menafsirkan sifat pertumbuhan yang sinis ke arah politik dan pemerintah bersamaan dengan memperburuk alienasi dari masyarakat sipil secara umum. Di dalam suatu artikel berjudul *"In Government We Don't Trust*," Nye (1997: 9) menyatakan: " Kepercayaan bangsa Amerika dalam pemerintah telah merosot. Di tahun 1964, tiga kuatal (three-quarters) Publik Amerika mengatakan bahwa mereka mempercayakan kepada pemerintah pusat melakukan hal yang benar kebanyakan dari waktunya. Di tahun terakhir... hanya one-quarter (satu kuartal) untuk sepertiga yang dilakukan" (juga lihat Nye, Zelikow, dan King, 1997).

Walaupun dorongan berkumpul mengibarkan bendera setelah peristiwa 11 September 2001, memberikan Presiden dan Konggres sesaatsesuatu menaikkan ketegangan pendukungan publik, yang pendukungan telah longsor ketika memori 9/11 telah memudar (Stille, 2001). Putnam, di (dalam) Bowling Alone (2000), yang ditemukan bahwa America's bahwa "modal sosial" tengah menyusutkan (di) atas masa lalu sepasang dekade, [seperti/ketika] dicerminkan kemunduran keanggotaan di (dalam) Apa [yang] tidak Tocqueville disebut "asosiasi sukarela dan dalam format banyak orang partisipasi politik seperti menandatangani petisi, menghadiri pertemuan-pertemuan kota, dan bekerja untuk partai politik (juga lihat Uchitelle, 2000). Hal itu adalah di luar lingkup penjelasan kecenderungan tulisan ini—banyak faktor memungkinkan ruwet ---tetapi menghasilkan penarikan dari ruang kewarganegaraan adalah tak diragukan.

Jika seseorang mengambil pandangan yang tidak diinformasikan maka partisipasi politik adalah jelek seperti tidak ada keikutsertaan, kemudian barangkali sama halnya baik yang tingkatan keikutsertaannya adalah rendah. Atas dimensi pengetahuan, orang banyak secara luas tidak berpengetahuan tentang corak berkenaan dengan unsur republik (termasuk apa maknanya untuk menjadi republik sebagai yang dilawankan terhadap suatu demokrasi). Lebih sedikit dibanding sepertiga orang-orang Amerika dapat menyebut wakil mereka di dalam Konggres atau senator mereka Amerika Serikat, dan hampir tidak mengetahui separuhnya bahwa mereka mempunyai dua senator (Delli Carpini dan Keeter, 1991 dan 1996), dengan demikian sehingga "atas bahkan isu-isu congressional diperdebatkan, sedikit orang-orang mengetahui di mana posisi Anggota Konggres mereka" (Erikson et Al., 1991, p. 295). Satu pengamat menyarankan kita adalah "suatu

bangsa orang dungu," yang mencerminkan dalam jajak pendapat Gallup terbaru yang menunjukkan bahwa “60 persen orang Amerika adalah tidak mampu untuk menyebut nama Presiden yang memerintah serangan nuklir Jepang, dan 35 persen tidak mengetahui bahwa bom atom yang pertama telah dijatuhkan di Hiroshima" (Herbert, 1995, p. A15).

Ketidaktahuan publik tidak nampak loncatan waktu: sepanjang tingginya krisis energi tahun 1970-an, separuh orang Amerika pikir kita secara keseluruhan mencukupi sendiri dalam kebutuhan minyak; sepanjang tingginya ketegangan Perang Dingin atas America Serikat hubungan dengan "kerajaan yang jahat" sepanjang tahun 1980-an, (di) atas separuh tidak yakin apakah Amerika Serikat atau Uni Soviet bahwa dimiliki persekutuan NATO; dan di tahun 1990-an dengan l persen anggaran pemerintah pusat meminta bantuan asing, orang banyak mengasumsikan figur itu] adalah dekat dengan 20 percent.3 Dalam semua, hanya sekitar 25 persen orang Amerika mendasarkan apa yang para ilmuwan politis sebut "publik yang penuh perhatian" (Burns, 1995: 275).

Delli Carpini dan Keeter (1996) mencatat bahwa "suatu konsensus telah muncul mengenai tingkatan jaman ini tentang pengetahuan politis. Studi... mengusulkan bahwa pengetahuan adalah yang paling baik tidak ada lebih besar dari itu adalah dua bagi empat dekade yang lalu, dan mungkin sudah merosot pada beberapa ukuran itu" (Carpini dan Keeter, 1996: 116). Yang didasarkan pada Analisis yang luas pengalaman mereka sendiri antara data 1940 dan 1994, mereka menyimpulkan:

Berita gembira adalah bahwa kendati perhatian atas mutu pendidikan... dan penyusutan komitmen untuk perjanjian kewarganegaraan, warganegara tidak nampak apapun lebih sedikit diberitahukan sekitar politik hari ini dibanding mereka pada suatu pertengahan abad yang lalu. Berita yang tidak baik adalah bahwa kendati suatu perluasan belum pernah terjadi dalam pendidikan publik..., warganegara tidak lagi nampak diberitahukan sekitar politik (p. 133). Banyak apologists untuk K-12 jaman ini pendidikan seperti untuk berargumen bahwa, tentu saja, sekolah kita adalah tidak lebih buruk dibanding di masa lalu sebagai agen untuk memancarkan pengetahuan kewarganegaraan. Tidak hanya dengan susah-payah suatu membunyikan pengesahan tentang sistem pendidikan sekarang kita, tetapi hal itu menjadi lebih suatu surat tuduhan, di dalam memberi akses yang ditingkatkan dan pembelanjaan pada pendidikan sejak Perang Dunia II, orang akan mengasumsikan kemampuan kewarganegaraan akan meningkatkan dibanding stagnan.

Sesungguhnya, generasi yang sekarang tentang orang-orang muda boleh menetapkan suatu standar baru untuk kedua-duanya kelepasan dari ikatan kewarganegaraan dan keterangan salah kewarganegaraan. Kemunduran jangka panjang dalam kedatangan pemberi suara di antara kalayak ramai dapat sedikitnya sebagian melekat pada itu menekan efek usia 18 tahun jangan diberi monopoli di dalam tahun 1971-tidak latihan itu. Persentase dari usia 18- ke 24-tahun memilih dalam pemilihan presiden merosot dari 50 persen di tahun 1972 terhadap 32 persen di tahun 1996 dan 2000.4 Seperti dicatat oleh Asosiasi Ilmu pengetahuan Politis Amerika, " Survei tahunan CIRP memasuki perguruan tinggi mahasiswa baru (yang di-compile oleh Institut Riset Pendidikan Lebih tinggi UCLA'S] melaporkan suatu pengurangan dan merekam rendah menarik perhatian politik di antara kelas tahun 2000," di samping kecenderungan untuk menarik perhatian untuk mencapai puncak suatu tahun pemilihan.

Studi menemukan bahwa hanya 28.1 persen mahasiswa tingkat pertama telah ditundukkan untuk memelihara terbaru dengan peristiwa politis, suatu kemunduran dari catatan rendah dalam tahun 1999 yang 28.6 persen dan catatan tinggi dalam tahun 1966 yang 60.3 persen. Survei juga menunjukkan suatu catatan rendah untuk (16.4 persen) tentang mahasiswa baru mendiskusikan politik yang sering, sehubungan dengan yang 16.9 persen di tahun 1999 dan ketinggian 33.6 per sen di tahun 1968." 5. Hal itu adalah benar bahwa "layanan masyarakat" dan "volunteerism" sepertinya adalah naik antar orang-orang muda (Plambeck, 2002), tetapi ini belum diterjemahkan

ke dalam keterlibatan lebih besar dalam politik.Dalam kaitan dengan keterangan salah di antara yang muda, statistik dengan sama mengkawatirkan.

- Pada tahun1994 Penilaian Nasional tentang Kemajuan Bidang Pendidikan (NAEP) Sejarah Amerika menguji, "36 persen level ke-empat membuat skore di bawah basis dasar; hanya dua persen telah maju/lanjut. Dengan kelas kedelapan, 39 persen di bawah basis dasar dan hanya satu persen mengedepan. Untuk yang senior, suatu penekanan 57 persen di bawah basis dasar, dengan satu per sen mengedepan" St. Louis Post-Dispatch, 1995, p. C16). Seperti halnya satu contoh tentang buta huruf berdasar fakta, lebih sedikit dibanding satu ke luar dari tiga level keempat bisa mengidentifikasi New York sebagai salah satu dari yang asli tigabelas jajahan, sebagai lawan Illinois, California, dan Texas. Ringkasan hasil itu, Lewis Lapham (1995) menulis bahwa hasil percobaan "dapat dibaca sebagai laporan pemeriksa kematian .... [Mereka] dikembalikan suatu temuan tentang ketidak-tahuan mematikan. Lebih dari 50 persen dari semua sekolah menengah yang senior adalah tidak acuh pada Perang Dingin itu. Hampir enam dari 10 telah dirampas bahkan suatu pemahaman primitif di mana Amerika datang dari" (p. A15).

- Lain NAEP data terbaru: " Kurang dari separuh 16,000 sekolah menengah senior Patrick dikenali ditest diakui Patrick Henry tantangan menyimpang, 'Beri aku kebebasan atau memberi aku kematian.' Bahkan lebih sedikit usia anak tanggung... mengetahui keberadaan Peperangan 1812, Rencana Marshall yang menyelamatkan Eropa, atau Lyndon Johnson's Great Society" (Gross, 1999: 3-4).

- Mengenai NAEP penilaian yang sangat terakhir U.S. sejarah, yang diadministrasikan tahun 2001, Diane Ravitch (2002) menulis, "sekolah menengah senior score dalamnya tak terukur sungguh-sungguh dicatatkan," seperti 57 persen jatuh di bawah basis dasar, "suatu tingkatan prestasi yang menandakan hanya penguasaan parsial tentang pengetahuan historis penting dan ketrampilan analitis. Ini menemukan salinan persisnya hasil yang kejam yang ter]akhir U.S. penilaian sejarah di tahun 1994.".

- David Broder (2000) *has observed that "young people are in danger of losing America's civic memory." Writing on July 4, 2000, he commented: "Who was the American general at Yorktown? William Tecumseh Sherman, Ulysses S. Grant, Douglas MacArthur, or George Washington? When that question was asked late last year of 556 randomly chosen seniors at 55 top-rated colleges and universities, one out of three got it right.*. David Broder (2000) telah mengamati bahwa " orang-orang muda dalam bahaya kehilangan memori Kewarganegaraan America's." Tulisan pada 4 Juli 2000, ia berkomentar: "Siapa yang dulu umum Amerika pada Yorktown? William Tecumseh Sherman, Ulysses S. Grant, Douglas Macarthur, atau George Washington? Ketika pertanyaan telah ditanyakan akhir-akhir tahun lalu, 556 secara acak memilih senior pada 55 universitas dan perguruan tinggi dinilai tinggi, satu ke luar dari tiga dimengerti kebenaran. Secara menarik perhatian, lebih banyak mereka mulai lulus dari perguruan tinggi pengetahuan budaya besar seperti Amherst dan Williams dan Grinnell dan world-class universitas seperti Harvard dan Duke... dinamai Grant ... bukannya Washington.... Hal itu bukanlah yang terburuk. Hampir tidak satu ke luar dari lima (22 persen) bisa mengidentifikasi Gettysburg Address sebagai sumber ungkapan ' Pemerintahan orang-orang, dengan orang-orang, untuk orang-orang'" (p. B7).

- Seorang rekan kerja tambangku yang mengajar suatu kelas pengantar politik di Universitas Missouri-St. Louis menanyai para mahasiswanya pada awal musim gugur 2002 untuk menentukan berapa banyak bisa menyebut semester sekarang U.S. Sekretaris Negara dari di antara aneka pilihan yang berikut: John Ashcroft, Dick Cheney, Madeleine Albright, atau Colin Powell. Bahwa hampir separuh kelas (56 persen) bisa mengidentifikasi Powell adalah seorang komentar sedih atas ketidak-tahuan siswa tidak hanya sejarah tetapi juga peristiwa sekarang. (Tidak diragukan bahkan lebih sedikit bisa sudah nama Condoleezza Rice,

Penasehat Keamanan Nasional Presiden. Bagaimana cara seorang siswa melakukan berpikir kritis tentang ras di Amerika tanpa menyadari bahwa kedua kabinet official secara luas bertanggung jawab untuk kebijakan orang asing adalah dari bangsa Amerika-Afrika?)

Barangkali kita harus tidak dikejutkan untuk menemukan orang-orang muda cenderung untuk menjadi lebih sedikit diberitahu sekitar politik dibanding yang lebih tua mereka, diberi pengalaman hidup lebih pendek mereka, dan lebih sedikit tertarik akan politik, memberi properti yang substansiil ketiadaan mereka yang akan meningkatkan pancang yang dirasakan mereka dalam sistem politik itu. Namun mengimbangi harapan tindakan dan kemampuan kewarganegaraan dan tindakan ini dipertinggi harapan berhubungan dengan ketergesaan kaum muda lebih besar ke ruang kelas pendidikan seperti halnya idealisme kaum muda lebih besar. Biar bagaimanapun juga, kecenderungan sepertinya adalah pindah ke arah yang salah, dengan informasi dan minat yang merosot bahkan antar orang-orang muda mereka sendiri. Seperti Thomas Patterson (2002A, p. D1) secara tumpul menaruh itu, "*today's young adults are less politically interested and informed than any cohort of young people on record." Insofar as schools are among our major vehicles for performing what political scientists call political socialization—"the process by which we learn about politics" (Edwards, 1988, p. 173) "sekarang anak muda masa kini adalah lebih sedikit yang tertarik dan memberi tahu dibanding manapun kelompok (pengikut) orang-orang muda yang dicatat". Sepanjang sekolah seperti antar sarana utama kita untuk menyelenggarakan apa yang ilmuwan politis sebut sebagai socialization---" proses politis dengan mana kita belajar sekitar politik" (Edwards, 1988: 173)*-hal itu adalah susah untuk membuat kesimpulan mereka yang sedang gagal dalam peran ini. Apa yang dicatat/dilaporrkan untuk kegagalan ini untuk memunculkan kompetensi civic dan perhatian?

THE STATE OF K-12 EDUCATION IN GENERAL

Dalam usaha untuk mendapatkan suatu tangkai pada masalah ini, sebelum memusatkan pada status studi sosial ("civics") pendidikan di Amerika, adalah sangat menolong untuk mempertimbangkan kondisi pendidikan sekunder dan utama yang lebih umum. Kecenderungan dalam pendidikan studi sosial, setelah semuanya boleh merefleksikan pertunjukan yang terakhir di kelas K-12 secara luas. Di sana selalu menjadi suatu kekuatan" kemasan pedagogis" dinamis di tempat kerja di kelas K-12. Diane Ravitch (2000) telah mendokumentasikan dengan baik bagaimana, dalam pendidikan melingkar, kemasan tengah membacakan catatan dasar yang sama untuk sekali waktu, seseorang menulis secara predominan dengan "progresif" seperti John Dewey. Dia mengamati bahwa, sejak penetapan pendidikan menolak sebutan itu, di tahun 1893, dengan Committee of Ten (diketuai oleh Harvard Presiden Charles Eliot) untuk suatu paradigma akademis lebih kaku untuk memandu sekolah Pendidikan bangsa Amerika telah ada suatu kedungauan tenggelm sistematis akademis dan diversi dari akademis, yang disela secara periodik oleh pembaharuan dinamai untuk keunggulan akademis (seperti jaman post-Sputnik), hanya untuk diikuti oleh suatu kesanggupan pembaharuan untuk sifat sedang (keadaan).

Sementara kecenderungan ini tidaklah baru, apa yang berbeda dan lebih menyusahkan hari ini adalah bahwa perubahan sekolah yang sekarang pergerakannya mempunyai suatu tepi penajam dibanding di masa lalu, seperti tak seorangpun sedang melepaskan "kapak alat yang menyamaratakan," tidak saja yang terbaik dan yang paling cerdas. Juga beberapa kekhawatiran adalah daya gerak yang lebih kuat masa kini di belakang progressivisme, yang didorong pada sebagian oleh internet dan berhubungan perkembangan teknologi, yang menambahkan berbagai kemungkinan menakjubkan kepada misi pendidikan bahkan waktu mereka bersikap risiko potensial. Beberapa pembaharu menggembar-gemborkan teknologi sebagai suatu dua bekas machin untuk merealisir visi yang progresif "tiap-tiap anaknya atau ia sendiri Socrates," maksud yang instant mengakses ke informasi suatu ujungjari pergi membuat para guru dan pengajaran ----di paling sedikit ketika datang untuk pembelajaran dalam basics---superfluous. Para guru, lebih dari pernah, kini diharapkan untuk "pelatih" atau "memudahkan," memusatkan atas "pemikiran kritis" dan keterampilan "menata tertinggi" (Rochester, 2002: 175-179). Pertanyaannya adalah

apakah ini "memandu atas sampingnya" model adalah suatu peningkatan yang progresif apa yang memperburuk disebut "orang bijaksana di atas panggung" model, atau apakah progresif sudah meninggalkan kita dengan "Metoda yang Socratic kurang Socrates".

Lebih dari itu, ada sedikit lawan (yang menipu) permainan yang berlangsung di sini: setelah digagalkan untuk menggambarkan ke luar bagaimana cara mendapatkan para siswa untuk menyerap informasi penting, pendidik sudah melemparkan dalam handuk/lap ; tetapi lebih dibanding mengakui seperti itu, mereka sekarang memohon Internet sebagai rasionalisasi ringkas untuk mengapa isi pengetahuan yang spesifik tidak lagi dibutuhkan diajar atau diuji.

Perubahan bermata dua (pisau) lain telah menjadi suatu pergeseran dalam nilai-nilai budaya. Tidak diragukan dekade 1960-an pergerakan Demokrasi Amerika maju dalam kaitannya dengan berkembangnya persamaan (hak tentang minoritas, khususnya) dan kebebasan individu (kebebasan untuk ekspresi khususnya). Tetapi kita masih menyesuaikan diri kelebihan Woodstock Bangsa, dengan peleburan yang mudah menguap dari egalitarianism radikal dan libertarianisme-nya (Bork, 1996). Di dalam pendidikan tinggi, itu telah memberi kita postmodernism, yang memelihara bahwa tidak ada seperti hal pengetahuan berdasar fakta, hanya persepsi berdasar pada keadaan pribadi, semua dari yang berhak menerima penghargaan sama. Pendidikan di kelas K-12, itu telah memberi kita kesabaran sendiri, tidak menilai mental kelas, di mana kekakuan dan jasa kini tabu, karena takut kekakuan kreativitas pribadi atau mirip siswa di atas yang lain. E.D. Hirsch (1997A) telah benar-benar menggelari peristiwa ini " populism bidang pendidikan".

Sistem Pendidikan kita dikacaubalaukan. Sedangkan praperguruan tinggi pendidik dengan menarik perhatian mengacu pada tuntutan/biaya mereka, bahkan anak-anak prasekolah, sebagai "komunitas sarjana," profesor perguruan tinggi sering merasakan yang dikepung oleh lulusan South Park/Taman Selatan dan ditemukan diri mereka mempunyai untuk mempersembahkan lebih waktu dan energi ke penyelesaian sengketa dengan penengahan kembali, dengan ungkapan yang lebih halus disebut " pengembangan akademis" (Arenson, 1998). "Konstruktivisme," varian jaman modern progressivism, berteori tentang anak membangun "arti" ketika mereka bahkan tidak bisa membangun suatu kalimat tunggal dengan baik.

The result has been a collapse of standards. Our schools are not wholly to blame for this. However, it could be argued that they have taken the standardless society to new depths. As I tried to explain in recent testimony before the Missouri Senate, commenting on the new "performance standards" that were developed by the state education establishment, which mirrored the standards being developed in other states: Hasil telah (menjadi) suatu roboh standard. Sekolah [kita/kami] tidaklah secara keseluruhan untuk menyalahkan orang lain ini. Bagaimanapun, bisa jadi berargumentasi bahwa mereka sudah mengambil masyarakat yang tanpa baku ke kerendahan baru. [Seperti/Ketika] aku mencoba untuk menjelaskan kesaksian terbaru [sebelum/di depan] Missouri Majelis tinggi, menafsirkan yang baru " standar prestasi" itu telah dikembangkan oleh penetapan pendidikan status, yang mencerminkan standard [itu] dikembangkan lain negara:

The dumbing down phenomenon can be seen at work in virtually every school district in the state. Note the wide-spread emphasis on "self-esteem" and dime-store psychology; "cooperative learning" whereby high achievers are to be used as free labor to bring up low achievers; the desperate search for a germ of genius in every child, other-wise known as "multiple intelligences theory," which equates slam-dunking a basketball with performing open-heart surgery as a form of brainpower; the nonliterate culture crowding out the literate culture as "visual arts" are now considered part of literacy training, and the latest national English standards now elevate "media-viewing" to a coequal status with reading and writing; Bisu peristiwa bawah dapat dilihat di tempat kerja di (dalam) hampir tiap-tiap daerah sekolah di (dalam) status [itu]. Catat wide-spread penekanan [itu] terpasang " mengagumi diri sendiri" dan

dime-store psikologi; " koperasi [yang] belajar" dengan mana tinggi achievers (diharapkan) untuk digunakan sebagai tenaga kerja cuma-cuma untuk [membawa naik/mendidik] rendah achievers; pencarian yang putus-asa untuk suatu benih/kuman genius di (dalam) tiap-tiap anak, dikenal sebagai menurut lain " berbagai teori kecerdasan/inteligen," yang menyamakan slam-dunking suatu bolabasket dengan melakukan/menyelenggarakan open-heart perawatan sebagai format brainpower; nonliterate kultur yang mendesak kultur yang terpelajar [sebagai/ketika] " seni visuil" kini dipertimbangkan bagian dari pelatihan melek huruf, dan Standard Bahasa Inggris nasional yang terakhir sekarang mengangkat " media-viewing" [bagi/kepada] suatu status sama dengan pembacaan dan menulis;

elimination of ability grouping and gifted programs altogether in favor of lowest-common-denominator education; "full inclusion" of behavior-disordered and severely learning disabled students in regular class-rooms; reliance on fun-filled, action-packed "activities" as an antidote to "boring" lectures and textbooks, based on the apparent premise that the entire student body suffers from attention deficit disorder; the denigration of substantive knowledge and in its place a growing touchy-feely, mush-and-fluff factor, epitomized by the new Show-Me standard that every student by the time they graduate from high school must be able to "express emotions." penghapusan pengelompokan kemampuan dan mengaruniai program sama sekali semuanya menuju ke masyarakat terendah -denominator pendidikan; " pemasukan penuh" tentang gangguan perilaku dan sungguh belajar para siswa dilumpuhkan dalam kelas regular, kepercayaan pada fun-filled, action-packed "aktivitas" sebagai suatu penawar racun untuk " membosankan" ceramah kuliah dan buku teks, berdasar pada pendapat yang nyata bahwa keseluruhan badan siswa kekacauan defisit perhatian menderita penyakit; denigration pengetahuan kata benda dan dalam tempat nya suatu bertumbuh touchy-feely, mush-and-fluff faktor, yang dilambangkan oleh Show-Me yang baru yang baku yang tiap-tiap siswa pada saat itu mereka lulus dari sekolah menengah harus mampu " menyatakan emosi."

Point itu adalah bahwa permasalahan studi social dan pendidikan pelajaran kewarga negaraan harus dipahami dalam kaitannya dengan yang lebih besar tentang ejaan yang ditemukan, matik yang membingungkan, experiential dan yang diposisikan pelajaran, kelas yang mengobati dan oprahisasi pendidikan Amerika, dan lain corak proyek progresif jaman ini. Ironi adalah bahwa, seperti Hirsch (1997B) telah berargumen bahwa, suatu paradigma pendidikan terutama semata mengarahkan, dengan maksud membantu, pada kekurangan/kemiskinan bidang pendidikan dan ekonomi siswa paling lemah paling miskin hanya under-mines pendidikan dari tinggi- dan middle-achievers tetapi mengerjakan tindakan yang merugikan yang terbesar kepada seluruh para pelanggan yang diilhami itu, sejak mereka tidak bisa bersandar orang tua dan guru privat di luar untuk menyediakan apa yang sekolah tidak lakukan. Tentu saja, pendidik progresif, sementara mengakui sebagai agen demokrasi yang melindungi rakyat jelata; orang banyak dari " sosial Darwinists," adalah penganut faham elit yang terakhir, sepanjang anti-merit mereka, anti-rigor, anti-basics, anti-discipline dorongan/gerakan hati berselisih dengan pandangan berpegang kepada suatu mayoritas Orang Amerika luas, yang terutama sekali keluarga-keluarga bagian tertua suatu kota, seperti dilaporkan Agenda Publik dan lain survei (Willis, 1995, p. 5; Stotsky, 1999, p. 201; Sengupta, 1997, p. B8).

The dumbing down of, and diversion from, academics that was just described in Missouri is spreading across the land via pack pedagogy. This trend is epitomized in a recent story in the *Baltimore Sun*, heralding "Howard's Futuristic School," a Howard County, Maryland, high school described as follows: Bisu bawah untuk, dan diversi dari, akademis yang [hanya;baru saja] diuraikan Missouri sedang menyebar ke seberang daratan via mengemasi ilmu mendidik. Kecenderungan ini dilambangkan [adalah] suatu cerita terbaru di (dalam) Baltimore Matahari, Gembar-Gembor " Sekolah Futuristic Howard'S," suatu Howard Daerah/Propinsi, Maryland, Sekolah menengah uraikan sebagai berikut:

"It's a very student-centered school," said [the high school principal]. "To some extent, the older philosophy was you teach content. And now the philosophy is, you teach students." Classrooms are equipped with 27-inch color televisions that connect through phone lines to a "media distribution center" in what used to be called the library. . . . The school store and student government offices are in their own spaces, with storage closets bigger than some elementary school Gifted and Talented Program classrooms. A built-in concession stand is between the gym and the auditorium. "That's something you don't normally have in a school," said [the head of the construction firm]. "But it's something that you need." Concession stands, school stores, state-of-the-art weight rooms, and dance labs—all are necessary these days, school construction experts say (White, 2002, p. B6). " Adalah suatu sekolah [yang] sangat student-centered," yang dikatakan [sekolah menengah prinsip]. " Sampai taraf tertentu, filosofi yang lebih tua adalah kamu mengajar isi. Dan sekarang filosofi adalah, kamu mengajar para siswa." Kelas adalah 27-inch dilengkapi dengan mewarnai televisi yang menghubungkan melalui/sampai menelpon bentuk untuk a " pusat distribusi media" di (dalam) apa [yang] digunakan untuk[lah [disebut/dipanggil] perpustakaan [itu].... [Gudang/ toko] Sekolah Dan Kantor Pemerintah Siswa adalah di (dalam) [ruang;spasi] mereka sendiri, dengan kamar kecil [gudang/penyimpanan] lebih besar dari sekolah dasar beberapa Aruniai dan Berbakat Kelas Program. Suatu built-in [posisi/letak] pemberian/hadiah adalah antar[a] gimnasium dan aula. " Itu sesuatu (yang) kamu tidak secara normal mempunyai di (dalam) suatu sekolah," yang dikatakan [kepala perusahaan konstruksi]. " Tetapi adalah sesuatu yang [yang] kamu memerlukan." [Posisi/Letak] Pemberian/Hadiah, [Gudang/ toko] Sekolah, State-Of-The-Art menimbang ruang, dan tarian labs-all adalah perlu hari-hari ini, tenaga ahli konstruksi sekolah kata[kan (Putih, 2002, p. B6).

Educational "constructivists" are collaborating with school construction experts to construct schools of the future that give short shrift to academics. "Less is more," as Theodore Sizer's Coalition for Essential Schools 13 trumpets, except, apparently, when it comes to building nonacademic facilities. And "rote memorization" is out, except, apparently, when it comes to self-styled "cutting edge" educators parroting what they have heard in their education schools and professional development training. It is a sad commentary on the K-12 profession that the late Albert Shanker felt a need, toward the end of his life, to write an article entitled "Knowledge Still Counts" (1996a). Imagine educators needing to be reminded of that maxim. Bidang pendidikan " constructivists" sedang bekerja sama/ berkhianat dengan konstruksi sekolah yang ahli untuk membangun [rombongan/ sekolah] masa depan yang memberi waktu yang sangat sedikit ke akademis. " Lebih sedikit jadilah lebih," [sebagai/ketika/sebab] Theodore Kesatuan Sizer'S untuk Sekolah [yang] Penting 13 terompet, kecuali, kelihatannya, ketika [itu] datang [bagi/kepada] membangun fasilitas nonacademic. Dan " Penghafalan Dihafal tanpa pikir" ke luar, kecuali, kelihatannya, ketika [itu] datang ke self-styled " memotong tepi" pendidik yang membebek apa [yang] mereka sudah mendengar sekolah pendidikan mereka dan pelatihan pengembangan profesional. [Ini] merupakan suatu komentar sedih pada [atas] K-12 Profesi [bahwa/yang] almarhum Albert Tulang kering merasa[kan suatu kebutuhan, ke arah ujung hidup nya, untuk tulis suatu artikel berjudul " Pengetahuan Meski demikian Hitung" (1996a). Bayangkan pendidik perlu untuk diingatkan

What is perhaps most surprising is that the very school reformers who preach the gospel of "diversity" are themselves often guilty of the most dogmatic and rigid thinking. If "the test of a first-rate intelligence is the ability to hold two opposing ideas in the mind at the same time and still be able to function," 14 then progressives are flunking. They seem unable to contemplate, in the same breath, rigor and creativity, memorization and understand-ing, lecturing and active engagement, learning and fun, moral clarity and values clarification, or any other notions that are quite compatible and quite integral to education. Legitimately railing against past excesses—overemphasis on discipline, deference to authority, transmission of factoids, and the like—progressives have *overcorrected* and would now dispose of the baby as well as the bath-water. Apa yang barangkali paling mengejutkan adalah bahwa seluruh

pembaharu sekolah [siapa] yang kotbahkan Injil keaneka ragaman" adalah diri mereka sering bersalah atas pemikiran [yang] yang paling kaku dan dogmatis. Jika " test suatu kecerdasan/inteligen kelas satu adalah kemampuan untuk [memegang/menjaga] dua menentang gagasan di (dalam) pikiran pada waktu yang sama dan tetap mampu berfungsi," 14 kemudian progresif sedang menggagalkan. Mereka nampak tidak mampu untuk merenungkan, di (dalam) nafas yang sama, kekakuan dan kreativitas, penghafalan dan understand-ing, memberi kuliah dan perikatan aktip, pelajaran dan kesenangan, kejelasan moral dan klarifikasi nilai-nilai, atau barang kelontong lain yang adalah [yang] [yang] sungguh integral dan dapat dipertukarkan ke pendidikan. [Yang] dengan sah mencaci maki masa lampau excesses-overemphasis pada [atas] disiplin, rasa hormat ke otoritas, transmisi factoids, dan like-progressives mempunyai overcorrected dan akan sekarang membuang bayi seperti halnya [itu] bath-water.

THE STATE OF SOCIAL STUDIES EDUCATION IN PARTICULAR

The dominant trends in contemporary K-12 education have predictably impacted social studies, especially civics education. In fact, these trends tend to be most accentuated in social studies, compared to science and other subject areas, for it is in this field, we are told, that democracy demands heterogeneous grouping and cooperative learning, that "service-learning" is essential, that there are mostly opinions rather than facts, that we must be respectful of diverse, multicultural perspectives and learning styles, that we must be sensitive to student emotions and feelings, and that the teacher's role is that of psychologist and problem solver as much as purveyor of knowledge and comprehension—in short, that the non-hierarchical, nonjudgmental, nonacademic classroom prevails. (One might add that it is also in social studies that we typically find most of the staff recruited to coach in the gym and on the athletic field, which suggests where civics education stands in the academic pecking order. Oddly, "coaching" in the sports context means instructing rather than facilitating.) Kecenderungan yang dominan di (dalam) K-12 jaman ini Pendidikan sudah predictably berdampak ilmu kemasyarakatan, [yang] terutama pendidikan pelajaran kewarga negaraan. Sesungguhnya, kecenderungan ini [tuju/ cenderung] untuk;menjadi [yang] paling ditekankan ilmu kemasyarakatan, dibandingkan ke ilmu pengetahuan dan lain area pokok, (sebab) adalah di (dalam) bidang ini, kita diberitahu, demokrasi itu menuntut koperasi dan pengelompokan heterogen [yang] belajar, bahwa " service-learning" adalah penting, yang ada kebanyakan pendapat dibanding/bukannya fakta, yang [itu] kita harus hormat untuk berbeda, multicultural perspektif dan belajar gaya, yang [itu] kita harus sensitip ke emosi siswa dan perasaan, dan [bahwa/yang] peran guru adalah sebagai psikolog dan masalah solver sebanyak . seperti leveransir pengetahuan dan comprehension-in pendek/singkat, [bahwa/yang] yang tidak hirarkis [itu], nonjudgmental, kelas nonacademic berlaku. (Satu kekuatan menambahkan bahwa juga di (dalam) ilmu kemasyarakatan yang kita secara khas temukan kebanyakan dari staff yang direkrut ke pelatih di (dalam) gimnasium dan pada [atas] bidang atletik, yang menyarankan [di mana/jika] pendidikan pelajaran kewarga negaraan berdiri [yang] tingkatan sosial yang akademis [itu]. [Yang] dengan anehnya, " pelatihan" dalam kaitan dengan sports berarti instruksikan dibanding/bukannya memudahkan.)

One need only peruse today's social studies pedagogy textbooks found in our education schools to see the precepts that now guide the teaching of civics. I conducted a small experiment in which I visited the University of Missouri-St. Louis School of Education library, randomly selected five social studies books published in the past decade or so, and performed a content analysis. As a political scientist rather than an educationist, my unfamiliarity with who was or was not a major figure in the field, and who was or was not a "progressive," afforded me an objectivity I might not otherwise have had. I simply wanted to sample the field to see if my impressions of a wayward discipline were accurate. I found that, almost without exception, the pages of these books teemed with progressive nostrums which on the surface sounded as American as apple pie, but upon closer inspection reflected a not-so-hidden agenda grounded in political correctness likely to breed ignorance of the American political system and cynicism toward it. Satu kebutuhan hanya membaca dengan teliti buku teks ilmu

mendidik ilmu kemasyarakatan masa kini menemukan sekolah pendidikan [kita/kami] untuk lihat ajaran [itu] yang sekarang memandu pengajaran pelajaran kewarga negaraan. Aku menyelenggarakan suatu eksperimen kecil di mana aku mengunjungi Universitas Missouri-St. Louis [Rombongan/ sekolah] Perpustakaan Pendidikan, secara acak memilih lima buku ilmu kemasyarakatan menerbitkan di masa dekade lalu atau kira-kira segitu, dan melakukan suatu analisa isi. Sebagai ilmuwan politis dibanding/bukannya suatu ahli pendidikan, ketidakramahan ku dengan siapa [yang dulu] atau bukanlah suatu figur utama di (dalam) bidang, dan siapa yang adalah atau tidaklah a " progresif," yang diusahakan aku suatu obyektifitas [yang] aku tidak boleh jika tidak pasti mempunyai. Aku hanya ingin mencicip bidang [itu] untuk lihat jika kesan ku suatu disiplin tidak patuh adalah akurat. Aku menemukan bahwa, hampir tanpa perkecualian, halaman [dari;ttg] buku ini berkerumun obat ajaib progresif yang (mana) pada [atas] permukaan membunyikan sama Amerika Seperti kue tar yang berisi apel, tetapi [atas/ketika] pemeriksaan semakin dekat mencerminkan suatu not-so-hidden agenda mendasarkan pada ketepatan politis [yang] mungkin untuk menternakkan ketidak-tahuan Sifat yang sinis Dan Sistem politik Amerika ke arah itu.

The first was Shirley Engle and Anna Ochoa's *Education for Democratic Citizenship: Decision Making in the Social Studies* (1988), published by Columbia University's Teachers College Press, which opens with the following passage:

In this book the social studies are linked incontrovertibly with the democratic ideal. Social studies . . . specializes in the education of an effective democratic citizen. The democratic citizen is not to be understood merely in the classic "good citizenship" sense of who is patriotic, loyal, and obedient to the state; rather, the good citizen is also a critic of the state, one who is able and willing to participate in its improvement (p. 3). Yang pertama adalah Shirley Engle Dan Anna Pendidikan Ochoa'S untuk Kewarga negaraan Demokratis: Pengambilan Keputusan di (dalam) Ilmu Kemasyarakatan (1988), yang diterbitkan oleh Columbia Tekanan Perguruan tinggi Para guru Universitas, Yang membuka dengan jalan lintasan yang berikut: Dalam buku ini ilmu kemasyarakatan dihubungkan incontrovertibly dengan ideal yang demokratis [itu]. Ilmu kemasyarakatan... mengkhususkan pendidikan dari suatu warganegara demokratis efektif. Warganegara yang demokratis tidaklah untuk dipahami melulu di (dalam) yang klasik " kewarga negaraan baik" [perasaan/pengertian] [siapa] yang adalah patriotik, setia, dan taat kepada status; melainkan, warganegara yang baik adalah juga suatu kritikus status, orang yang dapat dan berkeinginan mengambil bagian dalam peningkatan nya (p. 3).

Note the subtle devaluing of positive aspects of American democracy and the stress on "critical" scrutiny of the system. Playing up "critical thinking" and a focus on "controversy" rather than on giving students a basic familiarity with the everyday workings of the political system, the authors add: Catat yang sulit dipisahkan devaluing aspek [yang] positif [dari;ttg] Demokrasi Amerika dan tekanan terpasang " [yang] kritis" penelitian dengan cermat sistem [itu]. Mengembangkan " pemikiran kritis" dan suatu fokus terpasang " kontroversi" dibanding/bukannya pada [atas] memberi para siswa [adalah] suatu keakraban dengan aktip sehari-hari dasar sistem politik, pengarang menambahkan:

It is our position that the best hope for democracy lies not in indoctrination of shaky truths or in painting over problems that plague us, but rather with the cultivation of citizens who . . . have the facility to make intelligent judgments related to controversial issues in our society. . . . It is of far greater importance to focus on helping young people make intelligent . . . decisions for themselves than it is to tell them what to think. . . . We must stop exhorting students to be "good citizens" according to our own unquestioned view of good and help them instead to ask "good questions" about their own values and those of others. . . . Controversies, rather than fixed knowledge and values, will play a central role in the structure of social studies education (pp. 5-8). [Itu] adalah posisi [kita/kami] [bahwa/yang] harapan yang terbaik untuk demokrasi tidak berada di (dalam) pengajaran paham [dari;ttg] kebenaran goyah atau di (dalam) mengecat (di) atas permasalahan yang menggoda [kita/kami], tetapi lebih dengan

penanaman warganegara [siapa] yang... mempunyai fasilitas untuk membuat pertimbangan cerdas berhubungan dengan isu gemar bertengkar di (dalam) masyarakat [kita/kami].... [Itu] [menjadi/dari] arti penting [yang] lebih besar jauh untuk memusatkan pada [atas] membantu buatan orang-orang muda cerdas... keputusan untuk diri mereka dibanding [itu] adalah untuk ceritakan [kepada] [mereka/nya] apa yang harus berpikir.... Kita harus stop mendesak para siswa untuk ada " warganegara baik" menurut pandangan [yang] tidak ditanyakan kita sendiri [dari;ttg] baik dan membantu [mereka/nya] sebagai ganti(nya) untuk [minta;tanya] " pertanyaan baik" sekitar nilai-nilai mereka sendiri dan mereka yang (orang) yang lain.... Kontroversi, dibanding/bukannya menetapkan;perbaiki pengetahuan dan nilai-nilai, akan main suatu peran pusat di (dalam) struktur pendidikan ilmu kemasyarakatan (pp. 5-8).

Aside from denigrating the transmission of knowledge and equating it with "indoctrination," note the ostensibly morally neutral posture being promoted, while at the same time setting the groundwork for what is closer to nurturing "America-Worsters" than "America-Firsters," i.e., cultivation of a "let's not trash America, but if we trash anybody, let it be America" attitude. Terkecuali denigrating transmisi pengetahuan dan penyamaan [itu] dengan " pengajaran paham," mencatat [itu] pura-pura perawakan secara moral netral dipromosikan, [selagi/sedang] pada waktu yang sama menentukan dasar [itu] untuk apa [yang] adalah semakin dekat [bagi/kepada] memelihara " America-Worsters" dibanding " America-Firsters," yaitu., penanaman a " mari kita bukan Amerika sampah, tetapi jika kita sesiapapun sampah, biarlah itu terjadi Amerika" attitude.Aside dari denigrating transmisi pengetahuan dan penyamaan [itu] dengan " pengajaran paham," mencatat [itu] pura-pura perawakan secara moral netral dipromosikan, [selagi/sedang] pada waktu yang sama menentukan dasar [itu] untuk apa [yang] adalah semakin dekat [bagi/kepada] memelihara " America-Worsters" dibanding " America-Firsters," yaitu., penanaman a " mari kita bukan Amerika sampah, tetapi jika kita sesiapapun sampah, biarlah itu terjadi Amerika" Sikap.

Note, also, the assumption that uninformed students can make informed judgments. Echoing the anti-intellectualism of constructivist learning theories, the authors state (p. 10) that "dependable and meaningful knowledge seldom comes [from] . . . books or lectures . . . . It must be worked over in the mind and utilized in life situations never before seen and . . . unique to every individual." 17 "Problem-solving" is praised while "mastery of specific bits of information" is put down (p. 27). 18 Ignoring Franklin Delano Roosevelt's dictum that "in a democracy, the government functions with the consent of the whole people, [and] the latter must be guided by the *facts* [italics mine]," Engle and Ochoa (p. 55) insist that "facts learned just to be held in memory" are "next to useless, if not actually harmful." Catatan, juga, asumsi yang tak diberitahu para siswa dapat membuat pertimbangan diberitahukan. Gema anti-intellectualism constructivist yang belajar teori, status pengarang (p. 10) bahwa " pengetahuan penuh arti dan ketergantungan jarang datang [dari]... membukukan atau memberi kuliah.... [Itu] harus diolah lagi pikiran dan yang digunakan dalam hidup situasi tidak pernah [sebelum/di depan] dilihat dan... unik [bagi/kepada] tiap-tiap individu." 17 " Problem-Solving" dipuji; terpuji [selagi/sedang] " penguasaan [dari;ttg] bit informasi spesifik" diturunkan (p. 27). 18 Mengabaikan Franklin Delano Ucapan Roosevelt's yang " di (dalam) suatu demokrasi, pemerintah berfungsi dengan persetujuan keseluruhan orang-orang, [dan] yang belakangan harus dipandu oleh fakta [tambang/ranjau/aku huruf miring]," Engle Dan Ochoa (p. 55) meminta dengan tegas bahwa " fakta mempelajari hanya untuk [disimpan/laksanakan di] memori" adalah " hampir sia-sia, jika tidak benar-benar berbahaya."

Playing to multiple intelligences and the nonliterate culture, they do praise "art, music, drama" and such, stating (p. 56): "A picture may be more telling than a thousand words. . . . Children may gain greater insight into feudalism from . . . exploring the meaning of a photograph or a clay model of a feudal castle than in reading about feudalism from a history textbook." Were visuals presented as a useful supplement to books, one could hard-ly object; but they are presented here as coequal, even superior to reading as an intellectually taxing and rewarding

learning medium. Missing is any awareness of Benjamin Barber's caution that "books are a relic of a slowly vanishing culture of the word—democracy's indispensable currency and a faltering bulwark against the new world of images and pictures flashed across screens at a speed that thwarts all deliberation. Democracy, like a good book, takes time" (Barber, 1995, p. 118). Permainan [bagi/kepada] berbagai kecerdasan/inteligen dan nonliterate kultur, mereka memuji " seni, musik, drama" dan . seperti (itu), menyatakan (p. 56): " Suatu gambar-an mungkin (adalah) lebih menceritakan dibanding seribu kata-kata.... Anak-Anak boleh memperoleh pengertian yang mendalam lebih besar ke dalam feodalisme dari... menyelidiki arti dari suatu foto atau suatu model tanah liat suatu benteng feodal dibanding membaca sekitar feodalisme dari suatu buku teks sejarah." Apakah visuil diperkenalkan sebagai lampiran bermanfaat untuk membukukan, orang bisa hard-ly menolak; tetapi mereka diperkenalkan di sini [sebagai/ketika] sama, bahkan pembacaan lebih pandai daripada sebagai suatu dengan beralasan pajak dan yang bersifat penghargaan yang belajar medium. Yang hilang adalah manapun kesadaran Benjamin Perhatian tukang cukur yang " buku adalah suatu barang peninggalan suatu pelan-pelan lenyap kultur mata uang [yang] sangat dibutuhkan/harus ada word-democracy's dan suatu bimbang kubu melawan terhadap dunia baru gambaran dan gambar-an yang disiarkan ke seberang menyaring pada suatu kecepatan yang merintangi semua deliberation. Demokrasi, seperti suatu buku baik, memerlukan banyak waktu" (Tukang cukur, 1995, p. 118).

As one reads on, one realizes that the ultimate goal of social studies education is not only more affective than cognitive in nature but is calculated to produce not so much skeptics but cynics:

Citizens of a democracy must be allowed room for doubt, even of their own most cherished beliefs. They must be . . . able to withstand the socialization process. An important responsibility of education in a democracy is the *countersocialization* of youth [italics mine]. . . . Students are taught how to be skilled critics of the society rather than unquestioning citizen-soldiers. . . . [They must be liberated] from the dead weight of socialization (Engle and Ochoa, 1988, pp. 11-12). [Seperti/Ketika] sese]orang membaca terpasang, sese]orang menyadari bahwa gol pendidikan ilmu kemasyarakatan yang terakhir tidaklah hanya lebih secara cenderung dibanding teori secara alami tetapi dihitung untuk menghasilkan tidak begitu banyak para skeptis tetapi [yang] sinis:

Warganegara suatu demokrasi harus diijinkan ruang untuk keraguan, bahkan kepercayaan [yang] paling dibelai mereka sendiri. Mereka harus... mampu withstand proses sosialisasi [itu]. Suatu tanggung jawab pendidikan [yang] penting di (dalam) suatu demokrasi adalah countersocialisasi [masa/kaum] muda [tambang/ranjau/aku huruf miring].... Para siswa diajar bagaimana cara jadilah kritikus [yang] trampil masyarakat dibanding/bukannya tidak mempertanyakan citizen-soldiers.... [Mereka harus dibebaskan] dari bobot mati sosialisasi (Engle Dan Ochoa, 1988, pp. 11-12).

This means that "neither the teacher nor the textbook [should] serve as a major source of authority" (p. 163). We see here the caricaturing of traditional civics education, that to teach is to be a dictator, and to assign textbooks that tell the American story warts and all, and not just warts, is to misrepresent U.S. history. [Alat/ makna] ini yang " [bukan/tidak] guru maupun buku teks [perlukah] bertindak sebagai suatu sumber otoritas utama" (p. 163). Kita lihat di sini caricaturing pendidikan pelajaran kewarga negaraan tradisional, yang [itu] untuk mengajar (diharapkan) untuk suatu diktator, dan untuk menugaskan buku teks yang ceritakan [kepada] Kutil Cerita Amerika [itu] dan semua, dan tidak hanya kutil, adalah untuk salah menggambarkan U.S. sejarah.

Alan Singer's *Social Studies for Secondary Schools* (1997) outdoes Engle and Ochoa as an exemplar of progressive groupthink. From the outset, Singer signals his constructivist orientation: "I know this may sound heretical, but I do not think the specific content focus of a social studies curriculum should be the main concern" (p. x). His prescriptions for civics education sound more orthodox than heretical, as he associates himself with figures who are

worshipped by the progressive education establishment, such as Paulo Friere and John Dewey. On the student-centered, "democratic" classroom, he says, "I learned how to organize lessons centered on the interests and concerns of my students, rather than simply on what I would like to have discussed. . . . [I believe in] the importance of building democratic communities where students are able to express and explore ideas and feelings. . . . I argue that structured experiential learning is the most effective way to teach social studies" (pp. 7-8 and 65). He offers all the standard progressive clichés about direct instruction equaling "chalk and talk" and fostering dreary, dictatorial classrooms. Alan Ilmu Kemasyarakatan Penyanyi untuk Sekolah Menengah (1997) mengalahkan Engle Dan Ochoa sebagai suatu exemplar [dari;ttg] groupthink progresif. Sejak dari permulaan, Isyarat Penyanyi constructivist orientasi nya: " Aku mengetahui ini boleh bunyi heretical, tetapi aku tidak berpikir fokus isi yang spesifik suatu kurikulum ilmu kemasyarakatan harus merupakan perhatian yang utama" (p. x). Resep obat nya untuk pendidikan pelajaran kewarga negaraan bunyi lebih [] kaum ortodox dibanding heretical, [seperti/ketika] ia berhubungan [sen]dirinya dengan figur [siapa] yang dipuja oleh penetapan pendidikan yang progresif, seperti Paulo Friere Dan Yohanes Dewey. Pada [atas] yang student-centered, " demokratis" kelas, ia kata[kan, " Aku mempelajari bagaimana cara mengorganisir pelajaran memusat pada [atas] minat dan perhatian [dari;ttg] para siswa ku, dibanding/bukannya hanya pada apa aku bermaksud sudah membahas.... [Aku percaya akan] pentingnya bangunan masyarakat demokratis [di mana/jika] para siswa bisa menyatakan dan menyelidiki gagasan dan perasaan.... Aku membantah experiential pelajaran [yang] tersusun itu adalah [jalan/cara] yang paling efektif untuk mengajar ilmu kemasyarakatan" (pp. 7-8 dan 65). Ia menawarkan semua progresif yang baku clichés tentang instruksi langsung [yang] sama " kapur dan pembicaraan" dan mengembangkan kelas seperti diktator membosankan.

Deriding attention to facts as belonging to the "Dragnet" (or "Jeopardy") school of pedagogy, Singer goes so far as to state, "I do not believe there are any independent objective criteria for establishing a particular event or person as historically important" (p. 26). By this reading, 1776, the Declaration of Independence, and Thomas Jefferson are no more important than 1969, Woodstock, and Jefferson Airplane. It would seem incontestable that high school graduates should be able to place the U.S. Civil War in the correct half-century and that it is hard to do critical thinking about American democracy if one is clueless about the names of the Founding Fathers whose debates gave us a republican form of government. Today's civic educators consider this "Trivial Pursuit," however, as summed up in the views of Gary Nash, director of the 1994 National History Standards project, who commented that "we want to bury . . . the emphasis on dates, facts, places, events, and one damn thing after another. . . . [We want to] let children out of the prison of facts . . . and make them active learners" (cited in Ravitch, 2000, p. 434). 20 Never mind that, as Delli Carpini and Keeter (1996) note, factual competence is essential to civic competence: Nertawakan perhatian ke fakta [sebagai/ketika] kepunyaan [itu] " Jala penangkap ikan" (Atau " Resiko") [rombongan/ sekolah] ilmu mendidik, Penyanyi terjadi hingga sedemikian status, " Aku tidak percaya ada manapun ukuran-ukuran sasaran mandiri untuk menetapkan peristiwa atau orang tertentu [sebagai/ketika] menurut sejarah penting" (p. 26). Dengan ini pembacaan, 1776, Pernyataan Kemerdekaan, dan Thomas Jefferson adalah tidak [ada] lagi penting dibanding 1969, Woodstock, dan Jefferson Pesawat udara. [Itu] akan nampak tidak dapat dibantah yang sekolah menengah lulusan harus bisa menempatkan [itu] U.S. Perang Saudara di (dalam) half-century yang benar dan bahwa [bagi/kepada] lakukan kritis berpikir tentang Demokrasi Amerika jika satu adalah tanpa tanda/ kunci rahasia tentang nama Mendirikan Para bapak debat siapa memberi [kita/kami] suatu bentuk negara pendukung republik. Pendidik Kewarganegaraan masa kini mempertimbangkan ini " Pengejaran Sepele," bagaimanapun, [seperti/ketika] diringkas pandangan Gary Nash, Direktur yang 1994 Sejarah Nasional Proyek baku, [siapa] yang berkomentar bahwa " kita ingin kuburkan... penekanan pada [atas] biji, fakta, tempat, peristiwa, dan satu hal kutukan setelah yang lain.... [Kita ingin] anak-anak yang dibiarkan ke luar dari penjara fakta... dan membuat [mereka/nya] pelajar aktip" (yang dikutip Ravitch, 2000, p. 434). 20 Tidak apa-apa bahwa,

[sebagai/ketika/sebab] Delli Carpini dan Keeter (1996) catatan, kemampuan/ wewenang berdasar fakta adalah penting ke kemampuan/ wewenang kewarganegaraan:

We understand that effective citizenship requires more than just factual knowledge. . . . Among other things, citizens must also be able to reason, be committed to such fundamental democratic principles as freedom of speech and assembly, share a sense of community, and be willing and able to participate. . . . *Nonetheless, knowledge is a keystone to other civic requisites. In the absence of adequate information neither passion nor reason is likely to lead to decisions that reflect the real interests of the public* [italics mine] (p. 5).

Sean Wilentz of Princeton agrees, noting that educators "pose as courageous progressives dedicated to liberating schoolchildren from the tyranny of rote instruction. . . . But if they have their way, the widely lamented historical illiteracy of today's students will only worsen in the generations to come" (Wilentz, 1998, p. A15). Kita memahami kewarga negaraan [yang] efektif itu memerlukan lebih dari [hanya;baru saja] pengetahuan berdasar fakta.... Di antaranya, warganegara harus pula bisa alasan, jadilah merasa terikat dengan seperti prinsip [yang] demokratis pokok kebebasan untuk pidato/suara dan perakitan, [bagian;saham] suatu [perasaan/pengertian] masyarakat, dan jadilah rela dan mampu mengambil bagian.... Meskipun begitu, pengetahuan adalah suatu dasar(iman) [bagi/kepada] lain kewarganegaraan memerlukan. Di (dalam) ketidakhadiran [dari;ttg] informasi cukup [bukan/tidak] [penderitaan/nafsu] maupun alasan mungkin untuk didorong kearah keputusan yang mencerminkan minat yang riil orang banyak/masyarakat [tambang/ranjau/aku huruf miring] (p. 5).
Wilentz Princeton Sean setuju, mencatat yang pendidik " pose sebagai [yang] progresif berani dipersempahkan kepada membebaskan anak-anak sekolah dari kekejaman instruksi dihafal tanpa pikir.... Tetapi jika mereka mencapai maksud mereka , buta huruf historis yang secara luas [yang] diratapi [dari;ttg] para siswa masa kini akan hanya yang bertambah buruk generasi untuk datang" (Wilentz, 1998, p. A15).

Citing Alfie Kohn, Peggy McIntosh, and other such luminaries, Singer (pp. 66-67) urges teachers to "take a different approach to motivating students, focusing on the nature of classroom community rather than on particular subject content" and to adopt a "'feminist approach to education' based on an ethic of caring and concern for others." There is the obligatory bow to "cooperative learning," "inclusion," and "multiculturalism" (pp. 126ff and 220ff). To the extent that any exposure to facts is permitted, it must now "include everyone," every conceivable ethnic, gender, or other categorical group (p. 66). Mengutip Alfie Kohn, Peggy Mcintosh, dan lain . seperti (itu) benda angkasa bercahaya, Penyanyi (Pp. 66-67) para guru himbauan untuk " mengambil suatu pendekatan berbeda [bagi/kepada] memotivasi para siswa, memusatkan pada [atas] sifat alami masyarakat kelas dibanding/bukannya pada [atas] isi pokok tertentu" dan untuk mengadopsi a "' pejuang hak wanita mendekati ke pendidikan' yang didasarkan pada suatu susila mempedulikan dan berhubungan dengan untuk (orang) yang lain." Ada haluan/busur yang wajib untuk " koperasi [yang] belajar," " pemasukan," dan " multiculturalism" (pp. 126ff dan 220ff). Kepada tingkat bahwa semua ekspose ke fakta diijinkan, [itu] sekarang harus " meliputi semua orang," tiap-tiap [yang] kesukuan dapat dikayalkan, jenis kelamin, atau lain kelompok pasti/mutlak (p. 66).

The presence in the world of some 1,500 different ethnic groups poses a large time-on-task problem for the 180-day school year. 21 Even the imperative to give equal time to women alongside men can lead to silliness, such as McIntosh's suggestion that Beethoven and Beethoven's mother deserve equal coverage. 22 If our schools in the past were excessively exclusionist and dominated by a Western canon focused on "DWEMS" (dead white European males), we now have what could be called the "Pachelbel canon" approach to history that threatens to trivialize the past (the latter being the theme music from the movie "Ordinary People"). For better or worse, DWEMS dominated much of the political history of the world, certainly the history of the United States. If one really believes in situational learning, then

one should heed Edwin Yoder's advice: Kehadiran dalam dunia sekitar 1,500 kelompok [yang] kesukuan berbeda bersikap suatu time-on-task masalah besar untuk 180-day tahun pelajaran. 21 Bahkan yang sangat mendesak untuk memberi waktu sama ke wanita-wanita di samping/sepanjang orang dapat mendorong kearah kedunguan, seperti Usul McIntosh's yang Beethoven dan Ibu Beethoven's [berhak/layak] pemenuhan sama. 22 Jika sekolah [kita/kami] di masa lalu terlalu sering exclusionist dan yang dikuasai oleh suatu Aturan barat memusat terpasang " DWEMS" ([Jantan/Pria] mengenai Eropa putih mati), kita sekarang mempunyai apa [yang] bisa [disebut/dipanggil] [itu] " Pachelbel Aturan" mendekati ke sejarah yang mengancam ke trivialize masa lalu (yang belakangan menjadi;disebut musik tema dari bioskop " Orang-Orang Biasa"). Baik dalam untung maupun malang, DWEMS mendominasi sebagian besar sejarah yang politis dunia, pasti sejarah Amerika Serikat [itu]. Jika satu benar-benar percaya akan situational [yang] belajar, kemudian sese]orang [perlu] memperhatikan Edwin Nasihat Yoder's:

[Young people] need to learn first about our own [U.S.] traditions, and those from which they derive. You can't understand the ideas in the Declaration of Independence without knowing a bit about John Locke's treatise on government. Locke leads back into the English revolution of 1688. And that may lead back to the Magna Carta. . . . We should learn who we are before we venture to learn who we aren't (Yoder, 1996, p. B7). [Orang-Orang muda] harus belajar pertama sekitar kita sendiri [U.S.] tradisi, dan [mereka/yang] dari yang [yang] mereka memperoleh. Kamu tidak bisa memahami gagasan [itu] di (dalam) Pernyataan Kemerdekaan tanpa pengetahuan sedikit sekitar Yohanes [Risalah/Acuan] Locke's pada [atas] pemerintah. Locke Antaran kembali ke Revolusi Bahasa Inggris [itu] 1688. Dan itu boleh memimpin kembali ke Magna [itu] Carta.... Kita [perlu] belajar [siapa] yang kita adalah [sebelum/di depan] kita berspekulasi untuk belajar [siapa] yang kita bukan (Yoder, 1996, p. B7).

Given the fact that the standards for what constitutes historical accuracy and mastery are so low, we should not be surprised that Singer (p. 64) believes students, by the time they reach high school if not sooner, are ready to "become historians and social scientists." In keeping with the mantra of "active learning," students must not be content to learn history, but must *do* history! Peter Martorella, in *Teaching Social Studies in Middle and Secondary Schools* (2001), agrees. Like Singer, Martorella proudly bares his progressive, constructivist credentials at the start, acknowledging his debt to Dewey, Engle, and others, and his commitment to "countersocialization" (pp. 24 and 28). He states that Dengan fakta bahwa standard untuk apa [yang] [mendasari/membuat] penguasaan dan ketelitian historis menjadi sangat rendah, kita harus tidak dikejutkan bahwa Penyanyi (p. 64) para siswa percaya, pada saat itu mereka tidak menjangkau sekolah menengah jika lebih cepat, adalah siap;kan untuk " sarjana pengetahuan masyarakat dan sejarawan yang di;jadi;kan." Sehubungan dengan mantra " pelajaran aktip," para siswa harus tidak isi untuk belajar sejarah, tetapi harus lakukan sejarah! Petrus Martorella, di (dalam) Mengajar Ilmu Kemasyarakatan di (dalam) Pertengahan Dan Sekolah Menengah (2001), setuju. [Seperti;Suka] Penyanyi, Martorella [yang] yang dengan bangga telanjang [yang] progresif nya, constructivist surat kepercayaan di start, mengetahui hutang nya ke Dewey, Engle, dan (orang) yang lain, dan komitmen nya untuk " countersocialisasi" (pp. 24 dan 28). Ia negara yang

. . . the basic purpose of the social studies curriculum across the grades is to develop reflective, competent, and concerned citizens. . . . Reflective individuals are critical thinkers who make decisions and solve problems. . . . Competent citizens possess a repertoire of skills to aid them in decision making and problem solving. Concerned citizens investigate their social world, identify issues they identify as significant, exercise their rights, and carry out their responsibilities as members of a social community. . . . [Social studies should be viewed as] a matter of the head, the hand, and the heart. The head represents reflection, the hand denotes competencies, and the heart symbolizes concern (p. 29). tujuan dasar kurikulum ilmu kemasyarakatan ke seberang sekolah dasar adalah untuk kembang;kan yang memantulkan cahaya, berkompeten, dan warganegara terkait.... Individu yang memantulkan cahaya adalah

pemikir kritis [siapa] yang membuat keputusan dan memecahkan permasalahan.... Warganegara berkompeten memiliki suatu daftar lagu-lagu ketrampilan untuk membantu [mereka/nya] di (dalam) pengambilan keputusan dan pemecahan masalah. Warganegara terkait menyelidiki dunia sosial mereka, mengidentifikasi isu [yang] mereka mengidentifikasi [ketika;seperti] penting, latihan [hak/ kebenaran] mereka, dan menyelesaikan tanggung-jawab mereka [sebagai/ketika] anggota suatu masyarakat sosial.... [Ilmu kemasyarakatan harus dipandang sebagai] sesuatu yang kepala, tangan, dan [hati/jantung] [itu]. Kepala menghadirkan cerminan/pemantulan, tangan menandakan kemampuan, dan [hati/jantung] menandakan perhatian (p. 29)

Note that not only is the mind considered no more important than the hand, but the mind does not even include knowledge, as one is expected to reflect upon something one does not possess. We have come a long way since Jeremiah Day and James Kingsley, in their 1830 *Reports on the Course of Instruction in Yale Colleg*e, remarked about education that "the two great points to be gained . . . are the discipline and furniture of the mind—expanding its powers, and storing it with knowledge." 23 Today there is no discipline, and the room is barren of furniture. Catat bahwa tidak hanya adalah pikiran tidak lagi mempertimbangkan penting dibanding tangan, tetapi pikiran tidak genap meliputi pengetahuan, [seperti/ketika] satu diharapkan untuk mencerminkan [atas/ketika] sesuatu (yang) sese]orang tidak menguasai. Kita sudah datang suatu merindukan [jalan/cara] [karena;sejak] Jeremiah Hari Dan Yakobus Kingsley, di (dalam) mereka 1830 Laporkan pada [atas] keadaan Instruksi di (dalam) Yale Perguruan tinggi, berkata sekitar pendidikan yang " dua poin-poin besar untuk diperoleh... adalah disiplin dan mebel mind-expanding kuasa-kuasa nya, dan penyimpanan [itu] dengan pengetahuan." 23 Hari ini tidak ada disiplin, dan ruang adalah tidak tumbuh mebel.

However, there are plenty of "intelligences," as Martorella (p. 383) endorses multiple intelligences (MI) theory, urging that students "should engage in activities that draw on both hemispheres of the brain." 24 I am reminded of an advertisement that read as fol-lows: *"Adventure Tales of America: An Illustrated History of the United States, 1492-1877* fully integrates recent learning research in a U.S. history textbook. . . . Bagaimanapun, ada banyak dari " kecerdasan/inteligen," [sebagai/ketika/sebab] Martorella (p. 383) menguasakan berbagai kecerdasan/inteligen (MI (3)) teori, menghimbau yang para siswa " perlukah terlibat dalam aktivitas yang mendukung belahan bumi kedua-duanya otak." 24 aku diingatkan dari suatu iklan yang membaca [ketika;seperti] fol-lows: " Cerita Petualangan Amerika: Suatu Sejarah [yang] Digambarkan Amerika Serikat, 1492-1877 secara penuh mengintegrasikan terbaru belajar riset di (dalam) suatu U.S. buku teks sejarah....

Through its multicultural emphasis, strong role models, and dramatic style, students experience U.S. history as a personal adventure. The key to this textbook is its left brain/right brain format. . . . It presents U.S. history to both sides of the brain simultaneously through: words and analysis for the logical, sequential left brain, and pictures, humor, emotion, and drama for the creative, global right brain." 25 We have here not only the possibility of rewriting American history but also refeeling, reenacting, and redrawing it. Melalui/Sampai multicultural penekanan nya, model peran kuat, dan gaya dramatis, para siswa mengalami U.S. sejarah sebagai petualangan pribadi. Kunci pada buku teks ini . nya brain/right format otak kiri.... [Itu] menghadiahi U.S. sejarah ke kedua sisi otak [yang] secara serempak melalui/sampai: kata-kata dan analisa untuk yang logis, percontohan meninggalkan otak, dan gambar-an, lelucon, emosi, dan drama untuk yang kreatif, otak [hak/ kebenaran] global." 25 Kita mempunyai di sini tidak hanya kemungkinan menulis ulang Sejarah Amerika tetapi juga merasakan kembali, memberlakukan lagi, dan menjabar/mereduksi itu.

Jack Zevin's *Social Studies for the Twenty-First Century* (2000) offers a more balanced treatment that blends traditionalism with progressivism, but is still relatively heavy on the "fun" part of the equation. He reveals his priorities in a "personal prologue":

Part of the reason social studies is disliked by so many secondary students is that it holds out the promise of . . . vibrant discussion and debate . . . [but] didactic or knowledge aims nearly always triumph over reflective reasoning and ethical arguments. The "sexy stuff " . . . caves in to the "laundry list" of purportedly vital knowledge of dates, names, places, and books. . . . I remember very vividly how bored my urban, inner-city classes were with the facts they had to know and how lively they would become when they . . . [were given] a chance to "spout off " (p. xiv). Dongkrak Ilmu Kemasyarakatan Zevin'S untuk Twenty-First Abad (2000) menawarkan suatu perawatan [yang] lebih seimbang yang mencampur traditionalism dengan progressivism, tetapi masih secara relatif berat/lebat pada [atas] " kesenangan" bagian dari penyamaan [itu]. Ia mengungkapkan prioritas nya di (dalam) a " kata pendahuluan pribadi":

Bagian dari ilmu kemasyarakatan alasan dibenci oleh sangat banyak para siswa sekunder adalah bahwa [itu] bertahan janji... diskusi [bergetar/bersemangat] dan debat... [tetapi] didaktis atau pengetahuan mengarahkan hampir selalu memenangkan (di) atas pemikiran yang memantulkan cahaya dan argumentasi etis. " Bahan yang menggairahkan"... runtuh kepada " daftar penatu" tentang secara mengaku pengetahuan [yang] penting biji, nama, tempat, dan buku.... Aku ingat dengan jelas bagaimana bosan [yang] berkenaan dengan kota ku, kelas bagian tertua suatu kota ada bersama fakta [yang] mereka harus lebih dulu mengetahui dan bagaimana lincah mereka akan menjadi ketika mereka... [telah berikan kepada] suatu kesempatan " cerek batal/mulai" (p. xiv).

"Spouting off " used to be called "bull sessions." Now it is considered "education." Among the suggestions he offers for promoting such modes of analysis is a "drama-building strategy," that is, a pedagogy that "examines the emotional impact of a story, person, event, or document and often yields a sense of catharsis and involvement for the learner" (p. 107). As for the "sexy stuff," he says "students generally enjoy a good story line, especially if it involves adventure, sexual innuendo, or tension among characters" (p. 107). 26 In other words, history as soap opera. He adds that "music is a lovely change of pace from the words that seem to dominate social studies" (p. 368). " Cerek batal/mulai" yang digunakan untuk [disebut/dipanggil] " diskusi yang tidak penting." Sekarang [itu] dipertimbangkan " pendidikan." Di antara usul [yang] ia menawarkan untuk mempromosikan . seperti (itu) gaya analisa a " drama-building strategi," itu adalah, suatu ilmu mendidik yang " menguji dampak yang emosional seorang cerita, orang, peristiwa, atau dokumen dan sering juga menghasilkan suatu [perasaan/pengertian] catharsis dan keterlibatan untuk pelajar" (p. 107). Perihal " bahan yang menggairahkan," ia kata[kan " para siswa [yang] biasanya menikmati suatu garis cerita baik, [yang] terutama jika [itu] melibatkan petualangan, sindiran seksual, atau tegangan antar karakter" (p. 107). 26 Dengan kata lain, sejarah [sebagai/ketika] komedi stambul. Ia menambahkan bahwa " musik adalah suatu perubahan [yang] menyenangkan melangkah dari kata-kata yang nampak untuk mendominasi ilmu kemasyarakatan" (p. 368).

Zevin struggles, as do most social studies educators, with how, on the one hand, to teach "citizenship education" as *American* citizenship while, on the other hand, not promoting too narrow and nationalistic a worldview. The way he and most of his colleagues resolve this issue is to promote global citizenship over U.S. citizen-ship. One problem is that the concept of global citizenship assumes there is a universal set of values accepted worldwide, which of course is nonsense, given the fact that a majority of states are "not free" or only "partly free" and are habitual human rights violators (Freedom House, 2002). Another problem is that the American experience is now to be treated as just another story, to be "integrated" into the larger human story. Zevin Perjuangan, seperti halnya kebanyakan pendidik ilmu kemasyarakatan, dengan bagaimana, pada [atas] [yang] satu menyampaikan, untuk mengajar " pendidikan kewarga negaraan" [sebagai/ketika/sebab] Kewarga negaraan Amerika [selagi/sedang], pada sisi lain, tidak promosi terlalu membatasi dan kebangsaan suatu worldview. [Jalan/Cara] [yang] ia dan kebanyakan dari para rekan kerja nya memecahkan isu ini adalah untuk mempromosikan kewarga negaraan global (di) atas U.S. citizen-ship. Satu masalah adalah bahwa konsep [dari;ttg] kewarga negaraan global mengasumsikan ada suatu satuan nilai-nilai universal menerima di seluruh dunia, yang tentu saja adalah omong kosong, diberi fakta bahwa

sebahagian terbesar dari negara adalah " tidak cuma-cuma" atau saja " sebagian cuma-cuma" dan adalah pelanggar hak azasi manusia kebiasaan (Kebebasan Mondokkan, 2002). Masalah lain adalah bahwa Pengalaman Amerika kini untuk diperlakukan sebagai [hanya;baru saja] cerita lain, untuk " yang terintegrasi" ke dalam cerita manusia yang lebih besar.

However, Arthur Schlesinger (1992) has argued persuasively that the very intellectuals who preach "integration" and "inclusion" are in effect promoting the "balkanization" of America by legitimizing divisive, group identity politics over the "melting pot" metaphor. 27 Jeffrey Mirel (2002, p. 50) notes that, whereas at one time the "Common School ideal" was to teach "the common American culture" and "civic values" grounded in the Declaration of Independence and the Constitution and to "awaken [in immigrant children especially] a reverence for . . . those things in our national life which we as a people hold to be of abiding worth," now everything is up for debate, including whether it is appropriate for educators to focus on "national" life. Bagaimanapun, Arthur Schlesinger (1992) telah membantah dengan penuh bujukan [bahwa/yang] [yang] yang sangat intelektual [siapa] yang kotbahkan " pengintegrasian" dan " pemasukan" pada hakekatnya mempromosikan " balkanisasi" tentang Amerika dengan pengesahan bersifat memecah belah, politik identitas kelompok (di) atas " meleleh pot" kiasan. 27 Jeffrey Mirel (2002, p. 50) mencatat bahwa, sedangkan pada suatu waktu " Sekolah Yang umum ideal" adalah untuk mengajar " yang umum Kultur Amerika" Dan " Nilai-Nilai Kewarganegaraan" yang didasarkan pada Pernyataan Kemerdekaan dan Konstitusi dan untuk " membangkitkan [di (dalam) anak-anak imigran [yang] terutama] suatu penghormatan untuk... berbagai hal itu di (dalam) yang hidup nasional [kita/kami] [yang] kita sebagai orang-orang berpaut [menjadi/dari] [yang] berharga terpercaya," sekarang segalanya sudah waktunya debat, mencakup apakah [itu] adalah sesuai dengan pendidik untuk memusatkan terpasang " nasional" hidup.

Moreover, Zevin shares the dominant view among social studies gurus that not only has the teaching of American history over the years been too exclusionary, but it has also been too "sanitized" and "self congratulatory" (pp. 255 and 265). While he (p. 279; also see p. 398) recognizes that "all civics . . . courses face a built-in dilemma—how to balance socialization with criticism," he fails to acknowledge the extent to which "countersocialization" has prevailed. Diane Ravitch (2002, p. 9) has noted "a strong tone of cultural resentment [that] pervades" many social studies text-books today. 28 To paraphrase Gary Nash, teaching about the American political system has become the chronicling of one damn victim after another. Lebih dari itu, Zevin berbagi pandangan yang dominan antar guru ilmu kemasyarakatan yang tidak hanya mempunyai pengajaran [dari;ttg] Sejarah Amerika dari tahun ke tahun juga exclusionary, tetapi [itu] telah pula juga " [yang] sanitized" dan " diri berisi ucapan selamat" (pp. 255 dan 265). [Selagi/Sedang] ia (p. 279; juga lihat p. 398) mengenali bahwa " semua pelajaran kewarga negaraan... kursus menghadapi suatu built-in dilemma-how untuk menyeimbangkan sosialisasi dengan kritik," ia gagal untuk mengakui adanya tingkat [bagi/kepada] yang (mana) " countersocialisasi" telah berlaku. Diane Ravitch (2002, p. 9) telah mencatat " suatu nada [yang] kuat [dari;ttg] kemarahan budaya [bahwa] meliputi" banyak ilmu kemasyarakatan text-books hari ini. 28 Untuk menafsirkan Gary Nash, mengajar tentang Sistem politik Amerika telah menjadi chronicling satu korban kutukan setelah yang lain.

One need only witness the various prescriptions of "what to teach about 9/11" offered by the National Education Association and other elements of the K-12 establishment on the first anniversary of that horrific day to realize the latter's reluctance to associate themselves with the patriotism that gripped much of the rest of the country. The suggested "lesson plans" were a textbook example of the trends toward not only the nonjudgmental classroom but also the therapeutic, fact-free classroom. Satu kebutuhan hanya bersaksi [itu] berbagai resep obat " apa yang harus mengajar sekitar 9/11" yang ditawarkan oleh Asosiasi Pendidikan Yang nasional dan lain unsur-unsur K-12 Penetapan pada [atas] hari ultah yang pertama (menyangkut) hari horrific itu untuk [merealisir/sadari] keseganan/hambatan belakangan [itu] untuk berhubungan diri

mereka dengan patriotisme yang menggenggam sebagian besar sisa dari negeri [itu]. Yang diusulkan " Rencana Pelajaran" sekedar contoh buku teks kecenderungan ke arah tidak nonjudgmental kelas tetapi juga yang mengobati [itu], fact-free kelas.

29 Astonishingly, the website of the National Council of the Social Studies in September 2002 stressed the teaching of tolerance as an antidote to "the anti-democratic" forces at work in the United States represented by the Bush administration, and listed as its *first* recommended lesson plan a look at the internment of Japanese-Americans that followed Pearl Harbor. 30 This was consistent with the advice given by a keynote speaker at the annual meeting of the National Council for Social Studies just two months after 9/11, who "warned against patriotic displays like the singing of 'God Bless America'" (Hymowitz, 2002). 29 Secara mengejutkan, website Dewan [yang] Yang nasional Ilmu Kemasyarakatan pada bulan September 2002 menekankan pengajaran toleransi sebagai suatu penawar racun untuk " yang anti-democratic" memaksa di tempat kerja di (dalam) Amerika Serikat yang diwakili oleh Administrasi Semak, dan mendaftar [ketika;seperti] nya lebih dulu pelajaran direkomendasikan merencanakan suatu nampak/wajah di penawanan Japanese-Americans Mutiara [yang] diikuti itu Lindungi. 30 Ini adalah konsisten dengan nasihat yang diberi oleh seorang pembicara inti sari di pertemuan tahunan Dewan Yang nasional untuk Ilmu Kemasyarakatan [hanya;baru saja] dua bulan setelah 9/11, [siapa] yang " memperingatkan spy hati2 thd pajangan patriotik seperti bernyanyi Tuhan Memberkati Amerika"' (Hymowitz, 2002).

Again, to the extent criticism is permitted, it tends to be criticism of the United States (e.g., the kind of "why do they hate us, what have we done wrong?" self-flagellation that followed 9/11). Given the at best neutral, at worst negative, portrait painted of American democracy, we should perhaps not be surprised at young people's civic lethargy. As a solution to this lethargy, Zevin, like many other educators, stresses the importance of less seat time in class and more "community experience, volunteer work, and precinct-level door-to-door campaigning," as well as other forms of "activism" (pp. 264 and 274). Of course, if schools were not so busy producing cynics and instead engaged children in deep, profound, substantive discussion of the promise and problems of American democracy, perhaps they would not have to resort to coerced volunteerism and other academic diversions (like conflict resolution). Lagi, kepada tingkat kritik diijinkan, [itu] [tuju/ cenderung] untuk;menjadi kritik Amerika Serikat (E.G., macam " kenapa mereka benci [kita/kami], apa [yang] sudah kita berbuat jahat?" self-flagellation yang mengikuti 9/11). Dengan paling baik netral, paling sial negatif, potret mencat Demokrasi Amerika, kita [perlu] barangkali tidak dikejutkan pada kelesuan kewarganegaraan masyarakat muda. Sebagai solusi pada kelesuan ini , Zevin, [seperti;suka] banyak orang lain pendidik, menekankan pentingnya lebih sedikit waktu tempat duduk di (dalam) kelas dan lebih [] " pengalaman masyarakat, pekerjaan sukarelawan, dan precinct-level yang mengunjungi rumah berkampanye," seperti halnya lain format activism" (pp. 264 dan 274). Tentu saja, jika sekolah tidak demikian sinis memproduksi sibuk dan sebagai ganti(nya) bertaut anak-anak di (dalam) diskusi kata benda [yang] [yang] dalam janji dan permasalahan [dari;ttg] Demokrasi Amerika, barangkali mereka belum mempunyai untuk memohon pertolongan volunteerism dipaksa dan lain diversi akademis ([seperti;suka] resolusi konflik).

In *Teaching and Learning Secondary Social Studies* (1991), the final book I examined, Arthur Ellis, Jeffrey Fouts, and Allen Glenn come closest to presenting a balanced view of civics education, one that respects a "knowledge-centered" approach (focused on subject matter content) alongside a "society-centered" approach (focused on problem solving) and a "learner-centered" approach (focused on activities). Alas, however, even these authors cannot bring them-selves to rate the "knowledge-centered" approach first among equals, as they associate it with "negative attitudes" students have toward social studies, only grudgingly concede the need for testing "low level" information, and conclude that "the truth is that there is no perfect

center of the social studies curriculum" (pp. 67, 134, and 19). Di (dalam) Mengajar dan Belajar Ilmu Kemasyarakatan Sekunder (1991), buku I yang akhir menguji, Arthur Ellis, Jeffrey Fouts, dan Allen Glenn datang terdekat ke memperkenalkan suatu pandangan pendidikan pelajaran kewarga negaraan seimbang, apa yang pengakuan itu a " knowledge-centered" pendekatan (yang dipusatkan pada [atas] isi pokok) di samping/sepanjang a " society-centered" pendekatan (yang dipusatkan pada [atas] masalah [yang] memecahkan) dan a " learner-centered" pendekatan (yang dipusatkan pada [atas] aktivitas). Aduh, bagaimanapun, bahkan pengarang ini tidak bisa membawa them-selves untuk menilai " yang knowledge-centered" mendekati pertama antar sama, [seperti/ketika] mereka berhubungan ia/nya dengan " sikap negatif" para siswa mempunyai ke arah ilmu kemasyarakatan, hanya dengan enggan mengizinkan kebutuhan akan pengujian " tingkat rendah" informasi, dan menyimpulkan bahwa " kebenaran adalah bahwa tidak ada pusat [yang] sempurna kurikulum ilmu kemasyarakatan" (pp. 67, 134, dan 19).

Here, too, they cannot resist repeating the pabulum found in the other books: "To effectively incorporate the experiences, voices, struggles, and triumphs of marginalized groups in the social studies, the curriculum must be reconceptualized and transformed . . . . The development of a transformative social studies curriculum presents a major challenge . . . [requiring] new ways of thinking about the United States and the world" (p. 277). 31 Di sini, juga, mereka tidak bisa membalas mengulangi pabulum [itu] menemukan buku lain : " Untuk secara efektif menyertakan pengalaman [itu], suara, perjuangan, dan kemenangan [dari;ttg] kelompok marginalized di (dalam) ilmu kemasyarakatan, kurikulum harus diubah dan reconceptualized.... Pengembangan suatu transformative kurikulum ilmu kemasyarakatan menghadiahi suatu tantangan utama... [menuntut] cara pikir baru tentang Amerika Serikat dan dunia" (p. 277).

The bigger challenge facing American education would seem to remain one of training students who are not idiots when it comes to civic competence and concern. It is fine to "think globally," but can graduates of America's schools "act locally," in an informed, positive manner, when it comes to their *own natio*n? Walter Parker (2003), a leading theorist of citizenship education, raised this very question in a symposium at the 2002 annual meeting of the National Council for the Social Studies, entitled "From Idiocy to Citizenship." The answer seems to continue to elude today's social studies trendsetters. Tantangan yang lebih besar [yang] menghadapi Pendidikan Amerika akan nampak untuk tinggal salah satu dari para siswa pelatihan [siapa] yang bukanlah orang bodoh ketika [itu] datang ke kemampuan/ wewenang kewarganegaraan dan berhubungan dengan. [Itu] adalah bagus untuk " berpikir serentak," tetapi dapat lulus Sekolah America's " bertindaklah di tempat itu," di (dalam) suatu cara positif diberitahukan, ketika [itu] datang ke bangsa mereka sendiri? Walter Tukang parkir (2003), suatu ahli teori pendidikan kewarga negaraan terkemuka, mengangkat ini sangat mempertanyakan [adalah] suatu symposium di yang 2002 pertemuan tahunan Dewan Yang nasional untuk Ilmu Kemasyarakatan, berjudul " Dari Kebodohan ke Kewarga negaraan." Jawaban nampak untuk melanjut untuk berkelit ilmu kemasyarakatan masa kini trendsetters.

THE SOLUTION

We need to improve *both* civic information *and* civic interest on the part of our youth. If the earlier paradigm of K-12 civics education suffered from a sanitized, exclusionist bias, a tendency toward information overkill, or other such flaws, we now have overcorrect-ed in the other direction. We still do not have the balance right. What do we need to do? Kita memerlukan kedua-duanya, peningkatan informasi informasi civics dan minat/perhatian civics pada pihak kaum muda kita. Jika paradigma K-12 Pendidikan kewarga negaraan yang lebih awal menderita karena suatu sanitized, exclusionist penyimpangan, suatu kecenderungan ke arah pembantaian informasi, atau lain . seperti (itu) kekurangan, kita sekarang mempunyai overcorrect-ed arah lain . Kita tetap tidak mempunyai sisanya benar. Apa yang kita harus lakukan?

- First, we need to reaffirm the importance of students studying American history—*their* history—in its own right, and not merely as part of some "integrated" world history. Moreover, we need to provide a more accurate rendering of American history. While acknowledging the contributions of the Grimke sisters and of "ordinary" people and people of color, we also need to give proper space to Washington, Jefferson, and the true heroes of the American story. Pertama, kita harus menegaskan lagi pentingnya para siswa [yang] belajar Amerika History-Their history-in [hak/ kebenaran] sendiri, dan tidak melulu sebagai bagian dari beberapa " yang terintegrasi" sejarah dunia. Lebih dari itu, kita harus menyediakan suatu [yang] [yang] akurat menyumbangkan Sejarah Amerika. [Selagi/Sedang] mengetahui kontribusi Grimke Para saudari dan [tentang] " biasa" orang-orang dan orang-orang warna, kita juga harus memberi [ruang;spasi] sesuai ke Washington, Jefferson, dan pahlawan [yang] benar Cerita Amerika.

- Second, we need not be bashful about the extraordinary achievements of the American political system, which has, after all, produced the largest, most successful, most prosperous experiment in mass democracy in the million years humanity has been on the planet. While acknowledging a racist, sexist past that still lingers to an extent, we should read aloud to our students the words of Vaclav Havel, the Czech poet who helped lead his country out of communist dictatorship in the 1980s. Speaking before the U.S. Congress after the fall of the Berlin Wall, he said: "As long as people are people, democracy, in the full sense of the word, will always be no more than an ideal. In this sense, you, too, are merely approaching democracy. But you have one great advantage: you have been approaching democracy uninterruptedly for more than 200 years." Ke dua, kita tidak perlu jadilah kemalu-maluan tentang prestasi yang luar biasa Sistem politik Amerika, Yang mempunyai, betapapun, memproduksi yang paling besar, eksperimen paling berhasil, [yang] paling makmur di (dalam) demokrasi massa di (dalam) yang juta tahun ras manusia telah (menjadi) pada [atas] planet. [Selagi/Sedang] mengetahui suatu pembenci suku bangsa lain, sexist yang yang lampau yang masih tetap hidup [bagi/kepada] suatu luas, kita [perlu] membaca dengan suara keras kepada para siswa [kita/kami] kata-kata Vaclav Havel, Penyair Cekoslovakia [siapa] yang membantu [petunjuk/ ujung/ laju-awal] negeri nya ke luar dari pemerintahan diktator komunis di (dalam) [itu] 1980s. Pidato [sebelum/di depan] [itu] U.S. Konggres setelah kejatuhan Dinding Berlin, ia berkata: " Sepanjang orang-orang adalah orang-orang, demokrasi, di [dalam] [perasaan/pengertian] penuh kata[an], akan selalu tidak lebih daripada suatu ideal. Dalam hal ini, kamu, juga, melulu mendekati demokrasi. Tetapi kamu mempunyai satu keuntungan besar: kamu tengah mendekati demokrasi [yang] tak henti-hentinya untuk lebih dari 200 tahun."
- Third, we need to stress the importance of students starting with a common base of factual information about the American historical and contemporary experience. While promoting higher order thinking skills, we must acknowledge that this is not only compatible with memorizing names, dates, statistics, etc., but pre-supposes the latter. Precise recall is less important than developing a solid "ballpark" sense of history and the present, one that is stored in the brain rather than requiring constant "on-line access." At the same time, we should experiment with pedagogical strategies that may more successfully enable teachers to produce such factual literacy. 35 Before students can be expected to save the plan-et, they need to have at least a rough picture of what they are up against, of what reality looks like. The "Position Statement" on "Creating Effective Citizens," published by the National Council for the Social Studies in 2001, hints at the importance of insuring each student "has knowledge of our nation's founding documents, civic institutions, and political processes," but does not go far enough—relegating this to the middle rank of 10 goals. Ketiga, kita harus menekan pentingnya para siswa mulai dengan suatu basis bersama [dari;ttg] informasi berdasar fakta tentang Pengalaman jaman ini dan historis Amerika. [Selagi/Sedang] promosi [order/ pesanan] lebih tinggi yang berpikir ketrampilan, kita harus mengakui adanya bahwa ini bukan hanya kompatibel dengan menghafalkan nama, biji, statistik, dll., tetapi pre-supposes yang belakangan. Daya ingat tepat adalah lebih sedikit penting dibanding mengembang;kan suatu padat " ballpark" [perasaan/pengertian] sejarah dan hadiah, apa yang itu disimpan otak dibanding/bukannya menuntut tetap " akses on-line." Pada waktu yang sama, kita [perlu] mengadakan percobaan dengan strategi bersifat pendidikan yang boleh dengan sukses

memungkinkan para guru untuk menghasilkan . seperti (itu) [yang] melek huruf berdasar fakta. 35 [Sebelum/Di depan] para siswa dapat diharapkan untuk [menyelamatkan;menabung] plan-et [itu], mereka harus mempunyai sedikitnya suatu gambar-an keras/kasar/kejam dari apa [yang] mereka adalah menghadapi, dari apa [yang] kenyataan kelihatan seperti. " Statemen Posisi" terpasang " Menciptakan Warganegara Efektif," yang diterbitkan oleh Dewan Yang nasional untuk Ilmu Kemasyarakatan di (dalam) 2001, mengisyaratkan di pentingnya mengasuransikan siswa masing-masing " mempunyai pengetahuan [dari;ttg] bangsa [kita/kami] mendirikan dokumen, institusi kewarganegaraan, dan proses politik," tetapi tidak pergi enough-relegating jauh ini kepada ranking pertengahan 10 gol.

- Fourth, we need to cultivate teachers who are not only passionate about kids but about their subject matter. Such passion, as Shanker (1996b) noted, tends to be correlated with deep subject matter expertise. 37 We need teachers who not only have read books on teaching about slavery and the Holocaust but also have read books *on* slavery and the Holocaust. Process is no substitute for con-tent. Teaching about politics is more likely to come alive with a serious, captivating lecturer than with fun and games. There is a need to develop stronger links between the pedagogical experts in schools of education and the content experts in arts and sciences. Keempat, kita harus menanami para guru [siapa] yang tidaklah hanya [penuh kasih/bernafsu] tentang anak kambing tetapi sekitar pokok mereka. . seperti (itu) [penderitaan/nafsu], [seperti/ketika] Tulang kering (1996b) yang dicatat, [tuju/ cenderung] untuk dihubungkan dengan keahlian pokok dalam. 37 Kita memerlukan para guru [siapa] yang tidak hanya sudah membaca buku pada [atas] mengajar sekitar perbudakan dan Bencana tetapi juga sudah membaca buku pada [atas] perbudakan dan Bencana [itu]. Proses adalah tidak (ada) pengganti untuk con-tent. Pengajaran sekitar politik jadilah lebih mungkin untuk nampak hidup dengan suatu pemberi ceramah/ dosen [yang] menawan hati serius dibanding dengan kesenangan dan game. Ada suatu kebutuhan untuk kembang;kan mata rantai lebih kuat antar[a] tenaga ahli yang bersifat pendidikan di (dalam) [rombongan/ sekolah] pendidikan dan isi ilmu pengetahuan dan seni ahli.
- Fifth, we need to engage students in the right ways. While there is a place for service-learning, participation inside or outside the classroom must be meaningful if it is to translate later into participation at the polling booth and elsewhere in the political arena. "Kids Voting," a nationwide program that utilizes the school set-ting to get children to accompany their parents to the polls on election day, has proven successful as a civic initiation rite for many young people. More such efforts must be tried. Ke lima, kita harus melibatkan para siswa di (dalam) jalan yang benar [itu]. [Selagi/Sedang] ada suatu tempat untuk service-learning, keikutsertaan di dalam atau di luar kelas itu harus penuh arti jika [itu] adalah untuk menterjemahkan kemudiannya ke dalam keikutsertaan di menanyai warung dan di tempat lain di (dalam) gelanggang yang politis. " Anak kambing [Yang] memilih," suatu program di seluruh negara yang menggunakan sekolah [itu] [yang] set-ting untuk mendapat/kan anak-anak untuk menemani orang tua mereka kepada tempat pemungutan suara pada [atas] hari pemilihan, telah membuktikan sukses sebagai upacara inisiasi kewarganegaraan untuk banyak orang-orang muda. Lebih [] . seperti (itu) usaha harus dicoba.
- Finally, we need to create fewer doubters and cynics. Politics in America works, however imperfectly. True, education is mostly about getting students to cope with ambiguity. Yet ambiguity does not mean the absence of truth, only its complexity. Instead of promoting intellectual and moral relativism—nihilism—we should give children the strong grounding in knowledge and values that will hopefully result in a greater sense of political efficacy. Only then will the *polis* have a chance of surviving and flourishing. Akhirnya, kita harus menciptakan lebih sedikit doubters dan sinis. Politik di (dalam) Pekerjaan Amerika, bagaimanapun dengan tidak sempurna. Benar, pendidikan kebanyakan tentang menjadi para siswa untuk mengatasi kerancuan. Namun kerancuan tidak berarti ketidakhadiran kebenaran, hanya kompleksitas nya. Sebagai ganti promosi intelektual dan moral relativism-nihilism-we [perlu] memberi anak-anak yang kuat mengandaskan pengetahuan dan nilai-nilai yang

kehendak [yang] dengan penuh harapan mengakibatkan suatu [perasaan/pengertian] [yang] lebih besar [dari;ttg] kemanjuran politis.

Baru setelah itu akan polis mempunyai suatu kesempatan menyelamatkan nyawa dan melambaikan.

NOTES

1. The lament about the political ignorance and apathy of the American people is not new. Among the writings that have noted the lack of public affairs information and involvement long demonstrated by the average U.S. citizen, and particularly younger citizens, over the years are Remmers (1957), Mathews (1985), and Cronkite (1983). Wineburg (2001, pp. vii-viii) does an especially effective job in chronicling the periodic hand-wringing over the absence of historical knowledge possessed by high school graduates, beginning with J. Carleton Bell and David McCollum's 1917 piece in the *Journal of Educational Psychology*. My argument here, however, is not that this is an unprecedented problem, only that what evidence exists suggests that it seems to be worsening. See evidence below. Ratapan tentang kelesuan dan ketidak-tahuan yang politis Orang-Orang Amerika tidaklah baru. Di antara tulisan yang sudah mencatat [itu] ketiadaan keterlibatan dan informasi afair publik merindukan yang dipertunjukkan oleh [itu] rata-rata U.S. warganegara, dan warganegara terutama sekali lebih muda, dari tahun ke tahun adalah Remmers (1957), Mathews (1985), dan Cronkite (1983). Wineburg (2001, pp. vii-viii) mengerjakan suatu pekerjaan [yang] efektif di (dalam) chronicling hand-wringing yang berkala (di) atas ketidakhadiran [dari;ttg] pengetahuan historis yang dikuasai oleh lulusan sekolah menengah, mulai dengan J. Carleton Bel Dan David [yang] Potongan 1917 McCollum's di (dalam) Jurnal [dari;ttg] Psikologi Bidang pendidikan. Argumentasi ku di sini, bagaimanapun, bukanlah bahwa . ini adalah suatu masalah belum pernah terjadi, dengan pengecualian bukti apa [yang] ada menyatakan bahwa nampak jadilah memperburuk. Lihat bukti di bawah.

2. In each presidential election between 1860 and 1900, at least 70 percent of the electorate voted, with over 80 percent voting in 1860 and 1876, although some analysts argue that voter fraud inflated these numbers. Voting turnout trends are reported in Patterson (2002b); Wilson and Dilulio (1998, pp. 149-150); and Dye (2001, p. 143). Pada setiap pemilihan presiden antar[a] 1860 dan 1900, sedikitnya 70 persen orang yang mempunyai hak pilih memilih, dengan (di) atas 80 persen memilih 1860 dan 1876, walaupun beberapa analis membantah bahwa penipuan pemberi suara memompa angka-angka ini. Milih kecenderungan kedatangan dilaporkan Patterson (2002B); Wilson Dan Dilulio (1998, pp. 149-150); dan Celup (2001, p. 143).

3. On energy, see "Only About Half of Public Knows U.S. Has To Import Oil, Gallup Survey Shows," *New York Time*s, June 2, 1977. On NATO, see the 1981 Washington Post-ABC News poll, reported in *Interdependen*t, 7 (November 1981), p. 1; also the 1983 CBS-New York Times poll cited in *National Journal* (August 8, 1983), p. 1658. On foreign aid, see Barbara Crossette, "U.S. Foreign Aid Budget: Quick, How Much? Wrong," *New York Time*s, February 27, 1995. Pada [atas] energi, lihat " Hanya Sekitar Separuh Publik Mengetahui U.S. Harus Mengimport Minyak, Gallup Pertunjukan Survei," New York Waktu, Juni 2, 1977. Pada [atas] NATO, lihat yang 1981 Washington Post-ABC Berita menanyai, yang dilaporkan Saling tergantung, 7 (November 1981), p. 1; juga yang 1983 CBS-New York Pemberian suara [Kali;Zaman] mengutip Jurnal Nasional (Agustus 8, 1983), p. 1658. Pada [atas] bantuan asing, lihat Barbara Crossette, " U.S. Anggaran Bantuan Asing: Cepat, Berapa banyak? Salah," New York Waktu, Pebruari 27, 1995.

4. Data are from U.S. Census Bureau, accessed on the Internet at www.census.gov/population/socdemo/voting/tabA-1.

5. "Election Year Interest in Politics Marks Record Low," accessed on the Internet at wysiwyg://4/http://www.apsanet.org/ teach/freshmen.cfm.

6. Diane Ravitch, "Statement on NAEP 2001 U.S. History Report Card," released on May 9, 2002, accessed on the Internet at http://nagb.org/naep/history_ravitch.html. Also, see "Study: History Still A Mystery to Many Students," *Washington Pos*t, May 10, 2002, which reports "six in ten seniors lack basic knowledge." Diane Ravitch, " Statemen pada [atas] NAEP 2001 U.S. Kartu Laporan Sejarah," yang dilepaskan pada [atas] Mei 9, 2002, mengakses pada [atas] Internet pada http://nagb.org/naep/history_ravitch.html. Juga, lihat " Belajar: Sejarah Meski demikian Suatu Misteri [bagi/kepada] Banyak Para siswa," Washington [Pos/Tonggak], Mei 10, 2002, laporan yang (mana) " enam sepuluh pengetahuan dasar kekurangan senior."

7. One commentator argues that American students do well on tests of "civic knowledge" relative to foreign students. Examining the results of a 1999 test administered to over 2,000 ninth-graders in 28 countries, Carole Hahn (2001b, p. 456) reports that "on the overall test . . . U.S. students performed above the mean. Moreover, U.S. students did exceptionally well on [some items measuring higher order skills]. . . . On the subscale measuring knowledge of content, U.S. students did not differ from the international aver-age." Satu komentator membantah bahwa Para siswa Amerika maju/bekerja lancar pada [atas] test pengetahuan kewarganegaraan" sehubungan dengan para siswa asing. Uji hasil suatu 1999 test yang diatur ke (di) atas 2,000 ninth-graders di (dalam) 28 negara-negara, Carole Hahn (2001B, p. 456) melaporkan bahwa " pada [atas] keseluruhan test... U.S. para siswa melakukan di atas rata-rata. Lebih dari itu, U.S. para siswa lakukan sumur luarbiasa terpasang [beberapa materi [yang] mengukur ketrampilan [order/ pesanan] lebih tinggi].... Pada [atas] subscale yang mengukur pengetahuan isi, U.S. para siswa tidak berbeda dengan aver-age yang internasional."

Before proclaiming this as "good news," however, it may be instructive to note that a recent *Guardian* newspaper poll in Britain found that "young 18- to 24-year-old British adults are measurably 'dumber' than older age groups. British youth emerge consistently as knowing less . . . than older people about many of the main events and personalities of British history and culture. Fewer than a third of them can name Winston Churchill, Britain's wartime hero, as a prime minister who served before 1945" (Ezard, 2000). [Sebelum/Di depan] memproklamirkan ini [sebagai/ketika/sebab] " berita gembira," bagaimanapun, mungkin saja mengandung pelajaran untuk catat bahwa suatu Surat kabar Pengawal terbaru menanyai Inggris menemukan bahwa " muda 18- ke 24-year-old Orang dewasa Britania dengan dapat diukur a ' lebih bisu' dibanding kelompok [umur/zaman] lebih tua. [Masa/Kaum] muda Britania muncul secara konsisten [sebagai/ketika] mengetahui lebih sedikit... dibanding orang-orang lebih tua tentang banyak dari kepribadian dan peristiwa yang utama [dari;ttg] Kultur Dan Sejarah Britania. Lebih sedikit dibanding sepertiga [mereka/nya] dapat menyebut Winston Churchill, Pahlawan masa perang Britain's, sebagai perdana menteri [siapa] yang melayani [sebelum/di depan] 1945" (Ezard, 2000).

8. The reference here is to how the Bronx High School of Science, Stuyvesant High School, and Brooklyn Technical High School in New York City have struggled to remain elite schools with difficult admissions tests and strong academic programs, resisting efforts to make them more "egalitarian." Mac Donald (1999) notes they "are everything the public school system has mistakenly tried to eradicate." Di sini Acuan adalah [bagi/kepada] bagaimana Sekolah Menengah Wilayah kota New York Ilmu pengetahuan, Stuyvesant Sekolah Menengah, dan Brooklyn Sekolah Menengah Teknis di (dalam) New York Kota besar sudah berjuang untuk tinggal sekolah pilihan dengan pintu masuk sulit menguji dan program akademis kuat, menentang usaha untuk membuat [mereka/nya] lebih [] " penganut paham persamaan." Mac Donald (1999) [nada/catatan] [yang] mereka " adalah segalanya orang banyak/masyarakat sistem persekolahan telah dengan sembarangan mencoba untuk membasmi."

9. On the need for "student-centered" classrooms where teachers should be "in more of a coaching role . . . —a 'guide on the side,' helping students find answers online, rather than a

'sage on the stage,'" see Darling-Hammond (2001, p. 61). She was head of the National Commission on Teaching and America's Future.

10. For a discussion of the attack on knowledge, see Hirsch (1996). He was labeled an elitist when his *Cultural Literacy* (1987) made the case for a common core of basic factual knowledge all American students should be exposed to.

11. On constructivism, see Evers (1998) and Phillips (1995).

12. Testimony before the Missouri Senate, Jefferson City, on January 16, 1996. These criticisms have been sounded nationwide. See Ravitch (2000), Hirsch (1996), Gross (1999), and Sykes (1995).

13. The Coalition for Essential Schools preaches John Dewey's gospel of "less is more" (i.e., study a few topics in depth rather than maximizing content), work in cooperative groups while minimizing grades and competition, emphasize critical thinking rather than accumulation of knowledge, and coach rather than teach. See Sizer (1984).

14. The quote is from F. Scott Fitzgerald's *The Great Gatsb*y.

15. In my own child's school district of Clayton, Missouri, I could see the lack of respect accorded social studies as a serious academic discipline when, in the middle school, two science teachers formed an "expeditionary learning" team that took responsibility for teaching not only science but also social studies. It is hard to imagine the shoe on the other foot, that is, two social studies teachers being entrusted with teaching their students about molecular biology and other scientific topics.

16. On the importance of generating controversy—heat more than light—see Hahn (2001a).

17. The authors add, on p. 79, "learners must see a clear connection between subject matter and their lives. This emphasis suggests that the topics and issues studied need to be defined in terms of the interests and concerns of the students."

18. On the importance of problem solving, also see pp. 40-41. On the put-down of direct instruction, see pp. 108-109.

19. The authors state on p. 62, "education that emphasizes isolated facts is not only useless, it is, above all things, harmful."

20. For further discussion of the controversies surrounding the national history standards, see Ravitch (2000, pp. 433-437) and Rochester (2002, pp. 159-164).

21. Rosenau (1990, p. 406) counts at least 1,500 distinct ethnic groups. Another study (Russett and Starr, 1996, p. 48) counts as many as 5,000 such communities.

22. See Farney (1994). One hears similar notions that, for example, the abolitionist Grimke sisters deserve the same attention in history class as some

BAB III

The Student, the World, and the Global Education Ideology

Jonathan Burack

The attack on America on September 11, 2001, led to a patriotic revival of sorts. Flags appeared on cars and front porches, Ordinary working heroes of the day—rescue workers, police officers, and fire fighters—were celebrated and honored. A new seriousness marked the opening ceremonies of sports events. And the nation appeared to rally to George W. Bush's vigorous call to arms against a new kind of totalitarian evil and threat to civilization. Much of this same spirit was also visible in classrooms and schools across the country. If the goal of the suicidal hijackers was to sow seeds of self-doubt, despair, and defeat among the population, it appeared their efforts had backfired. Instead, new confidence in American values and institutions could be detected just about everywhere. Serangan pada [atas] Amerika pada [atas] September 11, 2001, menuju/mendorong suatu kebangkitan kembali jenis patriotik. Bendera nampak pada kereta;mobil] dan serambi medan, biasa Bekerja pahlawan day-rescue para pekerja, polisi, dan api fighters-were merayakan dan menghormati. Suatu kesungguhan hati baru menandai upacara pembukean sports peristiwa. Dan bangsa nampak untuk mengumpulkan ke George W. Panggilan semak bertenaga ke [lengan/ senjata] melawan terhadap semacam baru ancaman dan [kejahatan/ malapetaka] totaliter ke peradaban. Banyak roh [yang] sama ini adalah juga sekolah dan kelas kelihatan ke seberang negeri [itu]. Jika sasaran pembajak yang mengenai bunuh diri adalah untuk menabur [benih/keturunan] self-doubt, keputus-asaan, dan mengalahkan di antara populasi, [itu] nampak usaha mereka mempunyai backfired. Sebagai ganti(nya), kepercayaan baru di (dalam) Dan Nilai-Nilai Amerika Institusi bisa dideteksi kira-kira di mana-mana.

Yet among the leadership of the social studies profession, a quite different mood was apparent. In the initial response to 9/11 in the pages of *Social Education* (the premier journal of the National Council for the Social Studies), on the website of the National Education Association, and in countless other rapidly assembled curriculum supplements, a clear effort was made to temper patriotic expressions in class and stress instead a need for therapeutic healing. The main concern was for the psyches of children who may have been traumatized by the horrendous and dramatically televised carnage. As for teaching anything of political or historical relevance, two overriding themes were almost instantly brought front and center: a need for students to practice tolerance toward Muslims and Arabs, and a need for students to look more critically at U.S. policy in the Middle East in order to better understand the motives of the attackers (Education Development Center, 2002; Finn, 2001; Simpson, 2001). Namun di antara kepemimpinan profesi studi sosial, suatu suasana hati yang sungguh berbeda adalah nyata. Di (dalam) awal menjawab 9/11 halaman [dari;ttg] Pendidikan Sosial (jurnal perdana menteri Dewan Yang nasional untuk Ilmu Kemasyarakatan), pada [atas] website Asosiasi Pendidikan Yang nasional, dan di (dalam) tak terbilang lain lampiran kurikulum [yang] dirakit, suatu usaha jelas bersih telah dibuat ke perangai/penusuk ungkapan patriotik di (dalam) kelas dan tekanan sebagai ganti(nya) suatu kebutuhan untuk penyembuhan mengobati. Perhatian yang utama adalah untuk jiwa anak-anak [siapa] yang mungkin telah traumatized oleh yang menghebohkan dan secara dramatis menayangkan di televisi pertumpahan darah. Perihal mengajar apapun [dari;ttg] keterkaitan historis atau politis, dua tema penolakan hampir dengan segera dibawa medan dan pusat: suatu kebutuhan untuk para siswa untuk praktek toleransi ke arah Orang Islam dan Arabs, dan suatu kebutuhan untuk para siswa untuk lihat dengan kritis pada U.S. kebijakan di (dalam) timur tengah dalam rangka lebih baik memahami alasan penyerang (Pengembangan Pendidikan Musat, 2002; Bangsa Finlandia, 2001; Simpson, 2001).

This focus shocked many Americans, as was clear from the instantaneous and all but universal bad press the NEA earned when one of its lessons suggested that teachers avoid placing blame on anyone for the attacks (Sorokin, 2002; Feldman, 2002). Yet no one should have been shocked. Anyone aware of the long-standing consensus among social studies professional elites on matters pertaining to world history or world cultures could have anticipated that these elites would do exactly what they did: harp on American insensitivity toward Islam while muting concerns about the murderous intolerance of Islamic radicals toward America. For two decades, and especially since the end of the Cold War, a global

education ideology has taken hold in social studies education. Fokus ini mengejutkan banyak Orang Amerika, ketika harus jelas dari yang seketika/spontan dan nyaris tekanan tidak baik universal NEA berpendapatan ketika salah satu dari pelajaran nya mengusulkan bahwa para guru menghindari penempatan menyalahkan pada [atas] seseorang untuk serangan [itu] (Sorokin, 2002; Feldman, 2002). Namun tak seorangpun harusnya telah dikejutkan. Seseorang sadar akan konsensus yang sudah berjalan lama antar ilmu kemasyarakatan pilihan profesional pada [atas] berbagai hal [yang] menyinggung ke sejarah dunia atau dunia kultur bisa sudah mengantisipasi bahwa pilihan ini akan lakukan persisnya apa [yang] mereka lakukan: harpa pada [atas] Ketidakpekaan Amerika ke arah Islam [selagi/sedang] muting perhatian tentang ketidak toleranan Islam yang kejam yang radikal ke arah Amerika. Selama dua dekade, dan terutama [karena;sejak] ujung Perang Dingin, suatu pendidikan global ideologi telah mengambil mengecek pendidikan ilmu kemasyarakatan.

This ideology, the international equivalent of separatist versions of multi- culturalism, is deeply suspicious of America's institutions, values, and role in the world, while uncritically celebrating the institutions and values of most other societies. This ideology was clearly guiding many educators as they organized lessons and materials about 9/11 and its significance. Before detailing this ideology and its curricular manifestations, it needs to be pointed out that rank-and-file teachers usually soften the ideology as they cope with the practical tasks of teaching about the world beyond our shores. Furthermore, among the population at large, this critical view of America and nonjudgmental stance toward America's enemies appear to have had little effect. If anything, the mindless mantra of tolerance at all costs may be triggering an understandable, if in some cases equally mindless, reaction against it (Waldman and Caldwell, 2002). Ideologi ini, padanan versi separatis multi yang internasional- culturalism, [yang] curiga untuk Institusi America's, Nilai-Nilai, dan peran di dunia, [selagi/sedang] secara tanpa kritik merayakan institusi [itu] dan nilai-nilai hampir semua masyarakat. Ideologi ini dengan jelas memandu pendidik banyak orang [sebagai/ketika] mereka mengorganisir pelajaran dan material tentang 9/11 dan arti nya. [Sebelum/Di depan] detil ideologi ini dan curricular penjelmaan nya, [itu] perlu untuk ditunjukkan rank-and-file para guru itu [yang] pada umumnya mengurangi ideologi [itu] [sebagai/ketika] mereka mengatasi tugas yang praktis mengajar tentang dunia di luar pantai [kita/kami]. Lagipula, di antara populasi sebebasnya, pandangan Amerika [yang] kritis ini Dan Nonjudgmental Cara berpendirian ke arah Musuh America's nampak telah mempunyai efek [kecil/sedikit]. Meskipun terdapat perbedaan, mantra toleransi yang tanpa pertimbangan biar bagaimanapun mungkin (adalah) mencetuskan suatu dapat dimengerti, jika dalam beberapa hal dengan sama tanpa pertimbangan, reaksi melawan terhadap itu (Waldman Dan Caldwell, 2002).

GLOBAL EDUCATION AND WORLD HISTORY: RECENT TRENDS

In recent years, the pressure to expand schools' coverage of world cultures, global education, and non-Western societies has been building. By itself, this trend is to be welcomed. Since World War II, America's role in the world has expanded enormously. If anything, the end of the Cold War has added to the burdens and responsibilities the role imposes. As the only superpower, the United States influences every other part of the globe. Even its inaction leads to awesome consequences everywhere. In addition, an increasingly globalized trading system is bringing a vastly more interconnected world into being. Di tahun terakhir, tekanan untuk memperluas pemenuhan kultur dunia sekolah, pendidikan global, dan masyarakat non-Western tengah membangun. Dengan sendirinya, kecenderungan ini (diharapkan) untuk disambut. Sejak Perang Dunia II, Peran America's di dunia telah memperluas dengan sangat. Meskipun terdapat perbedaan, ujung Perang Dingin telah menambahkan kepada beban dan tanggung-jawab pemaksaan peran. Sebagai satu-satunya adikuasa, Amerika Serikat mempengaruhi semua yang lain bagian dari bola bumi itu. Bahkan inaction nya memimpin ke arah awesome konsekwensi di

mana-mana. Sebagai tambahan, suatu sistem perdagangan yang diglobalkan sedang membawa suatu sangat dunia yang lebih saling behubungan ke dalam insan.

Political and economic linkages are supplemented and augmented now by many other cross-cultural and cross-national forces. On the level of popular culture, for instance, America's impact on others is far more profound than in the past. Finally, a new wave of immigration since the 1960s has brought to our own shores a far more diverse mix of peoples. For all these reasons, the impulse to teach students more about the rest of the world was inevitable and desirable. Pertalian ekonomi dan politis dilampirkan dan ditambahkan sekarang oleh banyak lain antar budaya dan memaksa silang nasional. Jujur kultur populer, sebagai contoh, Dampak America's pada [atas] (orang) yang lain adalah jauh lebih dalam dibanding di masa lalu. Akhirnya, suatu [gelombang/lambaian] imigrasi [yang] baru [karena;sejak] 1960s telah membawa ke pantai kita sendiri [adalah] suatu campuran orang-orang berbeda lebih [yang] jauh. Karena semua pertimbangan ini , dorongan/gerakan hati untuk mengajar para siswa lebih banyak tentang sisa dari dunia adalah diinginkan dan tak bisa diacuhkan.

Much less desirable is the fact that a troubling ideological agenda is driving this effort. This ideology needs to be identified and examined if an otherwise worthy education project is not to become merely another vehicle for politicizing the curriculum. Three central features of this ideology will be examined here under the headings of "multicultural celebration," "cultural relativism," and "transnational progressivism." First, though, it may help to look at how teaching and curriculum materials in the fields of world cultures and world history are changing. Sangat sedikit diinginkan fakta bahwa suatu mengganggu agenda ideologis sedang mengemudi usaha ini. Ideologi ini perlu untuk dikenali dan diuji jika suatu proyek pendidikan pantas menjadi kebalikannya tidaklah untuk menjadi sarana (angkut) melulu lain untuk politicizing kurikulum [itu]. Tiga corak [yang] pusat [dari;ttg] ideologi ini akan [jadi] diuji di sini di bawah judul multicultural perayaan," " relativism budaya," dan " transnational progressivism." Pertama, meskipun [demikian], mungkin membantu ke arah memperhatikan bagaimana pengajaran dan material kurikulum di (dalam) bidang kultur dunia dan sejarah dunia sedang mengubah.

Perhaps the most dramatic evidence of the growing emphasis on world history and culture is the new Advanced Placement World History course, which in 2001 took its place alongside familiar AP courses on U.S. and European history. The World History course focuses heavily on non-Western societies. No more than 30 percent of its content will be on the West (College Entrance Examination Board, 2001, p. 7). Just as important is its stress on broad social, cultural, and economic trends and cross-cultural comparisons at the expense of a narrative of events, personalities, and key moments of individual and collective decision making. By organizing itself this way, AP World History, an otherwise reasonable idea, could well accelerate harmful trends in the teaching of world history by promoting the global education ideology to be examined here. Barangkali bukti yang dramatis bertumbuh penekanan pada sejarah dunia dan kultur adalah pelajaran Sejarah Dunia Untuk Tingkat Lanjut yang baru, yang mana di dalam 2001 mengambil tempat nya di samping/sepanjang AP pelajaran umum dikenal pada U.S. dan Sejarah Eropa. Pelajaran Sejarah Dunia memusatkan dengan berat pada masyarakat non-Western. Tidak lebih daripada 30 persen tentang isi nya pada Barat (College Entrance Examination Board, 2001: 7). Sama halnya penting tekanannya atas sosial yang luas, budaya, dan kecenderungan ekonomi dan perbandingan antar budaya atas biaya suatu untuk naratif peristiwa, kepribadian, dan saat/momen kunci individu dan pengambilan keputusan kolektif. Dengan pengaturan [dirinya] sendiri [jalan/cara] ini, AP Sejarah Dunia, suatu gagasan layak menjadi kebalikannya , bisa dengan baik mempercepat kecenderungan berbahaya di (dalam) pengajaran sejarah dunia dengan promosi ideologi pendidikan global untuk diuji di sini.

As with any world history course, the new AP course must confront the problem of coverage: how to combine breadth with depth. If students are not to be overwhelmed with massive

amounts of detail, clear unifying principles must be employed to select the facts, nations, and trends to be stressed. Yet without some richness of detail, such coverage will be impossibly general and superficial. The AP course attempts to solve this problem by focusing on a few key themes (global interaction, change and continuity, technology, social structure, gender, etc.). The goal is to unify and structure the vast body of information about world history under these themes. This makes some sense. Seperti dengan pelajaran manapun sejarah dunia, AP yang baru pelajaran harus menghadapi permasalahan dalam [itu] pemenuhan: bagaimana cara berkombinasi luas dengan kedalaman. Jika para siswa tidaklah untuk diliputi dengan sejumlah detil raksasa(masive), bersih;kan mempersatukan prinsip harus dipekerjakan untuk memilih fakta [itu], negara-negara, dan kecenderungan untuk ditekankan. Namun tanpa kesempurnaan beberapa [dari;ttg] detil, . seperti (itu) pemenuhan akan [jadi] dengan tidak mungkin dangkal dan umum. AP kursus mencoba untuk memecahkan masalah ini dengan memusatkan pada [atas] beberapa tema kunci (interaksi global, perubahan dan kesinambungan, teknologi, struktur sosial, jenis kelamin, dll.). Gol adalah untuk mempersatukan dan struktur badan informasi yang luas tentang sejarah dunia di bawah tema ini. Ini membuat [perasaan/pengertian] beberapa.

Yet the goal is made vastly more difficult to achieve because of another agenda: multiculturalism. The drive to cover all cultures equally adds enormously to the coverage problem by imposing an impossibly broad reach to the course. Moreover, by restricting coverage of the West, the course rejects what could provide a unifying principle for world history, at least for the past 500 years—namely, the central role of the West throughout the world. Namun gol dibuat sangat lebih sukar untuk mencapai oleh karena agenda lain: multiculturalism. Pengarah untuk [meliput/tutup] semua kultur [yang] dengan sama menambahkan dengan sangat kepada masalah pemenuhan oleh mengesankan suatu jangkauan [yang] lebar kepada kursus [itu]. Lebih dari itu, dengan pembatasan pemenuhan Barat, kursus menolak apa [yang] bisa menyediakan suatu mempersatukan prinsip untuk sejarah dunia, sedikitnya untuk masa lalu 500 years-namely, peran yang pusat Barat sepanjang;seluruh dunia [itu].

The thematic approach of the AP course also results in a downplaying of politics. As the AP course description puts it, "Knowledge of year-to-year political events is not required. The traditional political narrative is an inappropriate model for this course" (College Entrance Examination Board, 2001, p. 7). Combined with limited coverage of the West, this means students will learn very little about the constitutional and political history out of which their own civic culture and institutions arose. The reduced attention to politics also mutes attention to the most important way in which individual human agency acts to drive human experience. Pendekatan yang thematic AP kursus juga mengakibatkan suatu downplaying politik. [Seperti;Sebagai;Ketika] AP uraian kursus menaruh itu, " Pengetahuan [dari;ttg] peristiwa politis setahun demi setahun tidaklah diperlukan. naratif politis yang tradisional Adalah suatu model tidak sesuai untuk kursus ini" (Pengujian Pintu masuk Perguruan tinggi Numpang, 2001, p. 7). yang dikombinasikan Dengan pemenuhan [yang] terbatas Barat, [alat/ makna] ini para siswa akan belajar sangat kecil tentang sejarah politis dan yang konstitutional dari mana institusi dan kultur kewarganegaraan mereka sendiri [muncul/bangkit]. Perhatian yang dikurangi ke politik juga perhatian bisu kepada yang paling utama cara di mana agen manusia individu bertindak untuk [memandu/ mengemudi/ usir] pengalaman manusia.

Contributing to this result is the de-emphasis on the role of nation-states in human affairs as opposed to broader cultural and geographic regions or, as the AP guide puts it, "the major civilizations in Africa, the Americas, Asia, and Europe." The slighting of the liberal democratic nation-state is another key feature of the global education ideology. The organizers of AP World History say, in effect, that the past 1,000 years of history consist of "processes that, over time, have resulted in the knitting of the world into a tightly integrated whole" (College Entrance Examination Board, 2001, p. 4). In a sense, this is a truism. Mendukung hasil ini adalah de-emphasis pada [atas] peran nation-states di (dalam) afair manusia sebagai lawan

daerah mengenai ilmu bumi dan budaya lebih luas atau, [seperti;sebagai;ketika] AP pemandu menaruh itu, " peradaban yang utama di (dalam) Afrika, Americas, Asia, dan Eropa." Penghinaan nation-state demokratis yang liberal adalah corak kunci lain ideologi pendidikan yang global. Organisator AP Sejarah Dunia kata[kan, pada hakekatnya, [bahwa/yang] masa lalu 1,000 tahun sejarah terdiri dari " memproses bahwa, dari waktu ke waktu, sudah mengakibatkan pekerjaan merajut dunia ke dalam suatu utuh [yang] terintegrasi" (Pengujian Pintu masuk Perguruan tinggi Numpang, 2001, p. 4). Dalam beberapa hal, ini adalah suatu kebenaran mutlak.

But recent events should warn us about taking it too far. Our "tightly integrated" world system has not yet found a way to overcome deep religious, political, and cultural divisions. Nor does it appear to have found a way to dispense with nation-states as the preeminent players on the world stage or as the most important protectors—and violators—of constitutional government and liberty. Downplaying the nation-state's role in history is not yet justified by evidence either from the past or the present. It is an expression of ideology, not historical scholarship. Tetapi peristiwa terbaru [perlu] memperingatkan [kita/kami] tentang pengambilan [itu] [yang] terlalu jauh. [Kita/Kami] " [yang] terintegrasi" dunia sistem belum menemukan suatu [jalan/cara] untuk mengalahkan politis dalam, dan divisi budaya. Atau pun melakukan [itu] nampak untuk mempunyai ditemukan suatu [jalan/cara] untuk tidak memerlukan nation-states [seperti;sebagai;ketika] pemain yang yang unggul/yang menonjol pada [atas] langkah dunia atau sebagai yang paling utama protectors-and violators-of kebebasan dan pemerintah konstitutional. Downplaying peran nation-state's [itu] di (dalam) sejarah waktu itu belum dibenarkan oleh bukti baik dari masa lalu maupun hadiah. [Itu] adalah suatu ungkapan ideologi, [yang] bukan ilmu pengetahuan historis.

By demanding more of students, AP teachers may be able to handle the problems of coverage and depth. Such teachers are also likely to include plenty of politics and political theory, since it is hard to imagine how any competent history teacher could ignore them. Moreover, an AP European History course does still exist. But will it thrive? And how will the AP's prestige and influence affect the less rigorous courses in world history and global education that serve the majority of students? Dengan menuntut lebih banyak para siswa, AP para guru mungkin (adalah) mampu menangani permasalahan pemenuhan dan kedalaman. . seperti (itu) para guru adalah juga mungkin untuk meliputi banyak dari politik dan teori politis, karena susah untuk membayangkan bagaimana manapun sejarah berkompeten guru bisa mengabaikan [mereka/nya]. Lebih dari itu, suatu AP Sejarah Mengenai Eropa Kursus masih tersisa. Tetapi akan [itu] tumbuh dengan subur? Dan bagaimana nantinya Pengaruh Dan Gengsi AP's mempengaruhi semakin sedikit kursus kaku di (dalam) sejarah dunia dan pendidikan global yang melayani mayoritas para siswa?

Whatever the answer to these questions, it is clear that such courses already suffer greatly from the problems of breadth, depth, and the need to treat all cultures equally. Adding to these problems is the fact that world history, world cultures, and geography are often taught in the sixth or seventh grade (sometimes with follow- up world history courses in ninth or tenth grade). Under any circumstances, educators would have to simplify the subject for this young audience. But the pressure to cover all cultures equally, while offending none, vastly complicates the process of selecting material. It often results in courses consisting of little more than a smattering of geography, history, current events, and "cultural" analysis spread evenly across the globe. Apapun juga [yang] jawaban bagi [yang] ini mempertanyakan, itu telah jelas bahwa . seperti (itu) kursus telah menderita sangat dari permasalahan luas, kedalaman, dan kebutuhan untuk perlakukan semua kultur [yang] dengan sama. Menambah permasalahan ini fakta bahwa sejarah dunia, kultur dunia, dan geografi adalah sering diajar yang yang keenam atau nilai/kelas ketujuh (kadang-kadang dengan mengikuti- kursus sejarah dunia atas di (dalam) nilai/kelas kesepuluh atau kesembilan). Di bawah manapun keadaan, pendidik ingin mempunyai untuk menyederhanakan pokok materi untuk pendengar muda ini. Tetapi tekanan untuk [meliput/tutup] semua kultur [yang] dengan sama, [selagi/sedang] menyerang tidak ada, [yang]

sangat mempersulit proses memilih material. [Itu] sering mengakibatkan kursus terdiri dari [kecil/sedikit] lebih dari suatu pengetahuan yang dangkal geografi, sejarah, peristiwa sekarang, dan " budaya" analisa menyebar datar ke seberang bola bumi [itu].

The quotation marks around the word "cultural" in the last sentence are meant to indicate how vapid and inconsistent the term often is in world cultures curriculum materials. Any worthwhile world cultures course needs a systematic concept of culture taught and then used consistently to compare societies. Such a concept would define and explain linkages among family structure, kinship grouping, language, technology, religion, art, and ethical norms and laws. Far more common, however, is a seemingly random selection of disparate elements that are often superficial or exotic: clothing styles, food, holidays, religious observances, leisure activities, rituals, and other customs (see, for example, Bennetta, 1995). More often than not, such features are stressed mainly to provide a sense of difference and to "celebrate diversity," without much context to give them real meaning. Tanda kutip di sekitar kata[an] " budaya" di (dalam) [kalimat;hukuman] yang ter]akhir dimaksud untuk menandai (adanya) bagaimana hambar dan plin-plan istilah sering adalah di (dalam) material kurikulum kultur dunia. Manapun bermanfaat kursus kultur dunia memerlukan suatu konsep kultur [yang] sistematis yang diajar dan kemudian menggunakan secara konsisten untuk bandingkan masyarakat. Konsep seperti itu akan menggambarkan dan menjelaskan pertalian antar struktur keluarga, kekerabatan [yang] menggolongkan, bahasa, teknologi, agama, seni, dan hukum dan norma-norma etis. Umum lebih jauh, bagaimanapun, adalah suatu pemilihan [yang] acak [dari;ttg] unsur-unsur berlainan yang adalah sering eksotis atau dangkal: gaya pakaian, makanan, liburan, ketaatan/ibadat religius, aktivitas kesenangan, upacara agama, dan lain kebiasaan (lihat, sebagai contoh, Bennetta, 1995). Lebih sering daripada tidak, . seperti (itu) corak ditekankan sebagian besar untuk menyediakan suatu [perasaan/pengertian] perbedaan dan untuk " merayakan keaneka ragaman," tanpa banyak konteks untuk memberi [mereka/nya] maksud/arti riil.

Rarely is anything included that might strike a typical Western student as objectionable, e.g. female circumcision, slavery in Sudan, China's one-child policies, or religious discrimination (Kengor, 2002). In addition, the term "culture" itself is often used in confusing and inconsistent ways, at times referring to a region, a nation, a language group, a religion, or various racial, ethnic, and tribal groups within a nation. What often appears to govern the choice is an underlying victim- group/oppressor-group framework that, as we shall see, is yet another element in the global education ideology distorting this field and preventing it from developing coherence and rigor. Jarang apapun dimasukkan bahwa mungkin membentur suatu Siswa [yang] barat khas [sebagai/ketika] tak dapat disetujui, e.g. khitanan wanita, perbudakan di (dalam) Sudan, One-Child Cina/ keramik Kebijakan, atau diskriminasi religius (Kengor, 2002). Sebagai tambahan, istilah " kultur" [dirinya] sendiri adalah sering digunakan mengacaukan dan jalan plin-plan, kadang-kadang mengacu pada suatu daerah, suatu bangsa, suatu kelompok bahasa, suatu agama, atau berbagai rasial, [yang] kesukuan, dan kelompok mengenai suku di dalam suatu bangsa. Apa yang sering nampak untuk mengurus/memerintah pilihan [itu] adalah suatu mendasari korban- group/oppressor-group kerangka yang, seperti akan kita lihat, namun unsur lain di (dalam) ideologi pendidikan yang global [yang] belokkan pencegahan dan bidang ini [itu] dari mengembang;kan lekat dan kekakuan.

One final trend is worth commenting on, though it is still largely university based. This is the movement to internationalize the study and teaching of U.S. history. As with AP World History, a good case can be made for doing more to set U.S. history in a broad global context. Like every other nation, the United States has always existed in such a context, but it has become far more directly enmeshed in an international order since World War II. It is understandable, therefore, that historians might want to pay more attention to America's relationship to that order over the entire course of its history. The rationale for globalizing U.S. history teaching is spelled out in *The La Pietra Report: A Report to the Profession* (Bender, 2000). This report is a product of a four-year project by a group of historians assembled by the Organization of

American Historians to rethink American history for a global age. Satu kecenderungan akhir adalah berharga menafsirkan, meskipun [demikian] [itu] masih sebagian besar universitas mendasarkan. Ini adalah pergerakan untuk menginternasionalisasikan studi [itu] dan pengajaran U.S. sejarah. [Seperti/Ketika] dengan AP Sejarah Dunia, suatu kasus baik dapat dibuat untuk melakukan lebih untuk menetapkan U.S. sejarah di (dalam) suatu konteks global lebar. [Seperti;Suka] semua bangsa yang lain , Amerika Serikat telah selalu hidup dalam . yang sedemikian suatu konteks, tetapi [itu] telah menjadi jauh lebih secara langsung yang dijerat suatu [order/ pesanan] internasional [karena;sejak] Perang Dunia II. [Itu] adalah dapat dimengerti, oleh karena itu, sejarawan itu kekuatan ingin membayar lebih [] perhatian ke Hubungan America's untuk [order/ pesanan] itu (di) atas keseluruhan sepanjang sejarah nya. Dasar pemikiran untuk globalizing U.S. pengajaran sejarah ditunjukkan La Pietra Laporan: Suatu Laporan kepada Profesi (Menekuk, 2000). Laporan ini adalah suatu produk suatu four-year proyek oleh suatu kelompok sejarawan yang dirakit oleh Organisasi [dari;ttg] Sejarawan Amerika untuk memikirkan kembali Sejarah Amerika untuk suatu [umur/zaman] global.

The *La Pietra* participants call for much more attention both to global contexts and to cross-cultural comparisons in U.S. history courses. They also urge historians to adopt various thematic frames of reference to supplement or even replace the nation-state. Finally, they seek to counter history teaching that might foster a sense of American "exceptionalism"—any notion, that is, that the United States has a unique history or role that students especially need to appreciate. On this point, the report says: La Pietra Peserta meminta jauh lebih perhatian kedua-duanya ke konteks global dan ke perbandingan antar budaya di (dalam) U.S. kursus sejarah. Mereka juga menghimbau sejarawan untuk mengadopsi berbagai kerangka acuan thematic untuk melengkapi atau genap menggantikan nation-state [itu]. [Yang] akhirnya, mereka mencari ke pengajaran sejarah konter yang mungkin membantu perkembangan suatu [perasaan/pengertian] [dari;ttg] Amerika " exceptionalism"-any dugaan, yang [itu] adalah, [bahwa/yang] Amerika Serikat mempunyai suatu peran atau sejarah unik yang para siswa [yang] terutama harus menghargai. Pada [atas] ini menunjuk, laporan kata[kan:

By contextualizing the nation and comparing it with other nations one may better appraise the nature of its particular, even exceptional qualities, while avoiding simplistic assertions of American exceptionalism (Bender, 2000, p. 3). Dengan contextualizing bangsa [itu] dan membandingkan [itu] dengan lain negara-negara sese]orang boleh lebih baik menilai sifat alami [yang] tertentu nya, bahkan kualitas pengecualian, [selagi/sedang] menghindarkan pernyataan [yang] sederhana [dari;ttg] Exceptionalism Amerika (Menekuk, 2000, p. 3).

No one should quarrel with this way of putting it. What is odd, however, is the implication that U.S. history as presently taught is rife with simplistic assertions of American exceptionalism designed to pump students up with nationalistic pride. In fact, one would be hard pressed to find, say, a recent secondary school history textbook that does any such thing. Odd also is the implication that teachers today fail to set U.S. history in a global context—as if, for instance, they do not already routinely situate American colonial history in the larger context of an age of exploration and growing global interaction, or place the American Revolution in the context of the English and European Enlightenment, or set American slavery within the larger context of the Atlantic slave trade and the slave systems of Africa, the Caribbean, and the American continents. Tak seorangpun [perlu] bertengkar dengan [jalan/cara] ini meletakkan itu. Apa yang adalah aneh, bagaimanapun, adalah implikasi bahwa U.S. sejarah [sebagai/ketika] segera diajar adalah penuh dengan pernyataan [yang] sederhana [dari;ttg] Exceptionalism Amerika yang dirancang untuk memompa para siswa dengan kebanggaan kebangsaan. Sesungguhnya, orang akan jadilah dibawah tekanan untuk temukan, kata[kan, suatu buku teks sejarah sekolah menengah terbaru yang mengerjakan manapun . seperti (itu) hal. aneh Juga adalah implikasi yang para guru hari ini gagal untuk menetapkan U.S. sejarah di (dalam) suatu global context-as jika, sebagai contoh, mereka belum secara rutin meletakkan Sejarah Kolonial Amerika dalam kaitan dengan lebih besar dari suatu [umur/zaman] explorasi dan interaksi global bertumbuh,

atau menempatkan Revolusi Amerika [itu] dalam konteks Bahasa Inggris dan Penerangan/Keringanan Mengenai Eropa, atau menetapkan Perbudakan Amerika di dalam konteks yang lebih besar Budak Lautan Atlantik berdagang dan sistem budak Afrika, Caribbean, dan Benua Amerika [itu].

In other words, the problems the *La Pietra* project claims to address do not appear to be all that significant. This suggests that other agendas might be at work. On the matter of American exceptionalism, for instance, is the aim to temper uncritical pro- American bias, or is it to instill indifference to any patriotic appeal at all, no matter how well founded? After all, there are good grounds for fostering some forms of patriotic pride in students— with respect to our institutions of constitutionally-based liberty and democracy, for example. Does the movement to globalize U.S. history hope to eliminate all such sentiments from the history classes? Some of the language in the report does suggest this sort of hostility toward any positive portrayal of America and its role in the world today. Dengan kata lain, permasalahan La Pietra merancang klaim ke alamat tidak nampak seperti semua yang penting. Sarankan ini yang lain agenda boleh jadi di tempat kerja. Pada [atas] perihal [dari;ttg] Exceptionalism Amerika, sebagai contoh, adalah tujuan ke perangai/penusuk yang tanpa kritik ahli-Penyimpangan Amerika, atau apakah (itu) ke instill mengabaikan manapun pendekatan patriotik sama sekali, tak peduli bagaimana cukup beralasan? Betapapun, ada alasan-alasan baik untuk mengembangkan format beberapa [dari;ttg] kebanggaan patriotik di (dalam) para siswa-berkenaan dengan institusi [kita/kami] [dari;ttg] demokrasi dan kebebasan constitutionally-based, sebagai contoh. Apakah pergerakan ke globalize U.S. sejarah berharap untuk menghapuskan semua . seperti (itu) perasaan dari kelas sejarah? Sebagian dari bahasa di (dalam) laporan menyarankan permusuhan semacam ini ke arah manapun cara membawakan Amerika [yang] positif dan peran nya di dunia hari ini.

At one point the *La Pietra* report warns that even internationalized U.S. history courses will miss the real point if, by focusing on America's expanded global role, they "unthinkingly produce a form of historiographical imperialism or an ideological justification for globalization and American hegemony" (Bender, 2000, p. 3). The aim, then, is not just globalized U.S. history, but a version that weans students from an unacceptable celebratory stance toward their society or from any readiness to justify its "hegemonic" role in the world today. Such an agenda is one of political advocacy, not historical scholarship. Sependapat menunjuk [itu] La Pietra Laporan memperingatkan bahwa genap diinternasionalkan U.S. sejarah kursus akan luput/kehilangan titik yang riil jika, dengan memusatkan pada [atas] Peran global diperluas America's, mereka " secara membabi buta menghasilkan suatu format historiographical kekaisaran atau suatu pertimbangan ideologis untuk globalisasi dan Hegemony Amerika" (Menekuk, 2000, p. 3). Tujuan, kemudian, bukan hanya globalized U.S. sejarah, tetapi suatu versi yang menyapih/menghentikan para siswa dari suatu celebratory cara berpendirian tak dapat diterima ke arah masyarakat mereka atau dari manapun kesiap-siagaan untuk membenarkan nya " [yang] hegemonic" peran di dunia hari ini. Agenda seperti itu adalah salah satu dari pembelaan politis, [yang] bukan ilmu pengetahuan historis.

IS THERE A GLOBAL EDUCATION IDEOLOGY?

It is the central contention of this essay that a global education ideology does exist, developed and driven in part by a powerful confluence of institutional forces: key professional associations such as NCSS, NEA, and the World History Association; professors in schools of education; a number of institutes and foundations dedicated to promoting a global education agenda; and textbook companies with their teams of multicultural advisers and consultants who ensure that instructional materials serve the ideology's key purposes. Groups vigorously advocating for global education include the American Forum for Global Education and Global Education Associates in New York; Global Citizens for Change, a website project funded by the Ontario Ministry of Citizenship; [Itu] adalah perkelahian yang pusat esei ini yang suatu pendidikan global ideologi ada, yang dikembangkan dan yang dikemudikan pada sebagian oleh

suatu pertemuan(sungai) [yang] kuat [dari;ttg] kekuatan kelembagaan: menyetem asosiasi profesional seperti NCSS, NEA, dan Asosiasi Sejarah Dunia; Profesor di (dalam) [rombongan/ sekolah] pendidikan; sejumlah institut dan dasar mempersembahkan kepada promosi [adalah] suatu agenda pendidikan global; dan perusahaan buku teks dengan regu multicultural konsultan dan penasehat mereka [siapa] yang memastikan bahwa material intervi melayani tujuan kunci ideologi [itu]. Kelompok [yang] dengan penuh semangat mendukung untuk pendidikan [yang] global meliputi Forum Amerika [itu] untuk Pendidikan [yang] Global dan Pendidikan Global Berhubungan New York; Warganegara Global untuk Perubahan, suatu website proyek yang dibiayai oleh Ontario [Kementerian/ pendeta] Kewarga negaraan;

Choices for the 21st Century Education Project at Brown University; the Stanford Program on International and Cross-Cultural Education (SPICE); the "Workable Peace" curriculum project of the Consensus Building Institute in Cambridge, Massachusetts; and many other university programs in international relations, global change, or human rights. Obviously, not all of these organizations buy into every aspect of the global education ideology outlined here, but many appear to be inspired by its basic spirit. Three elements of this ideology are key. Aneka pilihan untuk Pendidikan abad 21 Rancang pada Universitas Coklat; Stanford Program pada [atas] Internasional dan Pendidikan Antar budaya (REMPAH-REMPAH); " Damai Yang dapat dikerjakan" Proyek Kurikulum Konsensus Yang membangun Institut di (dalam) Cambridge, Massachusetts; dan banyak lain program universitas di (dalam) hubungan internasional, perubahan global, atau hak azasi manusia. [Yang] sungguh-sungguh, tidak semua organisasi ini membeli saham kongsi tiap-tiap aspek/pengarah ideologi pendidikan yang global menguraikan di sini, tetapi banyak nampak seperti diilhami oleh roh dasar nya. Tiga unsur-unsur [dari;ttg] ideologi ini adalah kunci.

• **Multicultural Celebration:** An all-pervasive focus on the concept of "cultural diversity" and the need to expose students to as much of it as possible. This focus does help counter a traditional overemphasis on Western societies and an ethnocentric bias in the treatment of other societies. In recent years, however, textbooks and curricula have overcorrected for these defects. Nevertheless, many educators still insist that a pro-Western bias infects the teaching of world history and world cultures. In the meantime, their mantra of diversity for diversity's sake today is adding to already acute problems of excessive breadth of coverage and superficiality of treatment in global education curricula. Multicultural Perayaan: Suatu all-pervasive memusatkan pada [atas] konsep " keaneka ragaman budaya" dan kebutuhan untuk menyingkapkan para siswa [bagi/kepada] sebanyak mungkin [itu] [sebagai/ketika/sebab] mungkin. Fokus ini membantu konter suatu tradisional overemphasis pada [atas] Masyarakat barat dan suatu penyimpangan etnosentris di (dalam) perawatan dari yang lain masyarakat. Di tahun terakhir, bagaimanapun, buku teks dan curricula mempunyai [yang] overcorrected untuk cacat ini. Meskipun demikian, banyak pendidik masih meminta dengan tegas bahwa suatu pro-Western penyimpangan kena infeksi/menyebar pengajaran sejarah dunia dan kultur dunia. Dalam pada itu, mantra keaneka ragaman mereka demi keaneka ragaman hari ini sedang menambah telah permasalahan [yang] akut [dari;ttg] luas kedangkalan dan pemenuhan perawatan [yang] berlebihan di (dalam) pendidikan global curricula.

• **Cultural Relativism:** Global education advocates seek to promote respect and sympathetic understanding across cultures. This is all to the good. But true respect and sympathy cannot be based on a completely relativistic approach to culture, even though such an approach appears to dominate thinking in the field. By discouraging students who might wish to criticize negative aspects of other cultures, teachers seek to suppress what is likely an irrepressible natural human tendency to make moral judgments. Such pressure and hectoring probably foster cynicism and indifference in students, not a true spirit of tolerance. Relativism Budaya: Advokat Pendidikan global mencari untuk mempromosikan rasa hormat dan pemahaman simpatik ke seberang kultur. Ini adalah bermanfaat. Tetapi dan rasa hormat benar simpati tidak

bisa didasarkan pada suatu pendekatan [yang] relativistic ke kultur, sungguhpun pendekatan seperti itu nampak untuk mendominasi berpikir bidang [itu]. Dengan menakut-nakuti para siswa [siapa] yang mungkin ingin mengkritik aspek negatif dari yang lain kultur, para guru mencari untuk menindas apa [yang] mungkin suatu kecenderungan manusia [yang] alami tidak tertahan untuk membuat pertimbangan moral. . seperti (itu) tekanan dan hectoring mungkin membantu perkembangan sifat yang sinis dan sikap acuh tak acuh di (dalam) para siswa, tak satu roh toleransi benar pun .

• **Transnational Progressivism:** John Fonte (2001) of the Hudson Institute recently coined this term to refer to a tendency hostile to the liberal democratic nation-state and its claims to sovereignty. Fonte suspects that its aim is to redefine "democracy from a system of majority rule among equal citizens to power sharing among ethnic groups composed of both citizens and noncitizens" (Fonte, 2001, p. 3). Transnational progressives endorse a concept of post-national (global) citizenship and seek to shift authority to an institutional network of international organizations and sub- national political actors not bound within any clear democratic, constitutional framework. Transnational Progressivism: Yohanes Fonte (2001) tentang Hudson Institut [yang] yang baru-baru ini coined ini memasukkan untuk mengacu pada suatu kecenderungan yang bermusuhan kepada nation-state demokratis yang liberal dan klaim nya ke kedaulatan. Fonte mencurigai bahwa itu tujuan adalah untuk menggambarkan kembali " demokrasi dari suatu sistem mayoritas [atur/perintah] antar warganegara sama untuk menggerakkan berbagi antar kelompok kesukuan terdiri atas kedua-duanya warganegara dan noncitizens" (Fonte, 2001, p. 3). Transnational yang progresif menguasakan suatu konsep post-national (global) kewarga negaraan dan mencari untuk bergeser otoritas [bagi/kepada] suatu jaringan organisasi intemasional [yang] kelembagaan dan sub- para aktor [yang] politis nasional tidak [yang] terikat[an] di dalam manapun kerangka konstitutional demokratis jelas bersih.

In the global education field, this view is not dominant among rank-and-file teachers or even in the way textbooks get constructed. But it is a dynamic theme pushing the field forward. Those who embrace it are not content with a mere multicultural celebration of diverse societies and cultures. They see this "essentialist" view of distinct cultures as insufficiently global and focus instead on global trends, transnational cultural interchanges, and worldwide problems, especially those that can be depicted as rendering the nation-state obsolete.

GLOBAL EDUCATION IDEOLOGY: CONTRADICTIONS

The global education ideology outlined above does not provide a coherent strategy for curriculum development nor an instructional theory able to guide teachers in organizing and teaching lessons. In part, this is because the ideology's advocates have political objectives they do not openly acknowledge. And in part it is because the ideology is internally incoherent and contradictory. That is, it claims to support things that in fact will be harder to accomplish because of it. What follows is a brief look at the key contradictions. Di (dalam) bidang pendidikan yang global, pandangan ini tidaklah dominan antar rank-and-file para guru atau bahkan di buku teks [jalan/cara] mendapat/kan dibangun. Tetapi [ini] merupakan suatu tema dinamis yang mendorong bidang [itu] maju. Mereka yang memeluk ia/nya bukanlah isi dengan suatu semata-mata multicultural perayaan [dari;ttg] kultur dan masyarakat berbeda. Mereka lihat ini " essentialist" pandangan [dari;ttg] kultur beda [sebagai/ketika] dengan berkekurangan global dan memusatkan sebagai ganti(nya) pada [atas] kecenderungan global, transnational pertukaran budaya, dan permasalahan di seluruh dunia, terutama yang bahwa dapat dilukiskan [ketika;seperti] menyumbangkan nation-state [itu] usang.

A MULTICULTURALISM THAT IS NEITHER "MULTI" NOR "CULTURAL"

In a recent review of world history textbooks used in Wisconsin, Paul Kengor (2002) found substantial attention devoted to the internment of Japanese-Americans in the U.S. during World War II. At the same time, he found little space devoted to Japan's treatment of POWs

and other Japanese atrocities in the war, in particular the murder and rape-murder of hundreds of thousands of civilians in Nanking in 1937 (Kengor, pp. 10-11). Di (dalam) suatu tinjauan ulang buku teks sejarah dunia [yang] terbaru menggunakan Wisconsin, Paul Kengor (2002) perhatian substansiil yang ditemukan mempersembahkan kepada penawanan Japanese-Americans di (dalam) [itu] U.S. selama Perang Dunia II. Pada waktu yang sama, ia menemukan [ruang;spasi] [kecil/sedikit] mempersembahkan kepada Perawatan jepang POWS dan lain Kekejaman Jepang di (dalam) peperangan, khususnya pembunuhan dan rape-murder beratus ribu warganegara di (dalam) Nanking 1937 (Kengor, Pp. 10-11).

What are we to make of this imbalance, in which far less attention is paid to the far more horrifying injustice? What is especially striking is that these are *world* history texts. Would it not have made more sense for them to focus on Japan's actions in the war rather than U.S. home-front policies? After all, U.S. history textbooks already do quite well indeed in covering the Japanese-American internment. Apa yang adalah kita untuk memperjelas ketidak seimbangan ini, di mana jauh lebih sedikit perhatian dibayarkan kepada yang jauh lebih mengejutkan ketidakadilan? Apa yang terutama membentur adalah bahwa ini adalah teks sejarah dunia. Akan [itu] bukan sudah buat lebih [] [perasaan/pengertian] untuk [mereka/nya] untuk memusatkan pada [atas] Tindakan jepang di (dalam) peperangan dibanding/bukannya U.S. kebijakan kegiatan dalam negeri oleh rakyat? Betapapun, U.S. buku teks sejarah telah lakukan sumur [yang] sungguh tentu saja di (dalam) mencakup Japanese-American Penawanan.

This imbalance illustrates the contradictions of multiculturalism as it is enshrined now in educational practice. Japan is home to a culturally distinct people quite different from the vast majority of Americans. It would have been a worthwhile multicultural exercise to ask students to consider whether the Japanese atrocities revealed something about Japanese culture in general or were simply a result of the dictatorial political regime ruling Japan at that time. On the other hand, the Japanese-Americans of the internment camps were, by and large, not a distinct and separate culture. They were mainly U.S. citizens whose ethnic heritage shaped some aspects of their lives but who for the most part had adapted to and internalized the norms and patterns of American society. Nevertheless, world history textbook writers apparently see this Japanese-American ethnic group as far more worthy than Japan itself of multicultural "inclusion." Ketidak seimbangan ini menggambarkan pertentangan multiculturalism karena (itu) adanya diabadikan sekarang di (dalam) praktek bidang pendidikan. Jepang rumah bagi suatu orang-orang [yang] beda yang sungguh berbeda dari mayoritas luas Orang Amerika. [Itu] akan telah suatu bermanfaat multicultural berlatih untuk [minta;tanya] para siswa untuk mempertimbangkan apakah Kekejaman Jepang mengungkapkan tentang sesuatu Kultur Jepang di dalam umum atau hanya suatu hasil rejim politis yang seperti diktator yang menguasai Jepang pada waktu itu. Pada sisi lain, Japanese-Americans tempat interniran adalah, umumnya, tak satu kultur terpisah dan berbeda pun . Mereka sebagian besar U.S. warganegara warisan/pusaka kesukuan siapa shaped beberapa aspek [dari;ttg] hidup mereka tetapi [siapa] yang sebagian terbesar telah menyesuaikan diri dengan - dan internalized norma-norma dan pola teladan [dari;ttg] Masyarakat Amerika. Meskipun demikian, para penulis buku teks sejarah dunia [yang] kelihatannya lihat Japanese-American ini kelompok kesukuan [sebagai/ketika] jauh lebih pantas dibanding Jepang [dirinya] sendiri multicultural " pemasukan."

Why? To put it simply, multiculturalism has less to do with any rigorous study of other cultures than with ethnic, gender, racial, or other subgroup tension within the nations of the West, the United States in particular. Lacking a clear, consistent, and nonideological definition of culture, global education advocates and other proponents of multiculturalism exhibit a strong tendency to identify such subgroups as "cultures," especially when they can be depicted as victims of a "dominant culture." The result is that students are taught to view the world not as multicultural but as bicultural—as a world of oppressed vs. oppressor. A key corollary is the view of the West as the region where such subgroup "cultures" have been most grievously oppressed. Mengapa? Untuk menaruh ia/nya hanya, multiculturalism mempunyai lebih sedikit

untuk lakukan atas manapun studi kaku dari yang lain kultur dibanding dengan kesukuan, jenis kelamin, rasial, atau lain tegangan bagian jenis di dalam negara-negara Barat, Amerika Serikat khususnya. Kekurangan suatu jelas bersih, [yang] konsisten, dan nonideological definisi kultur, pendidikan global mendukung dan lain penganjur multiculturalism memperlihatkan suatu kecenderungan kuat untuk mengidentifikasi seperti sub-sub kelompok " kultur," [yang] terutama ketika mereka dapat dilukiskan [ketika;seperti] korban a " kultur dominan." Hasil adalah bahwa para siswa diajar untuk memandang dunia [itu] bukan sebagai multicultural tetapi [sebagai/ketika] bicultural-as dunia yang terhimpit;malang melawan penindas. Suatu kunci kesimpulan adalah pandangan Barat [sebagai/ketika] daerah [di mana/jika] . seperti (itu) bagian jenis " kultur" telah (menjadi) paling secara menyedihkan menekan.

THE UNBEARABLE BLANDNESS OF DIVERSITY

McDougal Littell's *Modern World History: Patterns of Interaction* is a popular world history textbook (Beck, 1999). Under a heading of "History Through Art," a page in this book is devoted to African textiles. Colorful patterns of cloth are displayed. An Ivory Coast chief is shown wearing Kente cloth. Brief paragraphs describe the various kinds of cloth and the "cultures" that produce them. The claim is made that historians can learn much from these fabrics about each group's myths, celebrations, and social roles. What students learn from this page, however, is a good deal less than that. Here is a typical paragraph, the one on Kuba cloth: Mcdougal [yang] Sejarah Dunia Modern Littell'S: Pola teladan Interaksi adalah suatu buku teks sejarah dunia populer (Isyarat, 1999). Di bawah suatu judul Sejarah Melalui/Sampai Seni," suatu halaman dalam buku ini diabdikan bagi Tekstil Dari Afrika. Pola teladan kain [yang] berwarna-warni/bersemangat dipertunjukkan. Suatu Pemimpin Pantai Gading ditunjukkan memakai Kente Kain. Ringkas [paragrap/ayat] menguraikan [itu] berbagai macam kain dan " kultur" hasil itu [mereka/nya]. Klaim dibuat bahwa sejarawan dapat belajar banyak dari pabrik ini tentang masing-masing dongeng kelompok, perayaan, dan peranan sosial. Apa yang para siswa belajar dari halaman ini, bagaimanapun, adalah suatu transaksi menguntungkan kurang dari itu. Di sini adalah suatu [paragrap/ayat] khas, [yang] satu pada [atas] Kuba Kain:

Made by Kuba people of the Congo, this cloth was made of raffia, a palm-leaf fiber. The cloth design was based on traditional geometric styles. The cloth was worn at ceremonial events, was used as currency, and may have been offered for part of a dowry (Beck, p. 312). Dibuat oleh Kuba Orang-Orang Kongo, kain ini telah dibuat dari tali rafia, suatu palm-leaf serabut. Disain Kain telah didasarkan pada gaya geometris tradisional. Kain telah dikenakan/dekil pada peristiwa peraturan adat, telah digunakan sebagai mata uang, dan mungkin telah ditawarkan untuk bagian dari suatu mas kawin (Isyarat, p. 312)

This is very interesting. However, since the Kuba people are never again mentioned in the textbook, no possibility exists of finding out why geometric styles were used or what their symbolic meaning to the Kuba might be. No description of Kuba "ceremonial events" is offered. Nor is the Kuba economy described or Kuba family structure analyzed, hence the significance of Kuba cloth as currency or as part of a dowry goes unexamined. The page is located in the middle of a chapter titled, "The Age of Imperialism, 1850-1914." The information on this page is connected neither to the chapter's historical theme nor to any overall concept of culture that might explain the artifacts depicted. Moreover, nowhere else in the book are textiles from any other region illustrated and described in this way, hence no useful cross-cultural comparisons are possible. Ini adalah [yang] sangat menarik. Bagaimanapun, [karena;sejak] Kuba Orang-Orang tidak pernah lagi tersebut buku teks, tidak (ada) kemungkinan ada mengenali mengapa gaya geometris telah digunakan atau apa yang maksud/arti simbolis mereka kepada Mereka kepada Kuba boleh jadi. Tidak (ada) uraian Kuba " Peristiwa Peraturan adat" ditawarkan. Maupun adalah Kuba Ekonomi diuraikan atau Kuba Struktur Keluarga menganalisa, karenanya arti Kuba Kain sama mata uang atau seperti bagian dari suatu mas kawin pergi tidak diuji. Halaman ditempatkan; terletak pada pertengahan suatu bab bergelar, " [Umur/Zaman] Kekaisaran, 1850-1914." Informasi pada [atas] halaman ini

dihubungkan [bukan/tidak] kepada tema bab historis maupun [bagi/kepada] manapun keseluruhan konsep kultur yang mungkin menjelaskan [itu] artifacts melukiskan. Lebih dari itu, tidak dimanapun juga selain itu di (dalam) buku adalah tekstil dari daerah lain menggambarkan dan yang diuraikan dengan cara ini, karenanya tidak (ada) perbandingan [yang] antar budaya bermanfaat adalah mungkin.

This is multiculturalism as a kind of exotic and colorful ethnic travelogue. It serves no significant educational purpose. Its location in the chapter on imperialism may be intended to reinforce a victim-group/oppressor (Africa/Europe) framework. But the primary purpose appears to be to get students to recognize the achievements of the various African peoples mentioned. The cloth patterns are indeed striking. As with so much multicultural material, the goal is to teach students to celebrate diversity and appreciate other cultures. Ini adalah multiculturalism sebagai macam ceramah tentang perjalanan kesukuan berwarna-warni/bersemangat dan eksotis. [Itu] melakukan seperti diminta tidak (ada) [yang] bidang pendidikan penting . Penempatan nya di (dalam) bab pada [atas] kekaisaran mungkin (adalah) diharapkan untuk menguatkan suatu victim-group/oppressor (Africa/Europe) Kerangka. Tetapi tujuan yang utama nampak seperti untuk mendapat/kan para siswa untuk mengenali prestasi berbagai Orang-Orang Dari Afrika menyebutkan. Pola teladan Kain tentu saja membentur. [Seperti/Ketika] dengan banyak multicultural material, gol adalah untuk mengajar para siswa untuk merayakan keaneka ragaman dan menghargai lain kultur.

But "celebrating" and "appreciating" are not the same thing. This African textiles "lesson" is based on a progressive educational approach that equates raw experience with learning. However, the material does little to extend the visual experience of colorful patterns of cloth into any substantive knowledge or understanding. The teacher's edition of the text suggests several activities, none of which entails learning anything about the societies that made the fabrics. One activity, based on Howard Gardner's multiple intelligences theory, is directed at "kinesthetic learners" (Beck, p. 313). It suggests that such students get help from the art teacher in tie- dying textiles of their own, using modern-day cloth and "nontoxic commercial dyes," of course. What this is meant to teach about African textiles, African cultures, or the history of imperialism is (mercifully) left unstated. Tetapi " merayakan" dan " menilai" bukanlah hal yang sama. Tekstil Dari Afrika Ini " Pelajaran" didasarkan pada suatu pendekatan [yang] bidang pendidikan progresif yang menyamakan pengalaman mentah dengan pelajaran. Bagaimanapun, material mengerjakan sedikit untuk meluas pengalaman yang visuil [dari;ttg] pola teladan kain [yang] berwarna-warni/bersemangat ke dalam manapun pemahaman atau pengetahuan kata benda. Edisi guru teks menyarankan beberapa aktivitas, tidak satupun dari yang memerlukan pelajaran segalanya tentang masyarakat yang buat pabrik [itu]. Satu aktivitas, Howard yang didasarkan pada [yang] Teori Kecerdasan/Inteligen berbagai Gardner's, diarahkan pada " pelajar kinesthetic" (Isyarat, p. 313). [Itu] menyatakan bahwa . seperti (itu) para siswa mendapat/kan bantuan dari guru seni di (dalam) dasi- sekarat tekstil milik mereka sendiri, menggunakan kain jaman modern dan " celupan komersil tidak beracun," tentu saja. Apa yang ini adalah dimaksud untuk mengajar sekitar Tekstil Dari Afrika, Kultur Dari Afrika, atau sejarah kekaisaran adalah (dengan penuh ampun) tidak dinyatakan yang ditinggalkan.

This African textile lesson is found in a high school world history textbook. As a lesson type, it is somewhat of an exception in that book (which nevertheless has many other problems). However, it is absolutely typical of the approach to culture found in less demanding world history and world cultures materials, especially for middle school students. It exemplifies a stunningly superficial treatment of stylistic cultural differences around the world. To avoid giving offense, only uplifting aspects of any culture are normally stressed. When something unpleasant is dealt with, it is done so indirectly, vaguely, and only if it can be presented within an acceptable muliticulturalist framework. Pelajaran Tekstil Dari Afrika Ini ditemukan [adalah] suatu buku teks sejarah dunia sekolah menengah. Sebagai pelajaran mengetik, [itu] adalah sedikit banyak(nya) dari suatu perkecualian di (dalam) yang membukukan (yang meskipun

demikian mempunyai banyak lain permasalahan). Bagaimanapun, [itu] [yang] khas untuk pendekatan ke kultur menemukan lebih sedikit menuntut sejarah dunia dan material kultur dunia, [yang] terutama untuk para siswa sekolah menengah. [Itu] menerangkan dnegan contoh suatu secara menarik perhatian perawatan gaya penulisan [yang] dangkal perbedaan budaya di seluruh bumi. Untuk menghindari menyakiti hati, hanya aspek menggembirakan pikiran tentang segala kultur secara normal ditekankan. Ketika sesuatu (yang) tak enak dihadapkan dengan, [itu] juga secara tidak langsung, samar-samar, dan hanya jika [itu] dapat diperkenalkan di dalam suatu muliticulturalist kerangka bisa diterima.

An especially odd example appears on page 549 of McDougal Littell's *World Cultures and Geography* (Bednarz, 2003). This page includes a brief paragraph on Rwanda. The paragraph, headed "Government in Rwanda," is about events there in the 1990s. One would naturally expect the passage to deal with the tensions between the Hutu and Tutsi tribes and the tragic way in which they led to one of the worst slaughters in history. In its defense, the book does very briefly mention these events earlier, on page 511. However, on page 549, it gives them a very peculiar spin: Suatu contoh [yang] aneh nampak pada [atas] halaman 549 Mcdougal Geografi Dan Kultur Dunia Littell'S (Bednarz, 2003). Halaman ini meliputi suatu [paragrap/ayat] ringkas pada [atas] Rwanda. [Paragrap/Ayat], memimpin " Pemerintah di (dalam) Rwanda," adalah sekitar peristiwa [di/ke] sana di (dalam) [itu] 1990s. Orang akan secara alami harapkan jalan lintasan [itu] untuk berhubungan dengan tegangan antar[a] Hutu Dan Tutsi Suku bangsa dan yang tragis cara di mana mereka menuju/mendorong salah satu [dari] yang terburuk pembantaian di (dalam) sejarah. Dalam pertahanan nya , buku mengerjakan dengan singkat menyebutkan peristiwa ini lebih awal, pada [atas] halaman 511. Bagaimanapun, pada [atas] halaman 549, [itu] memberi [mereka/nya] suatu putaran [yang] sangat ganjil:

In 1991, a new constitution was passed. It gave women the right to own property and hold jobs. But the new laws were not enforced. Then, in 1994, a civil war began in Rwanda. So many men were killed that women began taking over as heads of households. Finally, as a result of the deadly wars, women were able to claim their constitutional rights (Bednarz, p. 549). Amazingly, this passage turns one of the century's worst acts of genocide into a "civil war" that inadvertently advanced the rights of women! The irony is that it defeats entirely the objective of exposing students to true cultural diversity. Instead of wrestling in any deep way with the nature of tribal, ethnic, and gender conflict in Africa, students are invited to view these events through a far more familiar lens, that of women's struggles for "constitutional rights." Di (dalam) 1991, suatu konstitusi baru telah dilewati. [Itu] memberi wanita-wanita hak untuk memiliki [properti/milik] dan pekerjaan pegangan. Tetapi hukum yang baru tidaklah dikuatkan/dipaksa. Kemudian, di (dalam) 1994, suatu perang saudara mulai Rwanda. Sangat banyak orang telah dibunuh bahwa wanita-wanita mulai mengambil alih [sebagai/ketika/sebab] kepala-2 rumah tangga. [Yang] akhirnya, sebagai hasil peperangan yang mematikan, wanita-wanita bisa mengakui [hak/ kebenaran] konstitutional mereka (Bednarz, p. 549). Dengan mengagumkan, jalan lintasan ini memutar salah satu [dari] tindakan genocide abad [yang] paling buruk ke dalam a " perang saudara" bahwa dengan tak hati-hati mengedepan [hak/ kebenaran] wanita-wanita! Ironi adalah bahwa [itu] mengalahkan seluruhnya sasaran membongkar para siswa ke keaneka ragaman budaya benar. Sebagai ganti bergumul manapun [jalan/cara] dalam dengan sifat alami mengenai suku, [yang] kesukuan, dan konflik jenis kelamin di (dalam) Afrika, Para siswa diundang untuk memandang peristiwa ini melalui suatu lensa umum dikenal lebih jauh, yang [itu] perjuangan wanita-wanita untuk " [hak/ kebenaran] konstitutional."

Even the issue of women's rights in Rwanda is itself unlikely to be understood outside of a modern Western frame without much more historical background on women in Rwanda than students get from this textbook. And this is the key point about the blandness of diversity. Without solid historical context *and* a strong grounding in their own Western cultural heritage, students will not be able to grasp fully how other cultures differ. To understand the role of women in Rwanda, for instance, one needs to know what ideas prevail there about the

relationship generally of the individual to family, community, and state. Moreover, to fully appreciate these relationships as "different" from their own, students also need some awareness of Western ideas about the individual's relationship to authority as these have evolved from feudalism and the Magna Carta, to Locke and Jefferson, to the "Declaration of the Rights of Man and the Citizen," and on to Seneca Falls and the modern women's rights movement. Bahkan isu [dari;ttg] [hak/ kebenaran] wanita-wanita di (dalam) Rwanda adalah [dirinya] sendiri mau tidak mau untuk dipahami di luar suatu Bingkai [yang] barat modern tanpa jauh lebih latar belakang historis pada [atas] wanita-wanita di (dalam) Rwanda dibanding para siswa mendapat/kan dari buku teks ini. Dan ini adalah titik kunci tentang sifat lemah lembut keaneka ragaman. Tanpa konteks [yang] historis padat dan suatu kuat mengandaskan [yang] Warisan/Pusaka budaya barat mereka sendiri, Para siswa tidak akan mampu menyerap secara penuh bagaimana lain kultur berbeda. Untuk memahami peran wanita-wanita di (dalam) Rwanda, sebagai contoh, sese]orang harus mengetahui gagasan apa [yang] berlaku kira-kira hubungan [yang] biasanya yang individu ke keluarga, masyarakat, dan status. Lebih dari itu, untuk secara penuh menghargai hubungan ini [sebagai/ketika] " berbeda" dari milik mereka sendiri, para siswa juga memerlukan kesadaran beberapa [dari;ttg] Gagasan barat tentang hubungan individual ke otoritas [sebagai/ketika] ini sudah meningkatkan dari feodalisme dan Dan Magna Carta, ke Locke Dan Jefferson, kepada " Deklarasi [Hak/ kebenaran] Orang [laki-laki] dan Warganegara," dan ke atas Seneca Air terjun dan pergerakan [hak/ kebenaran] wanita-wanita yang modern.

An uncritical celebration of multiculturalism cannot provide this context. It cannot lead to a true appreciation of cultural difference. In fact, it will only mire students further in a bland and smug satisfaction with their own (or their teachers') notions about such matters. Actually, even this textbook's earlier reference to Rwanda (Bednarz, p. 511) illustrates a related point. It describes the Hutu/Tutsi rivalry in the context of European imperialism, stressing the way colonial political rule exacerbated tensions between the two tribal groups. The student still learns nothing of the specific nature of these two groups, what the traditional fault lines between them were, and why colonial rule was able to intensify those fault lines so drastically or (given that colonial rule had ended well before 1994) over such a distance in time. Suatu perayaan multiculturalism [yang] tanpa kritik tidak bisa menyediakan konteks ini. [Itu] tidak bisa mendorong kearah suatu penghargaan [yang] benar [dari;ttg] perbedaan budaya. Sesungguhnya, [itu] akan hanya menjerumuskan para siswa lebih lanjut suatu kepuasan [yang] puas diri dan lemah lembut dengan milik mereka sendiri (atau para guru mereka') barang kelontong tentang . seperti (itu) berbagai hal. [Yang] benar-benar, bahkan ini acuan buku teks lebih awal ke Rwanda (Bednarz, p. 511) menggambarkan suatu titik terkait. [Itu] menguraikan Hutu/Tutsi [itu] Persaingan dalam konteks Kekaisaran mengenai Eropa, menekan/kan kolonial [jalan/cara] [itu] aturan politis memperburuk tegangan antara kedua kelompok mengenai suku. Siswa masih tidak belajar apapun alam[i] yang spesifik dua kelompok ini , apa yang bentuk kesalahan yang tradisional antar[a] [mereka/nya] adalah, dan mengapa kolonial aturan bisa memperhebat bentuk kesalahan itu maka secara drastis atau (yang diberi yang kolonial aturan yang yang telah mengakhiri sumur [sebelum/di depan] 1994) (di) atas jarak seperti itu pada waktunya.

TOLERATING THE INTOLERANCE OF THE "OTHER"

The relativist stance so common in the global education field today constitutes a refusal to apply any universal ethical standards in judging another culture. Yet this denial of universal standards is itself a universal standard, usually called "tolerance." Tolerance is an admirable quality. But if it is our sole universal value, are we not then called upon to tolerate the intolerable? And if so called upon, are we even capable of performing such an act of mental jujitsu? In fact, the pressure not to apply moral standards is more likely to produce an ethic of "indifference" than one of true tolerance—as young people learn not to pass judgment on all kinds of horrendous practices, especially when they are non-Western. Relativist Cara berpendirian yang sangat umum bidang pendidikan yang global hari ini [mendasari/membuat]

suatu penolakan untuk [menerapkan/berlaku] manapun standard [yang] etis universal di (dalam) menghakimi kultur lain. Namun pengingkaran ini [dari;ttg] standard universal adalah [dirinya] sendiri suatu standard universal, pada umumnya [disebut/dipanggil] " toleransi." Toleransi adalah suatu mutu bisa dihormati. Tetapi jika [itu] adalah tapak kaki [kita/kami] nilai universal, apakah kita tidak kemudian menyerukan untuk memaklumi yang tak tertahankan? Dan jika demikian menyerukan, apakah kita bahkan mampu untuk melakukan/menyelenggarakan tindakan mental seperti itu jujitsu? Sesungguhnya, tekanan bukan untuk [menerapkan/berlaku] moral standard jadilah lebih mungkin untuk menghasilkan suatu susila sikap acuh tak acuh" dibanding salah satu dari benar tolerance-as orang-orang muda tidak belajar untuk menghakimi bermacam-macam praktek menghebohkan, [yang] terutama ketika mereka adalah non-Western.

In trying to suppress what is probably a natural human tendency (to judge), these students are more likely to become morally numb, certainly not "sensitive" to the "Other." The widely recognized political disengagement of young people today may, in part, reflect this aspect of their training. Di (dalam) berusaha untuk menindas apa [yang] mungkin suatu kecenderungan manusia alami (untuk [menilai/menghakimi]), para siswa ini jadilah lebih mungkin untuk menjadi secara moral mati rasa, pasti bukan " sensitip" kepada " Lain." Kelepasan dari ikatan politis yang secara luas [yang] dikenali [dari;ttg] orang-orang muda hari ini boleh, pada sebagian, mencerminkan aspek/pengarah ini [dari;ttg] pelatihan mereka.

Another way to handle the challenge of tolerating the intolerable is denial. This has certainly characterized the response of many educators to the post-9/11 threat of Islamic radicalism. In countless ways, such educators have insisted on misinforming students about this threat by denying its links to any aspect of Islam as a religion or to the Islamic societies of the Middle East and Asia. And when such links cannot be ignored (as, for example, the horrendous treatment of women by the Taliban or the rulers of Saudi Arabia, or the clear calls for war against the infidel by many Muslim clerics, or the widespread dissemination of Nazi-style, anti-Semitic propaganda throughout the Arab world), students are still exhorted to tolerate the intolerable by "understanding" its cultural or historical context to the point of excusing it. Yang lain [Jalan/Cara] untuk menangani tantangan memaklumi yang tak tertahankan adalah pengingkaran. Ini telah pasti menandai tanggapan dari banyak pendidik kepada post-9/11 ancaman Radikalisme Islam. Di (dalam) jalan tak terbilang, . seperti (itu) pendidik sudah mendesak menjelaskan keliru para siswa tentang ancaman ini dengan penyangkalan mata rantai nya [bagi/kepada] manapun aspek/pengarah Islam sebagai agama atau kepada Masyarakat Islam timur tengah dan Asia. Dan ketika . seperti (itu) mata rantai tidak bisa diabaikan ([sebagai/ketika/sebab], sebagai contoh, perawatan wanita-wanita yang menghebohkan oleh Taliban atau para penguasa Saudi Arabia, atau yang jelas bersih meminta peperangan melawan terhadap yang tidak setia oleh banyak Orang Islam clerics, atau penghamburan Nazi-Style yang tersebar luas, propaganda anti-Semitic sepanjang;seluruh Dunia Arab), Para siswa masih didesak untuk memaklumi yang tak tertahankan oleh " pemahaman" konteks [yang] historis atau budaya nya dengan tujuan untuk memaafkan itu.

Take the Islamic concept of *jihad*. Shahid Athar, a doctor and Islamic writer, responds on his website to questions about Islam. Here is what he has to say about *jihad*:

The word "Jihad" means struggle, or to be specific, striving in the cause of God. Any struggle done in day-to-day life to please God can be considered Jihad. One of the highest levels of Jihad is to stand up to a tyrant and speak a word of truth. Control of the self from wrong doings is also a great Jihad. One of the forms of Jihad is to take up arms in defense of Islam or a Muslim country when Islam is attacked (retrieved at: http://islam-usa.com/25ques.html#14). Ambil Konsep Islam jihad [itu]. Shahid Athar, seorang doktor dan Penulis Islam, menjawab pada [atas] website nya [bagi/kepada] pertanyaan tentang Islam. Di sini adalah apa yang ia harus kata[kan sekitar jihad:

Kata[An] [itu] " Jihad" berartilah perjuangan, atau untuk;menjadi spesifik, bekerja keras [yang] penyebab [itu] Tuhan. Manapun perjuangan melakukan hidup sehari-hari untuk menyenangkan Tuhan dapat dipertimbangkan Jihad. Salah satu [dari] tingkatan Jihad yang paling tinggi adalah untuk menantang menahan suatu raja lalim dan berbicara sedikit kebenaran. Kendali diri dari melakukan salah adalah juga suatu Jihad besar. Salah satu [dari] format Jihad adalah untuk melatih diri pertahanan Islam atau suatu Negeri Orang Islam ketika Islam diserang (yang didapat kembali pada: http://islam-usa.com/25ques.html#14).

This statement could stand in for hundreds like it that have appeared lately on the Internet, in books and magazines, and in educational materials on the attacks of 9/11. Muslim organizations in America and global education advocates together have worked vigorously to promote the notion of Islam as a peaceful religion, and the notion of *jihad* as peaceful striving and self-improvement. Statemen ini bisa menggantikan ratusan seperti [itu] itu sudah nampak belakangan ini pada [atas] Internet, di (dalam) buku dan surat kabar, dan di (dalam) material bidang pendidikan pada [atas] serangan 9/11. Organisasi Orang Islam di (dalam) Amerika dan advokat pendidikan global bersama-sama sudah bekerja/lancar dengan penuh semangat untuk mempromosikan dugaan Islam sebagai agama tenang, dan dugaan jihad [sebagai/ketika] bekerja keras tenang dan peningkatan diri.

Unfortunately, the notion is largely false. This is not the place to go in depth into the relevant scholarship. Those who wish to do this might consult *Jihad in Classical and Modern Islam: A Reader*, by Peters (1996) or Pipes's (2002) article "Jihad and the Professors." It is true that a Sufi variant of the term *jihad* does resemble Dr. Athar's definition. But for most of Islam's history, the vast majority of Muslims, including scholars and religious leaders, have clearly understood *jihad* to mean primarily a war to expand and defend the realm of Islam. Sungguh sial, dugaan sebagian besar sumbang/palsu. Ini adalah bukan tempat untuk pergi sungguh-sungguh mendalam ke dalam [itu] relevan ilmu pengetahuan. Mereka yang ingin lakukan ini mungkin berkonsultasi Jihad di (dalam) Islam Modern Dan klasik: Suatu Pembaca, dengan Reda (1996) atau Pipes'S (2002) artikel " Jihad dan Profesor." Adalah benar bahwa suatu Sufi Varian istilah jihad menyerupai Dr. Definisi Athar's. Hanyalah untuk paling Sejarah Islam's, mayoritas luas Orang Islam, mencakup sarjana dan para pemimpin religius, sudah dengan jelas memahami jihad untuk berarti terutama semata suatu peperangan untuk memperluas dan mempertahankan dunia Islam.

This is so obviously the case that some educators resort to a sleight-of-hand in passing off the sanitized variant. Here, for example, is a definition provided in a lesson on Afghanistan in a recent issue of NCSS's *Social Education*:

JIHAD: Arabic term meaning striving or effort in the service of God. It refers to an individual's struggle to overcome personal traits that are in conflict with the Koran. *It is often used* (italics added) to describe a war undertaken by Muslims as a sacred duty—a political or military struggle on behalf of Islam (Mertz, 2001, p. 435). Ini adalah maka sungguh-sungguh kasus yang beberapa pendidik memohon pertolongan suatu sleight-of-hand untuk lulus batal/mulai varian yang sanitized [itu]. Di sini, sebagai contoh, adalah suatu definisi menyiapkan dalam bentuk suatu pengajaran tentang Afghanistan di (dalam) suatu isu [yang] terbaru [dari;ttg] Pendidikan Sosial NCSS'S:

JIHAD: Maksud/Arti Istilah mengenai Arab [yang] bekerja keras atau usaha di (dalam) [jasa;layanan] Tuhan. [Itu] mengacu pada perjuangan perorangan untuk mengalahkan ciri pribadi yang adalah tidak sesuai dengan Quran [itu]. [Itu] adalah sering digunakan (huruf miring menambahkan) untuk menguraikan suatu peperangan yang dikerjakan oleh Orang Islam sebagai duty-a suci yang politis atau militer berjuang atas nama Islam (Mertz, 2001, p. 435).

Students would never know from the passive construction of that last sentence that Muslims past and present all but universally accept the idea of *jihad* as a war to expand or defend the

realm of Islam. They might even conclude that only Eurocentric Westerners see it that way. The redefinition of *jihad* as peaceful self-struggle is part of a more general tendency to soften Islam's harsher edges in dealing with it in world history and world cultures courses and curriculum materials. Such materials are now quite common and, due to vigorous advocacy by many Muslim groups in America, they are becoming still more common (Bennetta, 2002). What these groups ought to consider is that they may actually be defeating their own stated purpose of promoting greater understanding. As one writer puts it, "If we stifle rational discussion of Islam, what will emerge will be the very thing that political correctness and the government seek to avoid: virulent, racist populism" (Warraq, 2002). Para siswa tidak pernah akan mengetahui dari konstruksi yang pasif (menyangkut) [kalimat;hukuman] ter]akhir itu yang Orang Islam yang yang lampau dan menyajikan nyaris yang bersifat universal menerima gagasan untuk [itu] jihad sebagai peperangan untuk memperluas atau mempertahankan dunia Islam. Mereka mungkin genap menyimpulkan bahwa hanya Orang barat Eurocentric lihat ia/nya [jalan/cara] itu. Pendefinisian ulang jihad [sebagai/ketika] self-struggle tenang menjadi bagian dari suatu kecenderungan [yang] lebih umum untuk mengurangi Tepi [yang] lebih kasar Islam's di (dalam) berhadapan dengan [itu] di (dalam) sejarah dunia dan kursus kultur dunia dan material kurikulum. . seperti (itu) material kini [yang] sungguh umum dan, dalam kaitan dengan pembelaan bertenaga oleh banyak Orang Islam menggolongkan Amerika, mereka sedang menjadi masih ada lagi umum (Bennetta, 2002). Apa yang kelompok ini hendaknya mempertimbangkan adalah bahwa mereka boleh benar-benar jadilah kemenangan [yang] tujuan [yang] dinyatakan mereka sendiri mempromosikan pemahaman lebih besar. [Seperti/Ketika] satu penulis menaruh itu, " Jika kita stifle diskusi Islam masuk akal, apa yang akan muncul akan menjadi inilah ketepatan [yang] politis itu dan pemerintah mencari untuk menghindari: mematikan/jahat, pembenci suku bangsa lain populism" (Warraq, 2002).

After all, students need not immerse themselves in historical study to come to doubt the validity of these euphemisms about *jihad*. They have the evidence of the daily news. *Jihad* as peaceful self-struggle, as Pipes notes, contradicts the headlines students see every day:

It suggests that Osama bin Laden had no idea what he was saying when he declared jihad on the United States several years ago and then repeatedly murdered Americans in Somalia, at the U.S. embassies in East Africa, in the port of Aden, and then on September 11, 2001. It implies that organizations with the word "jihad" in their titles, including Palestinian Islamic Jihad and bin Laden's own "International Islamic Front for the Jihad Against Jews and Crusade[rs]," are grossly misnamed. And what about all the Muslims waging violent and aggressive jihads, under that very name and at this very moment, in Algeria, Egypt, Sudan, Chechnya, Kashmir, Mindanao, Ambon, and other places around the world? (Pipes, 2002, p. 19). Betapapun, para siswa tidak perlu membenamkan diri mereka di (dalam) studi historis untuk datang untuk meragukan kebenaran [dari;ttg] eufemisme ini tentang jihad. Mereka mempunyai bukti surat kabar harian [itu]. Jihad [sebagai/ketika] self-struggle tenang, [sebagai/ketika/sebab] [Nada/Catatan] Pipa, membantah para siswa berita utama [itu] lihat tiap hari:

[Itu] menyatakan bahwa Osama Bak/Peti Yang dimuati gagasan tidak mempunyai [yang] apa yang ia sedang berkata ketika ia mengumumkan jihad pada [atas] Amerika Serikat beberapa tahun yang lalu dan kemudian berulang-kali membunuh Orang Amerika di (dalam) Somalia, di [itu] U.S. kedutaan di (dalam) Afrika Timur, di (dalam) pelabuhan Aden, dan kemudian pada [atas] September 11, 2001. [Itu] menyiratkan organisasi itu dengan kata[an] [itu] " jihad" di (dalam) sebutan/judul mereka, termasuk Islam Palestinian Jihad Dan Bak/Peti Kepunyaan dimuati " Islam Internasional Wakili Jihad [itu] Melawan terhadap Yahudi dan Crusade[Rs]," nyata sekali salah dipanggil namanya. Dan bagaimana semua Orang Islam [yang] mengibas-ngibaskan agresif dan kejam jihads, di bawah nama seluruh itu dan pada ini seluruh saat/momen, di (dalam) Algeria, Mesir, Sudan, Chechnya, Kashmir, Mindanao, Ambon, dan lain tempat di seluruh bumi? (Salurkan lewat pipa, 2002, p. 19).

Another key Islamic term often whitewashed in this way is that of *dhimmitude*, the term for the subordinate status of Christians, Jews, and other religious groups in Muslim lands. Most secondary school textbooks and other materials routinely characterize *dhimmitude* as a "protected" status under which non-Muslims were treated with tolerance and allowed to maintain their own religious traditions. There is some basis for putting things this way, and it may well be that religious minorities in other cultures suffered worse treatment at times. Yet the fact remains that *dhimmitude* was a form of religious discrimination, and not a pleasant one. Yang lain Islam Kunci memasukkan sering putih bersih dengan cara ini adalah sebagai dhimmitude, istilah untuk status bawahan;subordinat Christians, Yahudi, dan lain kelompok religius di (dalam) Negeri Orang Islam. Kebanyakan buku teks sekolah menengah dan lain material secara rutin menandai dhimmitude sebagai " yang dilindungi" status di bawah non-Muslims yang (mana) telah diperlakukan dengan toleransi dan diijinkan untuk memelihara tradisi religius mereka sendiri. Ada beberapa basis untuk meletakkan berbagai hal [jalan/cara] ini, dan mungkin baik adalah bahwa minoritas religius di (dalam) lain kultur menderita perawatan lebih buruk kadang-kadang. Namun fakta tinggal dhimmitude itu adalah suatu format diskriminasi religius, dan tak satu menyenangkan pun .

It could be compared to "Jim Crow" segregation in the U.S. South, though the work of some scholars might lead one to view even this comparison as too kind (Bat Ye'or, 1996). Ironically, while presenting *dhimmitude* as a form of tolerance, secondary school world history texts also often heap praise on the Muslim emperor Akbar in Moghul India for his tolerance in abolishing many aspects of *dhimmitude*, including the *jizya*, the poll tax imposed on religious minorities elsewhere in the ancient Muslim world. Left unclear is exactly how both *dhimmitude* and the abolition of *dhimmitude* are examples of "tolerance." Bisa jadi dibandingkan untuk " Jim Kokok" pemisahan di (dalam) [itu] U.S. Selatan, meskipun [demikian] pekerjaan beberapa sarjana mungkin memimpin satu untuk memandang bahkan perbandingan ini [sebagai/ketika] sesama [yang] terlalu (Pemukul/ kelelawar Ye'Or, 1996). Ironisnya, [selagi/sedang] mempresentasikan dhimmitude sebagai format toleransi, teks sejarah dunia sekolah menengah juga sering menumpuk pujian pada [atas] Kaisar Orang Islam Akbar di (dalam) Moghul India untuk toleransi nya di (dalam) menghapuskan aspek banyak orang dhimmitude, mencakup jizya [itu], pajak untuk mendapatkan hak memilih membebankan atas minoritas religius di tempat lain di (dalam) Dunia Orang Islam yang masa lampau. belum jelas yang ditinggalkan Persisnya bagaimana kedua-duanya dhimmitude dan penghapusan dhimmitude adalah contoh toleransi."

What accounts for this unwillingness to deal honestly with unpleasant truths about Islam? After all, most of the educators who deny any link between Islam and violence or Islam and the harsh treatment of women are perfectly happy to take note of similar facts about Christianity's past. Few textbooks today slight the Crusades, the Inquisition, the wars of religion, the persecution of witches, the arrogance of missionaries, and much else. In fact, dwelling on such defects is seen as a necessary corrective to past Eurocentric bias in world history materials and courses. This glaring double standard arises out of the troubling contradiction in global education ideology described here as tolerance of the intolerable. Because of it, many global education and world history programs overlook or whitewash forms of injustice and brutality in other cultures that they roundly denounce in Western societies. Apa yang rekening/tg-jawab untuk keengganan ini untuk hadapi terus terang dengan kebenaran tak enak tentang Islam? Betapapun, kebanyakan dari pendidik [siapa] yang menyangkal manapun mata rantai antar[a] Islam Dan [Kekerasan/ kehebatan] Atau Islam dan perawatan wanita-wanita yang kasar dengan sempurna bahagia untuk memperhatikan fakta serupa tentang Masa lampau kekristenan. Sedikit buku teks hari ini melalaikan Perang salib [itu], Penyelidikan, peperangan agama, penyiksaan tukang sihir wanita, keangkuhan misionaris, dan banyak selain itu. Sesungguhnya, tinggal pada [atas] . seperti (itu) cacat dilihat sebagai [yang] mengoreksi perlu ke Penyimpangan Eurocentric yang lampau di (dalam) material sejarah dunia dan kursus. Ini membelalak dua patokan [muncul/bangkit] ke luar dari mengganggu pertentangan di (dalam) ideologi pendidikan global uraikan di sini [sebagai/ketika] toleransi yang tak tertahankan. Oleh

karena itu, banyak program sejarah dunia dan pendidikan global melewatkan atau mengapur format ketidakadilan dan kekejaman di (dalam) lain kultur yang mereka sama sekali menuduh Masyarakat barat.

CITIZENSHIP WITHOUT SOVEREIGNTY: THE MAKING OF GLOBAL CITIZENS

The ideal of "global citizenship" is much touted in the recent literature on global education and world history. This ideal often amounts to little more than an appeal for students to show concern about such matters as environmental degradation, worldwide poverty, or AIDS in Africa. For some, however, the term is meant more literally and radically. These advocates claim that the traditional liberal democratic nation-state has failed and that membership in such a state must ultimately be augmented by a new, more encompassing, global citizenship. In a statement written for the American Forum for Global Education, for example, Collins, Czarra, and Smith tell us: Yang ideal untuk " kewarga negaraan global" adalah banyak dipuji literatur yang terbaru pada [atas] sejarah dunia dan pendidikan global. [yang] ideal ini Sering sejumlah ke [kecil/sedikit] lebih dari suatu pendekatan untuk para siswa untuk menunjukkan perhatian tentang seperti berbagai hal penurunan(pangkat,derajad) lingkungan, kemiskinan di seluruh dunia, atau MBANTU Afrika. Untuk/Karena beberapa, bagaimanapun, istilah dimaksud lebih secara harafiah dan secara radikal. Klaim Advokat ini [bahwa/yang] nation-state demokratis liberal yang tradisional telah gagal;kan dan keanggotaan itu dalam . yang sedemikian suatu status harus akhirnya ditambahkan oleh suatu baru, lebih [] mencakup, kewarga negaraan global. Di (dalam) suatu statemen menulis untuk Forum Amerika untuk Pendidikan Global, sebagai contoh, Collins, Czarra, dan Tukang besi ceritakan [kepada] [kita/kami]:

Since the end of the Cold War, new forces—cultural, political, environmental, and economic—have swept the world. Americans are reexamining the role of their country within these new global complexities and questioning the ability of many of our basic institutions from the government to the military to our financial institutions to cope with these new realities (Collins, Czarra, and Smith; 1996; p. 1). [Karena;Sejak] ujung Perang Dingin, forces-cultural baru, politis, lingkungan, dan economic-have menjadi terkenal. Orang Amerika sedang memeriksa kembali peran [dari;ttg] negeri mereka di dalam kompleksitas [yang] global baru ini dan bertanya kemampuan dari banyak institusi dasar [kita/kami] dari pemerintah kepada militer kepada lembaga keuangan [kita/kami] untuk mengatasi kenyataan baru ini (Collins, Czarra, dan Tukang besi; 1996; p. 1).

Is it in fact true that Americans are questioning the ability of our "basic" institutions to cope with the new realities of a global world order? Certainly, millions of Americans realize that we live in a more interconnected world. And they know full well that this new world contains daunting challenges to us as a nation. But what evidence is there of lack of confidence in our institutions? When the attacks of 9/11 occurred, Americans did not look to the UN, the European Union or any other transnational entity to cope. They looked to the U.S. president, the Congress, the military, and other purely American institutions, as well as to themselves as individuals. For the most part, they still appear to be doing this, however much they may carp about this or that aspect of the way these institutions have responded. Apakah (itu) sesungguhnya benar bahwa Orang Amerika sedang bertanya kemampuan [dari;ttg] [kita/kami] " dasar" institusi untuk mengatasi kenyataan yang baru suatu [order/ pesanan] dunia global? [Yang] pasti, berjuta-juta Orang Amerika menyadari bahwa kita tinggal di suatu dunia [yang] lebih saling behubungan. Dan mereka mengetahui dengan baik bahwa . ini dunia baru berisi menakutkan tantangan kepada [kita/kami] sebagai bangsa. Tetapi bukti apa [yang] ada di sana tiada keyakinan diri di (dalam) institusi [kita/kami]? Ketika serangan 9/11 terjadi, Orang Amerika tidak menantikan UN [itu], Perserikatan/Pipa sambung Yang mengenai Eropa atau transnational kesatuan lain untuk menghadapi. Mereka melihat ke [itu] U.S. presiden, Konggres, militer, dan lain semata-mata Institusi Amerika, seperti halnya ke diri mereka [sebagai/ketika/sebab] individu.

Sebagian terbesar, mereka namun nampak seperti melakukan ini, bagaimanapun banyak mereka boleh karper tentang ini atau aspek/pengarah itu [jalan/cara] institusi ini sudah menjawab.

Clearly, however, many global education advocates want Americans to doubt the ability of their national civil society and its government to deal with global challenges. Global Education Associates posts this claim prominently on its website: "GEA's work in redefining sovereignty and security constitutes one of the more enlightened initiatives to world peace based on long-term and structural dynamics" (Giardino, n.d., para 9). This missionary drive to redefine sovereignty inspires much global education literature. Dengan jelas, bagaimanapun, banyak pendidikan global mendukung Orang Amerika kekurangan untuk meragukan kemampuan [dari;ttg] masyarakat sipil nasional mereka dan pemerintah nya untuk berhubungan dengan tantangan global. Pendidikan Global Berhubungan [pos/tonggak] klaim ini [yang] secara menyolok pada [atas] website nya: " Pekerjaan GEA's di (dalam) redefining kedaulatan dan keamanan [mendasari/membuat] salah satu [dari] prakarsa [yang] semakin diterangi ke damai dunia berdasar pada dinamika struktural dan jangka panjang" (Giardino, N.D., Para 9). Misionaris ini [memandu/ mengemudi/ usir] untuk menggambarkan kembali kedaulatan mengilhami banyak literatur pendidikan global.

The American Forum for Global Education devoted an entire issue of one of its recent newsletters to excerpting parts of what is described as a classic in the field (Lee F. Anderson's *Schooling and Citizenship in a Global Age: An Exploration of the Meaning and Significance of Global Education,* Bloomington, Indiana: Mid-America Program for Global Perspectives in Education, Social Studies Development Center, 1979). In American Forum's excerpts, Anderson depicts globalization not simply as a stepped-up process of greater interrelatedness among nations and societies, but as a new stage of history that transcends the nation-state: Forum Amerika untuk Pendidikan [yang] Global mengabdikan suatu keseluruhan isu salah satu dari laporan berkala [yang] terbaru nya [bagi/kepada] mengutip bagian-bagian dari apa [yang] diuraikan sebagai klasik bidang (Tempat teduh F. Kewarga negaraan Dan Pendidikan yang diterima di sekolah Anderson'S di (dalam) suatu [Umur/Zaman] Global: Suatu Explorasi Maksud/Arti Dan Arti [dari;ttg] Pendidikan Global, Bloomington, Indiana: Mid-America Program untuk Perspektif [yang] Global di (dalam) Pendidikan, Pengembangan Ilmu Kemasyarakatan Musat, 1979). Di (dalam) Kutipan forum Amerika, Anderson melukiskan globalisasi tidak hanya sebagai proses bertambah-tambah [dari;ttg] saling berhubungan lebih besar antar negara-negara dan masyarakat, tetapi sebagai langkah baru sejarah yang melebihi nation-state [itu]:

The progressive globalization of the human condition has produced a social system that is larger and more inclusive than nations, and this world system can be fruitfully conceptualized as a global society (Anderson, 2000-2001, p. 3).

Anderson goes on to define the concept of global citizenship that he feels is needed now that we all live in a "common global culture." Globalisasi yang progresif manusia kondisi telah memproduksi suatu sistem sosial yang adalah lebih besar dan lebih termasuk dibanding negara-negara, dan sistem dunia ini dapat dengan sukses conceptualized sebagai masyarakat global (Anderson, 2000-2001, p. 3).
Anderson terus untuk menggambarkan konsep [dari;ttg] kewarga negaraan global yang ia rasa diperlukan sejak kita semua tinggal di a " kultur global umum."

Citizenship refers to the decisions, the judgments, and the actions through which individuals link themselves—knowingly or unknowingly, deliberately and inadvertently—to the public affairs of the groups of which they are members (Anderson, 2000-2001, p. 13).

In one sense, this definition is so broad as to be almost without content. Yet that is what makes it useful to advocates of global citizenship. Its vague reference to the many "groups" to which individuals belong severs the link between the citizen and a single,

overarching national civic community. At the same time, these multiple groups compete for each citizen's loyalties, encouraging a balkanization in which subgroups, not individual citizens, become the essential units of the social order. This combination of enhanced subgroup authority and diminished national sovereignty is precisely the agenda of what Fonte identifies as "transnational progressivism." Kewarga negaraan mengacu pada keputusan [itu], pertimbangan, dan tindakan dengan mana individu menghubungkan themselves-knowingly atau tanpa mengetahui, dengan bebas dan inadvertently-to orang banyak/masyarakat afair kelompok yang [yang] mereka adalah anggota (Anderson, 2000-2001, p. 13).
Di (dalam) satu [perasaan/pengertian], definisi ini menjadi sangat lebar seperti hampir tanpa isi. Namun itulah apa yang melakukan hal berguna - ia/nya ke advokat [dari;ttg] kewarga negaraan global. Acuan [yang] samar-samar nya kepada orang banyak " menggolongkan" [bagi/kepada] rasa memiliki individu yang (mana) memotong mata rantai [itu] antar[a] warganegara dan tunggal, melingkupi masyarakat kewarganegaraan nasional. Pada waktu yang sama, ini berbagai kelompok bersaing untuk masing-masing kesetiaan warganegara, memberi harapan [kepada] suatu balkanisasi di mana sub-sub kelompok, [yang] bukan warganegara individu, menjadi unit yang penting [order/ pesanan] yang sosial [itu]. Kombinasi ini [dari;ttg] otoritas bagian jenis ditingkatkan dan mengurangi kedaulatan nasional dengan tepat agenda dari apa [yang] Fonte mengidentifikasi [ketika;seperti] " transnational progressivism."

But can citizenship in fact float freely in this way, unhinged from any sovereign national authority? In the liberal democratic state, such sovereign authority derives ultimately from the people. Effective democratic citizenship requires at minimum a dependable constitutional order protecting basic human rights and providing for elections, freedom of expression, and open debate, and the ability of loyal opponents of the government to organize and compete freely for power. Participation as a citizen means above all the right to ratify the decisions of the government regularly through elections and to change leaders when necessary. In the global education literature, such acts of ratification are not stressed. Tetapi dapat kewarga negaraan sesungguhnya mengapung dengan [cuma-cuma/bebas] dengan cara ini, menggusarkan dari manapun kedaulatan otoritas nasional? Di (dalam) negara demokrasi yang liberal, . seperti (itu) otoritas kedaulatan memperoleh akhirnya dari orang-orang. Kewarga negaraan demokratis efektif memerlukan pada minimum suatu [order/ pesanan] [yang] konstitutional ketergantungan yang melindungi [hak/ kebenaran] dasar manusia dan memperlengkapi pemilihan, kebebasan untuk ungkapan, dan debat terbuka, dan kemampuan [dari;ttg] lawan [yang] setia pemerintah untuk mengorganisir dan bersaing dengan [cuma-cuma/bebas] untuk [kuasa/ tenaga]. Keikutsertaan sebagai warganegara berarti di atas semua(nya) hak untuk mensahkan keputusan pemerintah [yang] secara teratur melalui/sampai pemilihan dan untuk ber;ubah para pemimpin ketika perlu. Di (dalam) literatur pendidikan yang global, . seperti (itu) tindakan pengesahan tidaklah ditekankan.

Instead, global citizens are more often exhorted simply to work through various civil society organizations or nongovernmental organizations (NGOs) and to put their faith in a vaguely defined "international community." Little emphasis is placed on how citizens will hold that international community accountable in a democratic way.

Fortunately, most serious scholars of international relations deal with the issue of global interconnectedness far more soberly than do advocates of the global education ideology. While such scholars acknowledge the growing entanglement of nation-states in an expanding web of international agreements and regimes, many of them doubt that the nation state is about to be replaced. Sebagai ganti(nya), warganegara global jadilah lebih sering didesak hanya untuk membahas berbagai organisasi masyarakat sipil atau nongovernmental organisasi (NGOS) dan untuk menaruh iman mereka di (dalam) suatu [yang] digambarkan " masyarakat internasional." Penekanan [kecil/sedikit] ditempatkan pada [atas]

bagaimana warganegara akan [memegang/menjaga] masyarakat [yang] internasional itu dapat dipertanggungjawabkan [adalah] suatu [jalan/cara] demokratis.
[Yang] kebetulan, sarjana [yang] [yang] serius [dari;ttg] hubungan internasional berhadapan dengan isu [dari;ttg] saling behubungan global yang jauh dengan sadar dibanding advokat ideologi pendidikan yang global. [Selagi/Sedang] . seperti (itu) sarjana mengakui adanya [itu] bertumbuh rintangan nation-states di (dalam) suatu ber;kembangkan web persetujuan internasional dan rejim, banyak di antara mereka meragukan [bahwa/yang] bangsa status akan digantikan.

In his book *Sovereignty: Organized Hypocrisy*, Stephen Krasner (1999) develops the thesis that states have never enjoyed absolute sovereignty, even though they all act as if they have it (hence, the "hypocrisy" in the title of the book). Limits on sovereignty, in other words, are not new. They shift in response to changing conditions. But for the foreseeable future they are unlikely to end the central role of national power and national interest in determining the behavior of the international order. Di (dalam) Kedaulatan buku nya: Kemunafikan Yang di/terorganisir, Stephen Krasner (1999) kembang;kan disertasi [itu] yang negara belum pernah menikmati kedaulatan absolut, sungguhpun mereka semua bertindak sebagai jika mereka mempunyai itu (karenanya, " kemunafikan" di [dalam] sebutan/judul buku). Batasi pada [atas] kedaulatan, dengan kata lain, tidaklah baru. Mereka bergeser sebagai jawaban atas kondisi yang berubah-ubah. Tetapi untuk masa depan yang dapat diduga [yang] mereka tidak mungkin untuk ber;akhir;i peran nasional dan kekuatan nasional yang pusat minat akan menentukan perilaku [order/ pesanan] yang internasional [itu].

Even some who view these globalizing trends favorably also acknowledge their darker side. Writing in *Foreign Affairs*, Jessica Mathews hopes that the diffusion of nation-state power will "mean more peace, justice, and capacity to manage the burgeoning list of humankind's interconnected problems." Yet she admits there are "at least as many reasons, however, to believe that the continuing diffusion of power away from nation-states will mean more conflict and less problem solving both within states and among them" (Mathews, 1997, p. 64). Writing in a different context, Daniel Brumberg (2002) makes a telling point about the value of a coherent, constitutionally grounded democratic state. Speaking of flaws in what he calls the "liberal autocracy" of many Middle East nations, he says: Bahkan beberapa [siapa] yang memandang ini globalizing kecenderungan [yang] dengan baik juga mengakui adanya sisi lebih gelap mereka. Beri suara dg tertulis Urusan Luar Negeri, Jessica Mathews berharap [bahwa/yang] difusi nation-state [kuasa/ tenaga] akan " berarti lebih [] damai, keadilan, dan kapasitas untuk mengatur [itu] berkembang daftar permasalahan saling behubungan humankind's." Namun dia mengakui;mengijinkan ada " sedikitnya sebanyak pertimbangan, bagaimanapun, untuk percaya bahwa difusi [kuasa/ tenaga] yang berlanjut [men]jauh dari nation-states akan berarti lebih [] konflik dan lebih sedikit masalah yang memecahkan kedua-duanya di dalam negara dan antar [mereka/nya]" (Mathews, 1997, p. 64). Beri suara dg tertulis suatu konteks berbeda, Daniel Brumberg (2002) membuat suatu menceritakan titik tentang nilai suatu negara demokrasi padu, [yang] menurut UUD dikandaskan. Satakan kekurangan di (dalam) apa yang ia [sebut/panggil/hubungi] " otokrasi (kuasa mutlak) yang liberal" dari banyak Negara-Negara Timur Tengah, ia kata[kan:

By themselves, civil society organizations cannot make up for the lack of a functioning political society, meaning an autonomous realm of self-regulating political parties that have the constitutional authority to represent organized constituencies in parliaments (Brumberg, 2002, p. 64).

Yet advocates of global citizenship rarely go beyond a call for greater reliance on civil society organizations acting through various unaccountable or semi-accountable international bodies. Such a program would undermine the real basis for active citizenship— the constitutional, democratic nation-state. Ironically, this would not be

likely to produce the more involved citizens these advocates say they seek. It would more likely produce passive subjects of an unaccountable international order. Dengan sendirinya, masyarakat sipil organisasi tidak bisa mengejar [itu] ketiadaan suatu masyarakat politis berfungsi, maksud/arti [adalah] suatu dunia [yang] otonomi [dari;ttg] partai politik mengatur sendiri yang mempunyai otoritas yang konstitutional untuk menghadirkan daerah pemilihan di/terorganisir di (dalam) parlemen (Brumberg, 2002, p. 64).
Namun advokat [dari;ttg] kewarga negaraan global [yang] jarang pergi di luar suatu panggilan untuk kepercayaan [yang] lebih besar pada [atas] organisasi masyarakat sipil bertindak melalui/sampai berbagai badan internasional semi-accountable atau tidak diketahui sebabnya. Program seperti itu akan mengikis basis yang riil untuk kewarga negaraan aktip- yang konstitutional, nation-state demokratis. [Yang] ironisnya, ini tidak akan mungkin untuk menghasilkan warganegara [yang] semakin dilibatkan advokat ini kata[kan mereka mencari. [Itu] akan lebih mungkin menghasilkan pokok pasif dari suatu [order/ pesanan] internasional tidak diketahui sebabnya.

Adding to this likelihood is global education's willful de-emphasis of the West, especially its political history, and minimizing of decisive individuals and great leaders. The stress is instead on social and cultural trends, and on non-Western and "marginalized" voices and stories. As a result, less attention is paid to the foundations of Western political freedom, from ancient Greece to the Magna Carta, the Glorious Revolution, the Enlightenment, and the American and French Revolutions. Kengor (2002, p. 9) points out that world-historical figures such as Churchill, Napoleon, Luther, Hitler, Lenin, and Lincoln are downplayed in favor of cultural icons and protest voices (Mother Teresa, Olaudah Equiano, Rigoberta Menchu). Menambah kemungkinan ini adalah pendidikan [yang] disengaja global de-emphasis Barat, [yang] terutama sejarah politis nya, dan pengecilan [dari;ttg] individu bersifat menentukan dan para pemimpin besar. Tekanan sebagai ganti(nya) pada [atas] sosial dan kecenderungan budaya, dan pada [atas] non-Western dan " marginalized" suara dan cerita. Sebagai hasilnya, lebih sedikit perhatian dibayarkan kepada dasar [dari;ttg] Kebebasan politis barat, dari Yunani masa lampau kepada Magna Carta, Revolusi Yang agung, Penerangan/Keringanan, dan Amerika Dan Revolusi Perancis. Kengor (2002, p. 9) poin-poin ke luar world-historical itu menggambarkan seperti Churchill, Napoleon, Luther, Hitler, Lenin, dan Lincoln adalah downplayed menuju ke patung orang suci budaya dan suara protes (Bunda Teresa, Olaudah Equiano, Rigoberta Menchu).

The result is a bias against the role of the individual in history, since those individuals who are described are often included as representatives of groups, usually victimized or "marginalized" groups, or to illustrate traditions of reactive protest against key decision-makers rather than the decision-makers themselves. The Western political tradition can only be grasped if the student becomes familiar with the ideas and lives of a large number of intellectual and political actors who happen mainly to be white males. Without this history, students will be taught a view of the past that centers not on individuals as the makers of history but on impersonal forces and helpless masses as the objects of history. Hasil adalah suatu penyimpangan melawan terhadap peran sejarah yang individu, [karena;sejak] individu itu [siapa] yang diuraikan adalah sering dimasukkan [ketika;seperti] wakil;contoh kelompok, pada umumnya dijadikan korban atau " marginalized" kelompok, atau untuk menggambarkan tradisi [dari;ttg] protes reaktif melawan terhadap pengambil-keputusan kunci dibanding/bukannya pengambil-keputusan diri mereka. Tradisi politis yang barat hanya dapat diserap jika siswa menjadi terbiasa dengan gagasan dan hidup sejumlah besar para aktor [yang] politis dan intelektual [siapa] yang terjadi sebagian besar untuk;menjadi [jantan/pria] putih. Tanpa sejarah ini, para siswa akan [jadi] diajar suatu pandangan masa lalu yang tidak memusat pada [atas] individu [sebagai/ketika] pembuat sejarah tetapi pada [atas] kekuatan bukan perseorangan dan massa tanpa pengharapan [sebagai/ketika] object sejarah.

GLOBAL EDUCATION: "HARD" AND "SOFT" APPROACHES

The most committed proponents of the global education ideology outlined here are activists with an agenda. They explicitly seek to wean American students from a "retrograde" loyalty to the nation-state and refocus them on a globalist agenda that is hostile to the West. Just beneath the surface of much of the cutting edge literature in the field lies a view of the West—and the United States in particular—as a malevolent political and cultural force. Expressing this spirit in a somewhat light-hearted way, one global education organization recently published a poem titled "The United States of Borg" which begins this way: Penganjur [yang] [yang] dilakukan ideologi pendidikan yang global menguraikan di sini adalah aktifis dengan suatu agenda. Mereka dengan tegas mencari untuk menyapih/menghentikan Para siswa Amerika dari a " mundur/memburuk" kesetiaan kepada nation-state dan refocus [mereka/nya] pada [atas] suatu globalist agenda yang adalah bermusuhan menuju ke Barat. [Hanya;Baru saja] di bawah permukaan sebagian besar memotong literatur tepi di [dalam] bidang berada suatu pandangan West-And Amerika Serikat di (dalam) particular-as suatu kekuatan budaya dan politis berhati dengki. Pernyataan roh ini di (dalam) suatu sedikit banyak(nya) [jalan/cara] senang bersuka ria, satu organisasi pendidikan global [yang] baru-baru ini menerbitkan suatu syair/puisi bergelar " Amerika Serikat Borg" Yang mulai [jalan/cara] ini:

We are the United States of Borg.
You will be assimilated. Resistance is futile.
We will assimilate your cultural and national
distinctiveness into our own.
You will be made to serve the process of globalization.
You will adopt American values as your own
(Jacobs, 2000). Kita adalah Amerika Serikat Borg.
Kamu akan [jadi] berasimilasi. Pembalasan adalah sia-sia.
Kita akan berasimilasi [yang] budaya mu dan nasional
membedakan ke dalam kita sendiri.
Kamu akan [jadi] dibuat untuk melayani proses globalisasi.
Kamu akan mengadopsi Nilai-Nilai Amerika [sebagai/ketika] milik mu
(Jacobs, 2000).

Given this view of America's globalizing cultural and political impact, it is perhaps understandable that these advocates feel that a new anti-American global citizenship is called for. But do most world history or world cultures teachers agree with such views? No one can be sure, but it seems doubtful. The textbooks in the field, at least, do not depict the United States in such harsh terms. For the most part, a softer version of the ideology prevails and can be summed up by the catch phrase "celebrate diversity." This seems innocuous enough, but it results in a vapid, overly broad curriculum. It wastes students' time on such things as African textiles, ethnic holiday feasts, and American pop culture icons. But it is primarily motivated by a well-intended desire to have students learn about and appreciate other cultures as well as their own. Dengan pandangan [dari;ttg] Dampak politis dan budaya globalizing America's, [itu] barangkali dapat dimengerti yang rasa advokat ini yang suatu anti-American baru kewarga negaraan global adalah menuntut. Tetapi lakukan kebanyakan sejarah dunia atau para guru kultur dunia memufakati . seperti (itu) pandangan? Tak seorangpun dapat pasti, tetapi [itu] nampak ragu-ragu. Buku teks di (dalam) bidang, sedikitnya, jangan melukiskan Amerika Serikat [itu] dalam . yang sedemikian terminologi kasar. Sebagian terbesar, suatu versi [yang] lebih lembut ideologi berlaku dan dapat diringkas oleh ungkapan tangkapan " merayakan keaneka ragaman." Ini nampak cukup tidak bahaya, tetapi [itu] mengakibatkan suatu hambar, kurikulum [yang] sangat lebar. [Itu] memboroskan waktu siswa pada [atas] hal-hal seperti Tekstil Dari Afrika, pesta liburan kesukuan, dan Patung orang suci Kultur Letusan Amerika. Tetapi [itu] terutama semata termotivasi oleh suatu keinginan dengan baik diharapkan untuk mempunyai para siswa belajar sekitar dan menghargai lain kultur seperti halnya milik mereka sendiri.

Both "hard" and "soft" proponents of global education tend to favor what they see as a more liberating and participatory pedagogy. They endorse the standard progressive education mantra against the supposedly rote "drill-and-kill" methods of an imagined authoritarian system. They see themselves as freeing children from a more rigidly conventional pedagogy focused on traditional subjects, and instead "involving" students in the construction of alternative views of the world and in more active and cooperative efforts to realize them. Kedua-Duanya " dengan keras" dan " [yang] lembut" penganjur [dari;ttg] pendidikan global [tuju/ cenderung] untuk menyukai apa [yang] mereka melihat sebagai suatu lebih membebaskan dan participatory ilmu mendidik. Mereka menguasakan pendidikan progresif yang baku mantra melawan terhadap menurut dugaan dihafal tanpa pikir " drill-and-kill" metoda dari suatu sistem otoriter dibayangkan. Mereka lihat diri mereka [seperti/ketika] membebaskan anak-anak dari suatu ilmu mendidik dengan teguh konvensional memusat pada [atas] pokok tradisional, dan sebagai ganti(nya) " menyertakan" para siswa di [dalam] konstruksi alternatif memandang dunia dan di (dalam) usaha [yang] lebih kerjasama dan aktip untuk [merealisir/sadari] [mereka/nya].

Here again, however, the harder version of the ideology pushes this progressive pedagogy further. Take, for example, the desire to reconstruct subject-area boundaries. Advocating this is Ross Dunn, Director of World History Projects at the National Center for History in the Schools at UCLA. He recently identified and evaluated several world history models (1999). The first is the traditional "Western Heritage Model," which stresses the history of the West and its institutions. Dunn has little good to say about this approach, though he praises its "dedication to democracy, freedom, and a shared system of cultural communication." This aside, he is harshly critical of the model's "essentialist point of view"—that is, its view of the West as carrying "inborn characteristics" constituting an "essential" core of values and ideas. Di sini lagi, bagaimanapun, versi yang lebih keras ideologi mendorong ilmu mendidik [yang] progresif ini lebih lanjut. Ambil, sebagai contoh, keinginan untuk merekonstruksi subject-area batasan-batasan. Mendukung ini adalah Ross Dunn, Direktur Sejarah Dunia Rancang di Pusat Yang nasional untuk Sejarah di (dalam) Sekolah pada UCLA. Ia baru-baru ini mengenali dan mengevaluasi beberapa sejarah dunia model (1999). Yang pertama adalah yang tradisional " Model Warisan/Pusaka Barat," Yang menekankan sejarah Barat dan institusi nya. Dunn hanya mempunyai sedikit baik untuk kata[kan sekitar pendekatan ini, meskipun [demikian] ia memuji nya " demokrasi pengabdian kepada, kebebasan, dan suatu sistem [yang] bersama [dari;ttg] komunikasi budaya." Ini ke samping, ia [yang] kritis untuk milik model " essentialist titik view"-that adalah, pandangan nya Barat [sebagai/ketika] membawa " karakteristik pembawaan sejak lahir" constituting suatu " penting" inti berharga dan gagasan.

But Dunn is also unhappy with what he sees as the most popular alternative, which he calls the "Different Cultures Model." This model also views cultures as having inherent ("essential") characteristics, though it exposes students to a much wider range of such cultures. He credits the model's popularity to the "triumph of multiculturalism."

That is, the multicultural tenets that world history education should be culturally inclusive, attentive to diversity, moderately relativist, internationally minded, and hostile to the idea that any single culture is inherently better or worse than any other have won acceptance, at least resigned acceptance, in virtually all state and large-city education agencies (Dunn, 1999, Introduction). Tetapi Dunn adalah juga tak bahagia dengan apa [yang] ia melihat sebagai alternatif [yang] yang paling populer, yang [yang] ia [sebut/panggil/hubungi] " Kultur Yang berbeda Model." Model ini juga memandang kultur seperti mempunyai;nikmati yang tidak bisa dipisahkan (" penting") karakteristik, meskipun [demikian] [itu] menyingkapkan para siswa [bagi/kepada] suatu banyak jangkauan yang lebih luas . seperti (itu) kultur. Ia kredit ketenaran model kepada " kemenangan multiculturalism."
Itu adalah, multicultural ajaran yang sejarah dunia pendidikan harus secara cultural inclusif, penuh perhatian ke keaneka ragaman, [yang] sedang relativist, secara internasional diingat-ingat, dan bermusuhan kepada gagasan di mana manapun kultur tunggal dengan tak terpisahkan lebih

baik atau lebih buruk dibanding lain sudah menang penerimaan, sedikitnya berhenti penerimaan, di (dalam) hampir semua status dan large-cas para agen pendidikan (Dunn, 1999, Pengenalan).

Dunn greatly prefers what he calls the "Patterns of Change Model." Like the "Different Cultures" model, this one is "socially and culturally inclusive." But it rejects the idea that the cultural, ethnic, or national groups described in history books are "solid, commonsensical, and agreed-upon" rather than "contested, uncertain, and in flux." Dunn [yang] sangat menyukai apa yang ia [sebut/panggil/hubungi] " Pola teladan Model Perubahan." [Seperti;Suka] " Kultur Yang berbeda" model, yang ini adalah " secara sosial dan secara cultural inclusif." Tetapi [itu] menolak gagasan di mana yang budaya, kesukuan, atau kelompok nasional uraikan buku sejarah adalah " padat, commonsensical, dan bersetuju" dibanding/bukannya " yang mengadakan perlombaan, tidak-pasti, dan di (dalam) perubahan terus menerus."

The Patterns of Change Model advances the idea that social and spatial fields of historical inquiry should be open and fluid, not predetermined by fixed cultural or geographical categories. Structuring world history curriculum, then, is not so much a matter of deciding how to line up study of various autonomously conceived cultures but of framing substantive, engaging historical questions that students might be invited to ask unconstrained by predetermined border lines of civilizations, nations, or continents (Dunn, Introduction).

This model, according to Dunn, requires world history materials to "start not with selection of places to study but with problems to investigate." Reflecting postmodern thinking, it seems perfectly designed to erode traditional subject-area boundaries and confuse students. It also tends to diminish the role of the nation-state. Pola teladan Model Perubahan membantu gagasan di mana sosial dan bidang [yang] mengenai ruang [dari;ttg] pemeriksaan historis harus membuka dan mengalir, tidak yang ditentukan oleh kategori geografis atau budaya yang ditetapkan;perbaiki. Structuring kurikulum sejarah dunia, kemudian, tidak demikian banyak sesuatu yang memutuskan bagaimana cara berbaris studi berbagai secara otonomi [mengandung;ngerti] kultur hanyalah penyusunan kata benda, melibatkan pertanyaan historis yang para siswa boleh jadi diundang untuk [minta;tanya] tidak dibatasi oleh bentuk perbatasan peradaban yang ditentukan, negara-negara, atau benua (Dunn, Pengenalan).
Model ini, menurut Dunn, memerlukan material sejarah dunia untuk " [tidak/jangan] start dengan pemilihan menempatkan untuk belajar tetapi dengan permasalahan untuk menyelidiki." Cerminkan postmodern [yang] berpikir, [itu] nampak dengan sempurna merancang untuk mengikis subject-area batasan-batasan tradisional dan mengacaukan para siswa. [Itu] juga [tuju/ cenderung] untuk mengurangi peran nation-state.

A similarly disorienting tendency appears within the aforementioned *La Pietra* project to internationalize U.S. history teaching. Guarneri (2002), for example, suggests the use of transnational political, social, or environmental trends as the core organizing themes for an American history course. He then goes on to say:

One can even imagine a future in which more aggressively globalized United States survey courses present the nation much more as a site than a subject, located near the midpoint between local, regional, continental, and global processes, not always the relevant unit of inquiry and only occasionally decisive as an historical intervener" (Guarneri, 2002, p. 46). Suatu yang sama disorienting kecenderungan nampak di dalam yang tersebut diatas La Pietra merancang untuk menginternasionalisasikan U.S. sejarah [yang] mengajar. Guarneri (2002), sebagai contoh, menyarankan penggunaan transnational politis, sosial, atau kecenderungan lingkungan [sebagai/ketika] inti yang mengorganisir tema untuk suatu Kursus Sejarah Amerika. Ia kemudian terus untuk kata[kan:
Seseorang dapat genap membayangkan suatu [yang] masa depan di mana Kursus Survei Amerika Serikat dengan agresif globalized menyajikan bangsa [itu] jauh lebih sebagai lokasi dibanding suatu pokok, menempatkan dekat midpoint antar[a] lokal, [yang] regional, kontinental,

dan proses global, [yang] tidak selalu relevan unit pemeriksaan dan hanya [yang] bersifat menentukan sebagai suatu historis intervener" (Guarneri, 2002, p. 46).

Given this approach, it is hard to see why a separate U.S. history course of any sort ought to be provided in the first place. Dengan pendekatan, [itu] adalah susah untuk lihat mengapa suatu terpisah U.S. sejarah sepanjang manapun sort;jenis hendaknya disajikan pada pokoknya.

The hard version of the global education ideology combines a rejection of traditional subject-area content with deep skepticism about the political worth of the nation-state and support for a divisive, anti-Western form of multiculturalism. It claims to offer a broader, more tolerant approach to world culture and history. And, with its stress on a problem-centered rather than subject-centered curriculum, it claims to offer students a more active learning experience, one that will move them to participate as global citizens in building a better world. In fact, by suppressing the student's natural tendency to make—and to want to make—moral judgments, by relentlessly denigrating the student's core Western cultural heritage, and by pandering to the supposed victim status of some cultures in relation to others, this ideology is a recipe for further alienating a generation already too comfortable with a fashionable distrust of authority and consequent withdrawal into civic passivity and cynicism. Versi yang [sulit/keras] ideologi pendidikan yang global berkombinasi suatu penolakan [dari;ttg] subject-area isi tradisional dengan keragu-raguan dalam tentang berharga yang politis untuk nation-state dan pen;dukungan untuk suatu [yang] bersifat memecah belah, anti-Western format multiculturalism. [Itu] mengakui untuk menawarkan suatu pendekatan lebih luas, [yang] lebih bersikap toleran ke kultur dunia dan sejarah. Dan, dengan tekanan nya pada [atas] suatu problem-centered dibanding/bukannya kurikulum subject-centered, [itu] mengakui untuk menawarkan para siswa [adalah] suatu [yang] lebih aktip belajar pengalaman, apa yang itu akan pindah;gerakkan [mereka/nya] untuk mengambil bagian [ketika;seperti] warganegara global di (dalam) membangun suatu dunia lebih baik. Sesungguhnya, dengan penindasan kecenderungan siswa alami [itu] ke make-and ke ingin make-moral pertimbangan, dengan dengan kejam denigrating inti siswa [itu] Yang barat warisan/pusaka budaya, dan dengan kaki tangan kepada status korban yang diharapkan beberapa kultur dalam hubungan dengan (orang) yang lain, ideologi ini adalah suatu resep untuk lebih lanjut mengasingkan suatu generasi telah [yang] terlalu nyaman dengan suatu [yang] modern mencurigai otoritas dan penarikan sebagai akibat ke dalam kepasifan kewarganegaraan dan sifat yang sinis.

GLOBAL EDUCATION: CHANGING THE DIRECTION

It is unlikely that most teachers of world history and global cultures embrace the "hard" approach. Most world history textbooks, while including much more on non-Western cultures, still accept a conventional focus on regions, civilizations, and nations, and on traditional time-period frameworks. Most world culture textbooks consist of geography and regional studies carried out in fairly conventional ways. And most teachers still appear comfortable with these approaches. This "soft" version of the global education ideology does cause problems, to be sure, but these mainly have to do with excessive breadth of coverage and lack of rigor in the study or evaluation of other cultures. The blanket of political correctness all but guarantees that students will learn little of substantive value about other cultures or grapple meaningfully with the very diversity the ideology claims to celebrate. [Itu] tidak mungkin para guru sejarah dunia kebanyakan itu dan kultur global memeluk " yang dengan keras" pendekatan. Kebanyakan buku teks sejarah dunia, [selagi/sedang] termasuk jauh lebih pada [atas] kultur non-Western, masih menerima suatu fokus konvensional pada [atas] daerah, peradaban, dan negara-negara, dan pada [atas] time-period kerangka tradisional. Kebanyakan buku teks kultur dunia terdiri dari geografi dan studi regional melaksanakan [yang] yang [secara] wajar jalan konvensional. Dan kebanyakan para guru masih nampak nyaman dengan ini mendekati. Ini " [yang] lembut" versi pendidikan yang global ideologi menyebabkan permasalahan, untuk memastikan, tetapi ini sebagian besar bertalian dengan luas pemenuhan [yang] berlebihan dan ketiadaan kekakuan di (dalam) studi atau evaluasi dari yang lain kultur. Selimut [dari;ttg] ketepatan politis nyaris

menjamin bahwa para siswa akan belajar [kecil/sedikit] untuk nilai kata benda tentang lain kultur atau bergulat dengan penuh arti adv dengan seluruh keaneka ragaman ideologi mengakui untuk merayakan.

But because the harder-edged version of the ideology has not yet triumphed, there is reason to hope that a more open debate can result in change for the better. In attempting to further that debate, educators need to embrace what is sound in the shift to a more global perspective while carefully identifying and criticizing what is harmful. Here are a few suggestions for those who wish to do this. Hanyalah sebab versi harder-edged ideologi belum memenangkan, ada memberi alasan untuk berharap bahwa suatu lebih membuka debat dapat mengakibatkan perubahan demi baiknya. Di (dalam) mencoba [bagi/kepada] lebih lanjut yang berdebat, pendidik harus memeluk apa [yang] adalah bunyi pergeseran [bagi/kepada] suatu perspektif [yang] lebih global [selagi/sedang] secara hati-hati mengidentifikasi dan mengkritik apa [yang] adalah berbahaya. Di sini adalah beberapa usul [yang] bagi mereka yang ingin lakukan ini.

● **Stress the continuing centrality of the West.** It needs to be made clear that the goal is not to celebrate the West's glories uncritically. It is to recognize, first, that the West has been the central force in world history for the past five centuries and, just as importantly, that the West is the source of the most important civic ideas and ideals that we want students to understand. Nekan centralas Barat yang berlanjut . [Itu] perlu untuk dijelaskan [bahwa/yang] gol bukanlah untuk merayakan Kemuliaan barat [itu] secara tanpa kritik. [Itu] adalah untuk mengenali, dulu, [bahwa/yang] Barat telah (menjadi) gaya sentral di (dalam) sejarah dunia untuk masa lalu lima berabad-abad dan, sama [halnya] sangat, [bahwa/yang] Barat adalah sumber gagasan kewarganegaraan yang paling utama dan ideal bahwa kita ingin para siswa untuk memahami.

● **Include other cultures, but honestly—warts and all, East and West.** The multicultural ideal can only be honestly pursued if educators reject the double standard that judges the West harshly while ignoring the defects of other cultures. This does not mean the West's flaws should be minimized. It does mean they need to be set in the context of an honest appraisal of the flaws of other societies. Liputi lain kultur, tetapi honestly-warts dan semua, Timur Dan Barat. Multicultural kaleng ideal saja terus terang dikejar jika pendidik menolak dua patokan [itu] yang [menilai/menghakimi] Barat [itu] [yang] dengan kasar [selagi/sedang] mengabaikan cacat dari yang lain kultur. Ini tidak berarti Kekurangan barat [itu] harus diperkecil. [Itu] berarti mereka perlu untuk di-set dalam konteks suatu penilaian [yang] jujur kekurangan dari yang lain masyarakat.

● **Note the contradictions of the global education ideology.** Demonstrate the failure of the ideology to achieve what its supporters believe it can achieve. This is especially true with regard to pressures on students to tolerate other cultures uncritically. If educators can come to see that the mantra of multicultural tolerance is likely to generate a contemptuous resistance among students, they may be more open to the idea of providing more honest and believable assessments of other cultures. Catat pertentangan ideologi pendidikan yang global. Pertunjukkan kegagalan ideologi untuk mencapai para pendukung nya apa [yang] percaya ia/nya dapat mencapai. Ini adalah terutama benar mengenai tekanan pada [atas] para siswa untuk memaklumi lain kultur secara tanpa kritik. Jika pendidik dapat datang untuk melihat [bahwa/yang] mantra multicultural toleransi mungkin untuk menghasilkan suatu pembalasan meremehkan antar para siswa, mereka mungkin (adalah) lebih terbuka bagi gagasan untuk menyediakan penilaian [yang] lebih dapat dipercaya dan jujur dari yang lain kultur.

● **Stress the superficiality, inaccuracy, and blandness of "world cultures" and "world history" materials.** The mistakes commonly found in textbooks are a disgrace. One reason for them is the textbook-by-committee approach now made even more nightmarishly bureaucratic by the relentless pressures of identity politics and political correctness (Ravitch,

2003). This also explains the bland superficiality of so many of these resources. The point for educators is that this is a key source of boredom among their students. The faith that a celebratory multiculturalism will make social studies more appealing to a more diverse student body is misplaced. Instead, it yields a bland and manipulative approach that leaves students apathetic and cynical. Nekan kedangkalan [itu], ketidaktepatan, dan sifat lemah lembut kultur dunia" dan " sejarah dunia" material. Kekeliruan [yang] biasanya yang ditemukan buku teks adalah suatu aib. Satu alasan untuk [mereka/nya] adalah textbook-by-committee mendekati sekarang buat lebih lagi secara mengerikan birokratis oleh tekanan politik identitas yang tak menaruh kasihan dan ketepatan politis (Ravitch, 2003). Ini juga menjelaskan kedangkalan yang lemah lembut banyak sumber daya ini. Titik untuk pendidik adalah bahwa ini adalah suatu sumber kunci kebosanan antar para siswa mereka. Iman yang suatu celebratory multiculturalism akan membuat ilmu kemasyarakatan yang lebih menarik [bagi/kepada] suatu badan siswa [yang] lebih berbeda salah meletakkan. Sebagai ganti(nya), [itu] menghasilkan suatu pendekatan [yang] manipulatip dan lemah lembut yang meninggalkan para siswa yang bersikap masa bodoh dan sinis.

● **Encourage stronger narrative history with a focus on moral and political action.** This point needs to be made in conjunction with the previous one. Not only will this recommendation restore human agency to the central place it deserves in the telling of the human story. It will also move students in the only legitimate ways that history can move them—by exposing them to the decisive actions by which human beings shaped their past and the foregone choices by which they might have shaped it differently. Dorong sejarah naratif lebih kuat dengan suatu fokus pada [atas] moral dan tindakan politis. Titik ini perlu untuk dibuat bersama dengan yang sebelumnya [itu]. [Yang] tidak hanya akan pujian/rekomendasi ini memugar kembali agen manusia kepada tempat yang pusat [itu] [berhak/layak] menandakan cerita manusia. [Itu] akan juga pindah;gerakkan para siswa di (dalam) satu-satunya jalan sah yang sejarah dapat pindah;gerakkan them-by membongkar [mereka/nya] kepada tindakan yang bersifat menentukan dengan mana manusia shaped masa lampau mereka dan aneka pilihan yang dibatalkan dengan mana mereka mungkin mempunyai shaped [itu] dengan cara yang berbeda.

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BAB IV

Multiculturalism and Social Studies[1]

Lucien Ellington and Jana S. Eaton

"There is no room in this country for hyphenated Americans. . . . The one absolutely certain way of bringing this nation to ruin, of preventing all possibility of its continuing to be a nation at all, would be to permit it to become a tangle of squabbling nationalities."

—Theodore Roosevelt. " Tidak ada ruang di (dalam) negeri ini untuk Orang Amerika menyambung garis.... [Yang] satu [jalan/cara] [yang] tertentu membawa bangsa ini untuk merusak, tentang mencegah semua kemungkinan tentang berkelanjutan nya untuk menjadi bangsa sama sekali, adalah untuk mengijinkan ia/nya untuk menjadi suatu kekusutan bertengkar kebangsaan."
- Theodore Roosevelt

Harvard sociologist Nathan Glazer (1997) named a recent book *We Are All Multiculturalists Now* because, in his opinion, "we all now accept a greater degree of attention to minorities and women and their role in American history and social studies and literature in schools" (pp. 13-14). Certainly there is little doubt that multicultural education has been institutionalized within social studies. Multicultural goals and content are present in schools' social studies curricula, states' social studies standards, and pre- and in-service social studies teacher education. Harvard Sarjana sosiologi Nathan Pelat datar (1997) yang dinamai suatu buku terbaru [Yang] kita Apakah Semua Multiculturalists Sekarang sebab, di (dalam) pendapat nya, " kita semua sekarang menerima suatu derajat tingkat perhatian [yang] lebih besar ke minoritas dan wanita-wanita dan peran mereka di (dalam) Literatur Dan Ilmu kemasyarakatan Dan Sejarah Amerika di (dalam) sekolah" (pp. 13-14). Pasti ada keraguan [kecil/sedikit] yang multicultural pendidikan telah dilembagakan di dalam ilmu kemasyarakatan. Multicultural Gol Dan Isi hadir di (dalam) ilmu

kemasyarakatan sekolah curricula, standard ilmu kemasyarakatan status, dan sebelum- dan dalam jabatan pendidikan guru ilmu kemasyarakatan.

Before the 1960s, treatment of ethnicity and minorities in U.S. history and social studies left much to be desired, as these groups were either largely ignored or often subjected to negative stereotyping. America now is even more multiethnic than four decades ago. School history and social studies classes must include significant multicultural components. Serious study of the various ethnic groups that are part of our society is a necessity if we are to have a truly educated citizenry. The critical question is *what kind* of multicultural education is most appropriate for our children. Two visions seem to have emerged. "Cultural pluralism," while recognizing our differences, accentuates what Americans have in common and our positive evolution as a diverse society. By the 1980s, large segments of the educated American public accepted cultural pluralism. By contrast, the second vision of multiculturalism, which we have labeled "critical separatism," stresses cultural and ethnic differences and the nation's failure to live up to its ideals. In this essay, we argue for the first version of multiculturalism. [Sebelum/Di depan] 1960s, perawatan ethnicas dan minoritas U.S. sejarah dan ilmu kemasyarakatan yang memuaskan untuk diinginkan, [sebagai/ketika/sebab] kelompok ini adalah yang manapun [yang] diabaikan atau sering juga memperlakukan ke [yang] meniru-niru negatif. Amerika sekarang bahkan lebih multiethnic dibanding empat dekade yang lalu. Sejarah Sekolah Dan Ilmu kemasyarakatan Kelas harus meliputi multicultural komponen penting. Studi [yang] serius berbagai kelompok kesukuan yang menjadi bagian dari masyarakat [kita/kami] adalah suatu keperluan jika kita adalah untuk mempunyai suatu keseluruhan penduduk [yang] dididik. Pertanyaan yang kritis adalah multicultural pendidikan seperti apa adalah paling sesuai untuk anak-anak [kita/kami]. Dua visi nampak untuk mempunyai dimunculkan. " [Pluralisme/ jamak] budaya," [selagi/sedang] mengenali perbedaan [kita/kami], menekankan Orang Amerika apa [yang] mempunyai bersama-sama dan evolusi hal positif [kita/kami] sebagai masyarakat berbeda. Dengan 1980s, segmen [yang] besar yang dididik Publik Amerika menerima [pluralisme/ jamak] budaya. Sebagai pembanding, visi multiculturalism yang kedua , yang [yang] kita sudah memberi label " paham terpecah belahan/sepratasme kritis," menekankan perbedaan kesukuan dan budaya dan kegagalan bangsa untuk berbuat sesuai dengan [yang] ideal nya. Di (dalam) esei ini, kita membantah untuk versi multiculturalism yang pertama.

Note at the onset, however, that most of the leading multicultural theorists within social studies favor the critical separatist version. Such people write textbooks for the multicultural education courses that the large majority of pre- and in-service teachers are required to take. They also exercise considerable national influence in the construction of social studies standards and textbooks. Catat di serangan, bagaimanapun, bahwa kebanyakan dari multicultural ahli teori yang terkemuka di dalam ilmu kemasyarakatan menyukai versi separatis yang kritis. . seperti (itu) orang-orang tulis buku teks untuk multicultural kursus pendidikan [bahwa/yang] mayoritas yang besar sebelum- dan dalam jabatan para guru diperlukan untuk mengambil. Mereka juga berlatih nasional pantas dipertimbangkan mempengaruhi konstruksi standard ilmu kemasyarakatan dan buku teks.

The National Council for Accreditation of Teacher Education (NCATE) lists "diversity," a synonym for multicultural education, as one of seven required standards that all schools or departments of education must meet before it will approve their programs. NCATE now collaborates with 46 states in ensuring that future teachers receive "diversity" education (NCATE, 2002). Although a "diversity" standard is, at one level, innocuous, the problem is that the large majority of education professors directly responsible for having future and practicing teachers meet the standards believe in the critical separatist version of multiculturalism.

This poses a large problem for social studies. There are compelling reasons for social studies teachers to reject critical separatist multiculturalism because it is misleading, attacks ideals integral to American success, fosters ethnic discord, promotes extreme

relativism, and is objectionable on educational, evidentiary, and political grounds. In this essay, we provide readers with what we believe to be an accurate and specific description of the worldviews and assertions of leading multiculturalists in American colleges and departments of education. We then analyze those ideas of the multiculturalists and offer alternatives that we believe to be more positive for both teachers and students. Dewan Yang nasional untuk Akreditasi Pendidikan Guru (NCATE) daftar " keaneka ragaman," suatu sinonim untuk multicultural pendidikan, [seperti/ketika] salah satu dari tujuh memerlukan standard bahwa semua sekolah atau departemen pendidikan harus temu [sebelum/di depan] [itu] akan menyetujui program mereka. NCATE sekarang bekerja sama/ berkhianat dengan 46 negara untuk menjamin bahwa para guru masa depan menerima " keaneka ragaman" pendidikan (NCATE, 2002). Walaupun a " keaneka ragaman" standard adalah, sependapat mengukur, tidak bahaya, masalah adalah bahwa mayoritas profesor pendidikan yang besar [yang] yang secara langsung [yang] bertanggung jawab untuk mempunyai;nikmati masa depan dan para guru praktek temu standard [itu] percaya akan versi separatis multiculturalism yang kritis.

Pose ini [adalah] suatu masalah besar untuk ilmu kemasyarakatan. Ada memaksa pertimbangan untuk para guru ilmu kemasyarakatan untuk menolak separatis kritis multiculturalism sebab [itu] sedang menyesatkan, menyerang integral ideal ke Sukses Amerika, membantu perkembangan perselisihan kesukuan, mempromosikan relativism ekstrim, dan adalah tak dapat disetujui pada [atas] bidang pendidikan, evidentiary, dan alasan-alasan politis. Di (dalam) esei ini, kita menyediakan pembaca dengan apa [yang] kita percaya untuk;menjadi suatu uraian [yang] spesifik dan akurat worldviews dan pernyataan memimpin multiculturalists di (dalam) Departemen Dan Perguruan tinggi pendidikan Amerika. Kita kemudian meneliti gagasan untuk itu multiculturalists dan menawarkan alternatif yang kita percaya untuk;menjadi hal positif [yang] lebih untuk kedua-duanya para guru dan para siswa.

THE THEORISTS' POLITICAL AND PEDAGOGICAL PERSPECTIVES

We define as "theorists" those leaders of social studies education and other fields who are multicultural specialists and often cited in leading multicultural and social studies education journals. Virtually all multicultural theorists (hereinafter theorists) are education professors, and many specialize in social studies. In two seminal articles, J.S. Leming (1989, 1992) concluded that, as a group, leading social studies education professors were politically to the left of social studies teachers, all teachers, all professors, and the general public. In Leming's words, "Social studies theorists tend to see society in crisis, the dream unfulfilled, and the need for major changes to be brought about by greater citizen participation. Teachers tend to hold a less alarmist point of view and wish to preserve traditional values and practices" (1989, p. 407). Kita menggambarkan [ketika;seperti] " ahli teori" para pemimpin pendidikan ilmu kemasyarakatan itu dan lain bidang [siapa] yang adalah multicultural spesialis dan sering juga yang dikutip memimpin multicultural dan jurnal pendidikan ilmu kemasyarakatan. [Yang] hampir semua multicultural ahli teori (sesudah ini ahli teori) adalah profesor pendidikan, dan banyak orang mengkhususkan ilmu kemasyarakatan. Di (dalam) dua artikel mungkin berkembang, J.S. Leming (1989, 1992) yang disimpulkan yang, sebagai kelompok, memimpin profesor pendidikan ilmu kemasyarakatan secara politis di sebelah kiri para guru ilmu kemasyarakatan, semua para guru, semua profesor, dan kalayak ramai [itu]. Di (dalam) Kata-Kata Leming's, " Ahli teori Ilmu kemasyarakatan [tuju/ cenderung] untuk lihat masyarakat di (dalam) krisis, mimpi tak dipenuhi, dan kebutuhan akan perubahan utama untuk disempurnakan oleh keikutsertaan warganegara lebih besar. Para guru [tuju/ cenderung] untuk [memegang/menjaga] suatu lebih sedikit segi pandangan penggelisah dan ingin memelihara nilai-nilai tradisional dan praktek" (1989, p. 407).

Leming was so impressed by the political and philosophical differences between leading social studies professionals and other educators that he used the phrase "two cultures" in the titles of both articles (1989, p. 404). Multicultural theorists evince an even more negative view of American society than other members of the social studies professoriate. They identify unjust relations as causes of America's evils and see multicultural education as an agent for positive change (Banks, 1995a). Their discussions of U.S. ethnic relations are usually limited to the

"racism" that "the European-American power structure creates to serve its own purpose. . ." (Pang, Gay, and Stanley, 1995, p. 312). Leming menjadi sangat terkesan oleh perbedaan filosofis dan yang politis antar[a] para profesional ilmu kemasyarakatan terkemuka dan lain pendidik yang ia menggunakan ungkapan [itu] " dua kultur" di (dalam) sebutan/judul kedua-duanya artikel (1989, p. 404). Multicultural Ahli teori menunjukkan dengan jelas suatu lebih pandangan [yang] negatif [dari;ttg] Masyarakat Amerika lagi dibanding lain anggota ilmu kemasyarakatan [itu] professoriate. Mereka mengidentifikasi hubungan tak adil [sebagai/ketika] penyebab [Kejahatan/ malapetaka] America's dan lihat multicultural pendidikan sebagai suatu agen untuk perubahan positif (Bank, 1995A). Diskusi mereka U.S. hubungan kesukuan pada umumnya [di/terbatas] pada [itu] " rasisme" bahwa " European-American Struktur [Kuasa/ tenaga] menciptakan untuk melakukan seperti diminta sendiri ..." (Rasa sakit yang tiba-tiba, Gembira, dan Stanley, 1995, p. 312).

Theorists constantly focus upon the racism of the dominant (white) majority toward all other ethnic groups while ignoring racism's universality. One theorist, in comparing the plight of poor African children and the general position of U.S. black children, writes, "Moreover, while a child in an African country experiences the effects of poverty, he or she does not experience the stigma of past dehumanization and second-class citizenship and the modern realities of ghettoization and denial of opportunity that confront Americans of African descent" (Ukpokodu, 1999, p. 8). Some theorists even advocate abolishing any reference to the "white race" because of the insidious motives of the dominant white majority. Ahli teori [yang] secara konstan memusatkan [atas/ketika] rasisme yang dominan (putih) mayoritas ke arah semua lain kelompok kesukuan [selagi/sedang] pengabaian rasisme universalas. Satu ahli teori, di (dalam) membandingkan keadaan [dari;ttg] Anak-Anak Dari Afrika lemah/miskin dan kedudukan rampat U.S. anak-anak hitam, tulis, " Lebih dari itu, [selagi/sedang] seorang anak di (dalam) suatu Negeri Dari Afrika mengalami efek kemiskinan, ia atau dia tidak mengalami cacat [dari;ttg] dehumanisasi yang lampau dan kewarga negaraan klas dua dan kenyataan ghettoisasi yang modern dan pengingkaran kesempatan yang menghadapi Orang Amerika Pendaratan Dari Afrika" (Ukpokodu, 1999, p. 8). Beberapa ahli teori genap advokat yang menghapuskan manapun acuan kepada " bangsa kulit putih" oleh karena alasan yang tersembunyi/membahayakan mayoritas putih yang dominan.

Speaking at the 2000 annual meeting of the American Educational Research Association, one prominent multiculturalist had this to say: "If white educators wish to transform themselves into agents of social justice (and we would encourage them to do so), then we suggest that they accomplish this as Polish, Irish, Canadian, English, or French, etc., and not by identifying themselves with the vile historical fiction known as the white race" (McLaren and Farahmandpur, 2001, p. 74). Pidato di yang 2000 pertemuan tahunan Asosiasi Riset Bidang pendidikan Amerika, satu multiculturalist terkemuka mempunyai ini untuk kata[kan: " Jika pendidik putih ingin mengubah bentuk diri mereka ke dalam agen keadilan (dan kita akan mendorong [mereka/nya] untuk melakukannya), kemudian kita menyatakan bahwa mereka memenuhi ini [sebagai/ketika/sebab] Semir, Orang Irlandia, Kanada, Bahasa Inggris, atau Perancis, dll., dan bukan dengan mengidentifikasi diri mereka dengan fiksi historis yang [busuk/hina] mengenal sebagai bangsa kulit putih [itu]" (Mclaren Dan Farahmandpur, 2001, p. 74).

Theorists regularly argue that "whiteness" warps the perceptions of members of the "dominant majority culture," whether they are children, educators, or university students. The author of an article included in a popular annual compilation of multicultural pieces meant for pre- and in-service teachers describes the majority of white students as follows: "Most white children have spent their academic lives looking into distorted mirrors of their history and culture which only reflected people like themselves." In contrast, the author contends, "Most children of color have been pointed toward a narrow window, which offered an obstructed view of the world and their place in it" (Ukpokudu, 1999, p. 8). Ahli teori [yang] secara teratur membantah

bahwa " sifat putih" melengkungkan/menyesatkan persepsi anggota " kultur mayoritas yang dominan," apakah mereka adalah anak-anak, pendidik, atau mahasiswa universitas. Pengarang dari suatu artikel tercakup di suatu kumpulan multicultural potongan [yang] tahunan populer bermaksud/arti untuk sebelum- dan dalam jabatan para guru menguraikan mayoritas [dari;ttg] para siswa putih sebagai berikut: " Anak-Anak [yang] paling putih sudah membelanjakan hidup [yang] akademis mereka [yang] mempelajari cermin [yang] disimpangkan [dari;ttg] kultur dan sejarah mereka yang (mana) hanya mencerminkan orang-orang seperti diri mereka." Di (dalam) kontras, pengarang berkelahi, " Kebanyakan anak-anak warna telah ditunjuk ke arah suatu jendela sempit, yang menawarkan suatu pandangan dihalangi dunia dan tempat mereka di dalamnya" (Ukpokudu, 1999, p. 8).

The theorists' negative views of the dominant "European-American majority" apparently include many of the pre- and in-service teachers they instruct. The unrealistic and biased perceptions of "European-American" education majors and teachers about minorities and their lack of enthusiasm for multiculturalism are common topics in the theorists' literature. The strong resistance of many undergraduate and graduate education students to multicultural education requirements is also frequently addressed in theorists' academic journal articles. At one university, 24 multicultural education instructors identified as two of their greatest challenges student resistance and anger displayed toward multicultural topics and opposition and hostility toward multicultural education instructors for promoting the examination of concepts such as tolerance and acceptance (Gallavan, 2000). How much of the alleged student resistance to multicultural education is a result of negative reactions to instructors' distorted portraits of a deeply racist America is a question the theorists do not explore. Pandangan Hal negatif ahli teori yang dominan [itu] " European-American Mayoritas" [yang] kelihatannya meliputi banyak dari sebelum- dan dalam jabatan para guru [yang] mereka instruksikan. Yang tak realistis dan menyimpang persepsi European-American" Jurusan Pendidikan Dan Para guru tentang minoritas dan gairah ketiadaan mereka untuk multiculturalism adalah topik umum di (dalam) literatur ahli teori [itu]. Pembalasan yang kuat dari banyak mahasiswa belum bergelar dan para siswa pendidikan lulusan ke multicultural pendidikan kebutuhan adalah juga sering ditujukan [yang] artikel jurnal ahli teori akademis. Sependapat universitas, 24 multicultural instruktur pendidikan mengenali [ketika;seperti] dua kemarahan dan pembalasan siswa tantangan [yang] terbesar mereka mempertunjukkan ke arah multicultural topik dan oposisi dan permusuhan ke arah multicultural instruktur pendidikan untuk mempromosikan pengujian konsep seperti toleransi dan penerimaan (Gallavan, 2000). Berapa banyak pembalasan siswa yang dituduh ke multicultural pendidikan adalah suatu hasil [dari;ttg] reaksi negatif ke potret instruktur [yang] disimpangkan suatu sangat Amerika pembenci suku bangsa lain adalah suatu pertanyaan ahli teori tidak menyelidiki.

The theorists' negative views of white teachers (and future teachers) are best illustrated in the concept of "white privilege" and its attendant literature. "White privilege" is defined as according benefits to whites on a purely ascriptive basis—their race, as opposed to their merit. In an interview published in *Rethinking Schools*, Christine Sleeter, a leading theorist and author of a substantial body of multicultural materials for education students, said this about white privilege: "Generally, people of European descent still claim white privileges. This is particularly true of wealthy people of European descent" (para. 2). Earlier in the same interview, she made clear that white privilege has, in her opinion, been an unchanging constant in the United States. In Sleeter's words: Pandangan Hal negatif ahli teori [dari;ttg] para guru putih (dan para guru masa depan) terbaik digambarkan konsep " perlakuan khusus putih" dan literatur penjaga nya. " Perlakuan khusus putih" digambarkan sebagai menurut manfaat ke orang kulit putih pada [atas] suatu semata-mata ascriptive basis-their [ras/lomba], sebagai lawan jasa mereka. Di (dalam) suatu wawancara menerbitkan Memikirkan kembali Sekolah, Christine Hujan es dan salju, suatu pengarang dan ahli teori terkemuka suatu badan multicultural material [yang] substansiil untuk para siswa pendidikan, berkata perlakuan khusus putih sekitar ini: " [Yang] biasanya, orang-orang [dari;ttg] Pendaratan mengenai Eropa masih mengakui perlakuan

khusus putih. Ini adalah [yang] benar untuk orang-orang [yang] kaya [dari;ttg] Pendaratan mengenai Eropa" (Para. 2). lebih awal Wawancara yang sama, dia menjelaskan perlakuan khusus [yang] putih itu mempunyai, di (dalam) pendapat nya, suatu [yang] tetap tak berubah-ubah Amerika Serikat [itu]. Di (dalam) Kata-Kata Sleeter's:

Both historically and in contemporary society, the relationships between racial and ethnic groups in this country are framed within a context of unequal power. People of European descent generally assume the power to claim the land, claim the resources, and claim the language. They even claim the right to frame the culture and identity of who we are as Americans. This has been the case ever since Columbus landed on the North American continent (Miner and Peterson, 2000-2001, para. 1). Kedua-Duanya menurut sejarah dan di (dalam) masyarakat jaman ini, hubungan antar[a] kelompok [yang] kesukuan dan rasial di (dalam) negeri ini dibingkai di dalam suatu konteks [dari;ttg] [kuasa/ tenaga] berbeda. Orang-Orang [dari;ttg] Pendaratan mengenai Eropa [yang] biasanya mengasumsikan [kuasa/ tenaga] [itu] untuk mengakui daratan [itu], mengakui sumber daya [itu], dan mengakui bahasa [itu]. Mereka genap mengakui hak untuk membingkai identitas dan kultur [itu] [siapa] yang kita adalah [sebagai/ketika/sebab] Orang Amerika. Ini telah (menjadi) kasus sejak Columbus mengeritik benua Amerika Utara [itu] (Buruh tambang Dan Peterson, 2000-2001, para. 1).

Since their perspectives are grounded in this notion of permanent privilege of whites, for most theorists the goal of multiculturalism is not teaching a true appreciation for diversity. The stakes are higher. The central issue in multicultural education, for Sleeter and her fellow theorists, is a type of "justice" in which schools would advocate the reconstruction of society by transforming power relationships and redressing past grievances through various compensatory measures. In their view, teachers should begin promoting this goal in kindergarten. In the interview cited above, Sleeter recounts correcting a kindergarten teacher who had designed a lesson around Thanksgiving as a tool for teaching young children about the cultures of indigenous people. [Karena;Sejak] perspektif mereka didasarkan pada dugaan ini [dari;ttg] perlakuan khusus orang kulit putih permanen, untuk/karena kebanyakan ahli teori gol multiculturalism tidaklah mengajar suatu penghargaan benar untuk keaneka ragaman. Taruhan adalah lebih tinggi. Isu yang pusat di (dalam) multicultural pendidikan, untuk/karena Hujan es dan salju dan ahli teori pengikut nya, adalah suatu jenis " keadilan" di mana sekolah akan mendukung rekonstruksi masyarakat dengan menjelmakan hubungan kekuasaan dan perbaikan keluhan yang lampau melalui/sampai berbagai ukuran mengganti rugi. Di (dalam) pandangan mereka, para guru [perlu] mulai promosi gol ini di (dalam) taman kanak kanak. Di (dalam) wawancara mengutip di atas, Hujan es dan salju menceriterakan mengoreksi seorang guru taman kanak kanak [siapa] yang telah merancang suatu pelajaran di sekitar Rasa syukur sebagai alat untuk mengajar anak-anak [yang] muda tentang kultur [dari;ttg] orang-orang berasal dari/pribumi.

But that isn't the story. From the perspective of indigenous people, the real story has been one of genocide and of taking land away. It's important for kids to understand that story. From the perspective of indigenous people today, what's important is reclaiming land, reclaiming sovereignty, rebuilding economies, reclaiming and rebuilding cultures that have been devastated (Miner and Peterson, 2000-2001, para. 16). Tetapi itu bukan cerita [itu]. Dari perspektif [dari;ttg] orang-orang berasal dari/pribumi, cerita yang riil telah (menjadi) salah satu dari genocide dan [tentang] membawa daratan. Adalah [yang] penting untuk mempermainkan untuk memahami cerita itu. Dari perspektif [dari;ttg] orang-orang berasal dari/pribumi hari ini, apa (yang) penting sedang memperoleh kembali daratan, memperoleh kembali kedaulatan, membangun kembali ekonomi, perolehan kembali dan pembangunan lagi kultur yang telah dibinasakan (Buruh tambang Dan Peterson, 2000-2001, para. 16).

Note the last sentence. Such theorists are not content simply to advocate teaching about treatment of Native-Americans and blacks from a historical perspective. They advocate using the public school classroom as a forum to promote the notion that there must be redress *now*

for injustices that whites perpetrated, in some cases, centuries ago against people of color. A classroom focus upon content-based history education is, in the minds of the theorists, woefully inadequate. Instead, promotion of an activist agenda should be a major pedagogical goal, beginning in preschool. Since most multicultural theorists are educating for justice and activism, simply teaching about white racism is inadequate because it fails to demand compensatory action and the renegotiating of power relationships. Catat [kalimat;hukuman] yang ter]akhir [itu]. . seperti (itu) ahli teori bukanlah isi [yang] hanya untuk mendukung pengajaran tentang perawatan Native-Americans dan hitam dari suatu perspektif historis. Mereka mendukung penggunaan orang banyak/masyarakat kelas sekolah sebagai forum untuk mempromosikan dugaan [itu] yang harus ada mengganti kerugian sekarang untuk ketidakadilan yang orang kulit putih melakukan, dalam beberapa hal, berabad-abad yang lalu melawan terhadap orang-orang warna. Suatu kelas memusatkan [atas/ketika] pendidikan sejarah content-based adalah, di [dalam] pikiran ahli teori, dengan sedih tidak cukup. Sebagai ganti(nya), promosi dari suatu aktifis agenda harus suatu gol bersifat pendidikan utama, mulai sebelum masuk sekolah. [Karena;Sejak] kebanyakan multicultural ahli teori sedang mendidik untuk keadilan dan activism, [yang] hanya mengajar sekitar rasisme putih adalah tidak cukup sebab [itu] gagal untuk menuntut tindakan mengganti rugi dan renegotiating hubungan kekuasaan.

In addition to taking the "European-American power structure" to task for perpetuating racism, the theorists are also extremely critical of other traditional American values, particularly individualism, capitalism, and definitions of knowledge. In a 1995 article in *Theory and Research in Social Education*, three leading theorists identified individualism as a major "European-American" value perpetuated through the education system. They asserted that "past emphasis on individual competitiveness has caused a few to do exceptionally well while many others are plagued by powerlessness, oppression, economic hardships, and alienation" (Pang, Gay, and Stanley 1995, p. 322). In another article discussing critiques of multicultural education, a theorist described the attacks as "mainly about trying to maintain European and American capitalist supremacy" (Sleeter, 1995, p. 88). Sebagai tambahan terhadap mengambil [itu] " European-American menggerakkan struktur" ke tugas untuk mengabadikan rasisme, ahli teori adalah juga sangat kritis dari yang lain tradisional Nilai-Nilai Amerika, [yang] terutama sekali individualisme, kapitalisme, dan definisi pengetahuan. Di (dalam) suatu 1995 artikel di (dalam) Teori Dan Riset di (dalam) Pendidikan Sosial, tiga ahli teori terkemuka mengenali individualisme sebagai utama " European-American" Nilai mengabadikan melalui/sampai sistem pendidikan. Mereka menyatakan bahwa " penekanan yang lampau pada [atas] daya saing individu telah menyebabkan beberapa untuk lakukan sumur luarbiasa [selagi/sedang] (orang) yang lain banyak orang digoda oleh mati kutu, tekanan, [kesukaran/penderitaan] ekonomi, dan pengasingan" (Rasa sakit yang tiba-tiba, Gembira, dan Stanley 1995, p. 322). Di (dalam) artikel lain yang mendiskusikan kritik multicultural pendidikan, suatu ahli teori uraikan serangan [itu] [sebagai/ketika] " sebagian besar tentang berusaha untuk memelihara mengenai Eropa Dan Supremasi kapitalis Amerika" (Hujan es dan salju, 1995, p. 88).

Leading theorists are also strongly committed to postmodernism and its contention that knowledge is not neutral but reflects power relationships within society. In other words, school curricula foster the interests of the hegemonic elite. Sympathetic reviewers of *The Handbook of Research on Multicultural Education* (Banks and Banks, 1995a) identified the postmodernist definition of knowledge as central to the field. "A multicultural canon challenges the notion that knowledge represents verifiable truths" (Boyle-Baise, 1995, p. 335). Instead, the theorists view knowledge as a social construction defined by the dominant group. They seek to redefine knowledge in ways that present plural versions of the truth. In numerous articles, leading multicultural theorist James Banks has tried to refute notions of objective knowledge and universal rules of inquiry (1993; 1995b). Ahli teori terkemuka adalah juga betul-betul merasa terikat dengan postmodernism dan perkelahian nya yang pengetahuan tidaklah netral tetapi mencerminkan hubungan kekuasaan di dalam masyarakat. Dengan kata lain, sekolah curricula membantu perkembangan minat pilihan yang hegemonic [itu]. Penulis resensi buku

[yang] simpatik Pedoman Riset pada [atas] Multicultural Pendidikan (Bank Dan Bank, 1995A) dikenali postmodernist definisi pengetahuan [itu] [sebagai/ketika] pusat kepada bidang. " Suatu multicultural aturan menghadapi tantangan dugaan [itu] yang pengetahuan menghadirkan kebenaran verifiable" (Boyle-Baise, 1995, p. 335). Sebagai ganti(nya), ahli teori memandang pengetahuan sebagai konstruksi sosial yang digambarkan oleh kelompok yang dominan [itu]. Mereka mencari untuk menggambarkan kembali pengetahuan dalam cara-cara yang [kini/hadir] itu versi [yang] jamak kebenaran [itu]. Di (dalam) banyak artikel, memimpin multicultural Yakobus ahli teori Bank telah mencoba untuk membuktikan salah/menyangkal barang kelontong pengetahuan sasaran dan peraturan tentang universal pemeriksaan (1993; 1995b).

Because theorists promote the notion that objective truth is impossible, it is not surprising that they either find fault with knowledge transmission for its own sake or as a means to educate students to enter the work force or social structure. Such education is viewed as assimilationist and as creating problems for people of color (Banks, 1990, p. 211). The social studies content that the theorists promote seems to focus largely on teaching young people about ethnic groups other than those that are European. In *The Handbook of Research on Multicultural Education* (Banks and Banks, 1995a), the only nonethnic social studies content objective that the theorists recommended is a general commitment to America's unrealized democratic ideals. Sebab ahli teori mempromosikan dugaan [itu] yang kebenaran sasaran mustahil, [itu] tidaklah mengejutkan bahwa mereka yang manapun temukan kesalahan dengan transmisi pengetahuan demi sendiri atau sebagai bermakna untuk mendidik para siswa untuk masuk kekuatan pekerjaan [itu] atau struktur sosial. . seperti (itu) pendidikan dipandang sebagai assimilationist dan [seperti/ketika] menciptakan permasalahan untuk orang-orang warna (Bank, 1990, p. 211). Isi Ilmu kemasyarakatan [bahwa/yang] ahli teori mempromosikan nampak untuk memusatkan sebagian besar pada [atas] mengajar orang-orang muda tentang kelompok kesukuan selain dari . yang adalah Mengenai Eropa. Di (dalam) Pedoman Riset pada [atas] Multicultural Pendidikan (Bank Dan Bank, 1995A), satu-satunya sasaran isi ilmu kemasyarakatan nonethnic [bahwa/yang] ahli teori direkomendasikan adalah suatu komitmen umum ke [yang] Ideal demokratis tidak direalisir America's.

The theorists are not interested in students learning a body of knowledge about different ethnic groups. Instead, their objective is to change student attitudes about themselves and others. They place a high priority on multicultural education as a tool to improve ethnic group relations, raise specific groups' self-esteem, and stimulate citizen action to transform America. In the words of a leading theorist, "multicultural education can be perceived as a pedagogy of the oppressed, resistance, hope, possibility, equity, emancipation, and reconstruction" (Gay, 1995, p. 5). The same writer asserts that a central theme of most theoretical conceptions of multiculturalism "is its potential for revolutionizing education, and ultimately, revitalizing society" (p. 38). The only way to accomplish education for citizenship in a multicultural society is through a transformation (of the schools) "as far reaching as the one that has seized Eastern Europe and what was once the Soviet Union" (Pang et al., 1995, p. 323). Ahli teori tidaklah tertarik akan para siswa yang belajar tubuh dari pengetahuan tentang kelompok kesukuan berbeda. Sebagai ganti(nya), sasaran mereka adalah untuk ber;ubah sikap siswa tentang diri mereka dan (orang) yang lain. Mereka menempatkan suatu prioritas tinggi pada [atas] multicultural pendidikan sebagai alat untuk meningkatkan hubungan kelompok kesukuan, kenaikan yang spesifik kelompok mengagumi diri sendiri, dan merangsang tindakan warganegara untuk mengubah bentuk Amerika. Di (dalam) kata-kata suatu ahli teori terkemuka, " multicultural pendidikan dapat dirasa sebagai ilmu mendidik si tertindas, pembalasan, harapan, kemungkinan, hak kekayaan, pembebasan, dan rekonstruksi" (Gembira, 1995, p. 5). Penulis yang sama menyatakan bahwa suatu tema [yang] pusat [dari;ttg] konsepsi multiculturalism [yang] [yang] teoritis " potensi nya untuk mengadakan revolusi pendidikan, dan akhirnya, revitalizing masyarakat" (p. 38). Satu-Satunya cara untuk memenuhi pendidikan untuk kewarga negaraan di (dalam) suatu multicultural masyarakat jemu akan suatu perubahan bentuk (tentang sekolah) " [sebagai/ketika/sebab] berjangkauan luas seperti satu yang telah menangkap Eropa Ketimuran

dan apa sekali ketika Perserikatan/Pipa sambung Soviet" (Rasa sakit yang tiba-tiba Et Al., 1995, p. 323).

Although readers might suppose that such rhetoric is a product of the political radicalism of the 1960s, this is not its sole source. Leading multiculturalists, in most respects, reiterate the Progressive philosophy of Social Reconstructionism. Long before the Vietnam War, Social Reconstructionists believed that schools and teachers should act as agents in effecting deliberate social change. Two contemporary multicultural theorists correctly define Social Reconstructionism as an approach that "directly challenges students to become social reformers and commit to the reconstruction of society through the redistribution of power and other resources" (Jenks, Lee, and Kanpol, 2002, p. 23). This framework encompasses the overarching belief that multicultural educators should seek to change power relations in order to effect a more just and equitable society. According to this view, education has traditionally been a tool of the hegemonic elite to retain the status quo with its highly inequitable power relations. Walaupun pembaca mungkin mengira bahwa . seperti (itu) retorik adalah suatu produk radikalisme yang politis 1960s, ini adalah bukan sumber tapak kaki nya. Terkemuka multiculturalists, di (dalam) kebanyakan pengakuan, mengulangi pernyataan Filosofi yang progresif [dari;ttg] Reconstructionism Sosial. Rindukan [sebelum/di depan] Vietnam Peperangan, Sosial Reconstructionists percaya dan sekolah itu para guru [perlu] bertindak sebagai agen di (dalam) mengakibatkan sosial sengaja ber;ubah. Dua multicultural ahli teori jaman ini [yang] dengan tepat menggambarkan Reconstructionism Sosial sebagai suatu pendekatan yang " secara langsung menghadapi tantangan para siswa untuk menjadi pembaharu sosial dan mengikat . kepada rekonstruksi masyarakat melalui/sampai pembagian kembali [kuasa/ tenaga] dan lain sumber daya" (Jenks, Tempat teduh, dan Kanpol, 2002, p. 23). Kerangka ini meliputi [itu] melingkupi kepercayaan yang multicultural pendidik [perlu] mencari untuk ber;ubah hubungan [kuasa/ tenaga] dalam rangka mempengaruhi suatu lebih [hanya;baru saja] dan masyarakat patut. Nurut pandangan ini, pendidikan telah secara kebiasaan suatu alat pilihan yang hegemonic untuk mempertahankan keadaan tetap pada suatu saattertentu [itu] dengan hubungan [kuasa/ tenaga] [yang] sangat tidak adil nya .

Although contemporary theorists often accentuate the connection between "European-American" elites and the disempowered, their assertions about what social studies teachers should teach to remedy America's ills have roots at least 70 years deep. In his 1932 book, *Dare the Schools Build a New Social Order?,* prominent progressive George Counts, who founded Social Reconstructionism, advocated the elimination of capitalism, competition, property rights, and profits. Counts emphasized that schools should be the vanguard of America's political, economic, and social transformation (Ravitch, 2000). Contemporary theorists echo Counts' indictment of capitalism, individualism, and competition. They also reiterate his emphasis on schools as training centers for social activism instead of institutions that focus primarily upon the transmission of knowledge. Walaupun ahli teori jaman ini sering menekankan koneksi [itu] antar[a] " European-American" Pilihan dan yang disempowered, pernyataan mereka tentang ilmu kemasyarakatan para guru apa [yang] [perlu] mengajar untuk memperbaiki Penyakit America's mempunyai akar sedikitnya 70 tahun dalam. Di (dalam) buku 1932 nya, Ambil Sekolah [itu] Mbangun suatu [Order/ pesanan] Sosial Baru?, George progresif terkemuka Gelar ningrat, [siapa] yang menemukan Reconstructionism Sosial, mendukung penghapusan kapitalisme, kompetisi, hak milik, dan laba. Gelar ningrat menekankan bahwa sekolah harus merupakan barisan depan [dari;ttg] [yang] Politis America's, ekonomi, dan perubahan bentuk sosial (Ravitch, 2000). Gema Ahli teori jaman ini Surat tuduhan kapitalisme gelar ningrat, individualisme, dan kompetisi. Mereka juga mengulangi pernyataan penekanan nya pada [atas] sekolah [sebagai/ketika] pelatihan memusat untuk activism [yang] sosial sebagai ganti institusi yang memusatkan terutama semata [atas/ketika] transmisi pengetahuan.

APPRAISING THE THEORISTS

The notion that "European-American" elements of our society continue to be racist relative to other ethnic groups runs contrary to recent historical and contemporary evidence. Glazer (1997, p. 46) accurately summarized the historical case against the theorists when he asserted that, if one examines recent American history, one finds greater inclusion, a steady increase in constitutional and legal protection for minorities, and an abandonment of racial restrictions in U.S. immigration law. In his critically acclaimed book, *Bowling Alone* (2000), Robert Putnam cites a number of studies indicating "without a doubt, America in the 1990s was a more tolerant place than America in the 1950s or even the 1970s" (p. 352). Dugaan bahwa " European-American" Unsur-Unsur [dari;ttg] masyarakat [kita/kami] melanjut untuk;menjadi pembenci suku bangsa lain sehubungan dengan lain kelompok kesukuan berlari bertentangan dengan bukti jaman ini dan historis terbaru. Pelat datar (1997, p. 46) dengan teliti meringkas kasus yang historis melawan terhadap ahli teori ketika ia menyatakan bahwa, jika sese]orang menguji terbaru Sejarah Amerika, sese]orang temukan pemasukan lebih besar, suatu peningkatan mantap di (dalam) perlindungan [yang] sah/tentang undang-undang dan konstitutional untuk minoritas, dan suatu penundaan [dari;ttg] pembatasan rasial di (dalam) U.S. hukum imigrasi. Di (dalam) buku [yang] disambut tepuk tangan nya, Bowling Sendiri (2000), Robert Putnam mengutip sejumlah studi [yang] menandakan " tanpa suatu keraguan, Amerika di (dalam) 1990s adalah suatu tempat [yang] lebih bersikap toleran dibanding Amerika di (dalam) 1950s atau bahkan 1970s" (p. 352).

In *America in Black and White: One Nation Indivisible, Race in Modern America* (1997), social scientists Stephan and Abigail Thernstrom provided even more impressive evidence of increases in the legal rights and educational progress of blacks, who, until 2003, comprised the largest American minority group. The authors used the early 1940s as a beginning point and concluded their work with the mid-1990s. They chronicle the end of "separate but equal" and the passage of the voting and civil rights acts. In part because American democracy worked and government-supported racism ended, blacks have made substantial educational and economic progress. In 1960, 20 percent of the black population completed four or more years of high school. By 1995 that figure had risen to approximately 74 percent (p. 190). In 1960, 7 percent of blacks attended and only 3 percent graduated from college. Di (dalam) Amerika hitam di atas putih: Satu Bangsa Tak terpisahkan, [Ras/Lomba] di (dalam) Amerika Modern (1997), sarjana pengetahuan masyarakat Stephan Dan Abigail Thernstrom menyajikan lebih bukti [yang] mengesankan lagi meningkat/kan [hak/ kebenaran] yang sah/tentang undang-undang dan kemajuan [yang] bidang pendidikan [dari;ttg] hitam, [siapa] yang, sampai 2003, terdiri atas yang paling besar Minoritas Amerika menggolongkan. Pengarang menggunakan [itu] awal 1940s sebagai mulai titik dan menyimpulkan pekerjaan mereka dengan [itu] mid-1990s. Mereka riwayat ujung " memisahkan tetapi sama" dan jalan lintasan pemungutan suara dan hak-hak warga negara bertindak. Sebagian karena Demokrasi Amerika bekerja/lancar dan rasisme government-supported mengakhiri, hitam sudah buat kemajuan ekonomi dan bidang pendidikan substansiil. Di (dalam) 1960, 20 persen populasi yang hitam menyelesaikan empat atau lebih [] tahun sekolah menengah. Dengan 1995 yang figur yang yang telah bangkit untuk sekitar 74 persen (p. 190). Di (dalam) 1960, 7 persen [dari;ttg] menghadiri hitam dan hanya 3 persen lulus dari perguruan tinggi.

By 1995, these figures were 38 percent and 13 percent (p. 192). In 1940, black male median income was 41 percent that of white males and black female income 36 percent that of white females. By 1995, the median income percentage for black males relative to whites had risen to 67 percent, while black female median income had soared to 89 percent of white female median income (p. 195). Over three times as many blacks in 1995 (41 percent) identified themselves as middle class than the 12 percent who did so in 1949 (p. 200). The authors convincingly document that the educational attainment deficit of blacks relative to whites, not direct white racism, accounts for most remaining economic gaps. Although no scholars have marshaled the massive amount of evidence depicting the progress of other ethnic groups to

the degree that the Thernstroms have in the case of blacks, the end of legal racial segregation and the passage of civil rights laws have resulted in dramatic educational and economic advances for all U.S. ethnic minorities over the past half century. Dengan 1995, figur ini adalah 38 persen dan 13 persen (p. 192). Di (dalam) 1940, pendapatan angka median [jantan/pria] hitam adalah 41 persen yang [jantan/pria] putih dan pendapatan wanita hitam 36 persen yang wanita putih. Dengan 1995, persentase pendapatan angka median untuk [jantan/pria] [yang] hitam sehubungan dengan orang kulit putih yang yang telah bangkit [bagi/kepada] 67 persen, [selagi/sedang] angka median wanita hitam pendapatan yang yang telah membumbung tinggi [bagi/kepada] 89 persen [dari;ttg] pendapatan angka median wanita putih (p. 195). (Di) atas tiga kali sebanyak hitam 1995 (41 persen) yang dikenali diri mereka [seperti/ketika] kelas menengah dibanding yang 12 persen [siapa] yang nengikuti 1949 (p. 200). Pengarang [yang] dengan meyakinkan dokumen [bahwa/yang] defisit pencapaian yang bidang pendidikan [dari;ttg] sanak keluarga hitam ke orang kulit putih, [yang] tidak mengarahkan rasisme putih, meliputi gap ekonomi paling sisa[nya]. Walaupun tidak (ada) sarjana sudah menyusun yang raksasa(masive) jumlah bukti yang melukiskan kemajuan dari yang lain kelompok kesukuan kepada derajat tingkat [bahwa/yang] Thernstroms mempunyai di (dalam) kasus [dari;ttg] hitam, ujung pemisahan [yang] rasial sah/tentang undang-undang dan jalan lintasan hak-hak warga negara hukum sudah mengakibatkan advance ekonomi dan bidang pendidikan dramatis untuk semua U.S. minoritas kesukuan (di) atas masa lalu separuh abad.

An examination of the materials that social studies multiculturalists use with their pre- and in-service captive student audiences indicates that they simply do not include this kind of accurate historical content, thereby grossly distorting the last 60 years of American history. Through these distortions, they perpetuate the notion of "white guilt" when there is no reason in the 21st century for the vast majority of whites to feel guilty about issues of ethnicity. Suatu pengujian material yang ilmu kemasyarakatan multiculturalists menggunakan dengan sebelum mereka- dan dalam jabatan pendengar siswa tawanan menunjukkan bahwa mereka hanya tidak meliputi isi historis akurat macam ini , dengan demikian nyata sekali belokkan 60 tahun [yang lalu/ terakhir] Sejarah Amerika. Melalui penyimpangan ini , mereka mengabadikan dugaan " rasa bersalah putih" walaupun tidak ada alasan di (dalam) abad 21 untuk mayoritas luas orang kulit putih untuk merasa berdosa tentang isu ethnicas.

Multicultural theorists further mislead students and distort reality by never focusing upon the international comparative data on how majority populations in other countries feel about their principal minorities. In one 1991 study comparing the United States to 12 European countries, random samples of Europeans and American majority populations were asked if they disliked their nations' principal minorities. For example, 42 percent of the French sample disliked North Africans, and the same percentage of Poles disliked Ukrainians. The U.S. ranked lowest of all 13 countries in the percentage of majority citizens (13) who held unfavorable attitudes toward blacks, who, at the time, comprised the largest minority group in the U.S. (Thernstrom and Thernstrom, p. 531). When such evidence is objectively examined, it strongly supports the argument that the United States has, by world standards, evolved into a society that is highly tolerant of ethnic minorities. Multicultural theorists, with their stubborn insistence that we are deeply flawed by our racism, prefer to ignore such comparisons. Multicultural Ahli teori lebih lanjut menyesatkan para siswa dan menyimpangkan kenyataan dengan tidak pernah memusatkan [atas/ketika] internasional komparatip data pada [atas] bagaimana populasi mayoritas di (dalam) lain negara-negara merasakan tentang utama mereka minoritas. Di (dalam) satu 1991 studi mencocokkan dengan Amerika Serikat [itu] 12 Negara-Negara eropa, sampel acak untuk mengenai Eropa Dan Populasi Mayoritas Amerika telah [diminta;tanya] jika mereka membenci minoritas utama bangsa mereka. Sebagai contoh, 42 persen Contoh Perancis membenci Orang Afrika Utara, dan yang sama persen dari Kutub membenci Ukrainians. [Itu] U.S. [yang] paling rendah yang diatur dari semua 13 negara-negara di (dalam) persen dari warganegara mayoritas (13) [siapa] yang [mengadakan;memegang] sikap kurang baik ke arah hitam, [siapa] yang, pada ketika, terdiri atas minoritas yang paling besar menggolongkan U.S. (

Thernstrom Dan Thernstrom, p. 531). Ketika . seperti (itu) bukti secara obyektif diuji, [itu] betul-betul mendukung argumentasi [itu] [bahwa/yang] Amerika Serikat mempunyai, dengan dunia baku, ditingkatkan ke dalam suatu masyarakat yang adalah [yang] sangat bersikap toleran untuk minoritas kesukuan. Multicultural Ahli teori, dengan desakan/permintaan tegas [yang] keras kepala mereka yang kita sangat bercacat oleh rasisme [kita/kami], menyukai untuk mengabaikan . seperti (itu) perbandingan.

The theorists' attack upon the "European-American" values of individualism and capitalism neglects the positive influence of both those values in the battle against racism. Western beliefs in individual rights and liberty formed the foundation of the American civil rights movement. Despite its flaws, the capitalist/competitive aspect of American society, far from causing the few to prosper at everyone else's expense, has resulted in extremely high levels of affluence for the majority of Americans by world standards and is a major reason why enormous numbers of foreigners desire to live here. Serangan ahli teori [atas/ketika] " European-American" Nilai-Nilai individualisme dan kapitalisme melalaikan pengaruh yang positif kedua-duanya nilai-nilai itu di (dalam) pertempuran melawan terhadap rasisme. Kepercayaan barat di (dalam) kebebasan dan [hak/ kebenaran] individu membentuk [itu] pondasi bagi Pergerakan Hak-Hak warga negara Amerika. Di samping kekurangan nya, capitalist/competitive aspek/pengarah [dari;ttg] Masyarakat Amerika, jauh dari menyebabkan minoritas untuk berhasil baik pada semua orang biaya selain itu, telah mengakibatkan untuk [yang] tingkat tinggi kemakmuran untuk mayoritas Orang Amerika [oleh/dengan] standard dunia dan adalah suatu alasan utama mengapa angka-angka orang asing [yang] mahabesar menginginkan untuk [tinggal/hidup] di sini.

The theorists' postmodern perspective poses a serious challenge to the idea that what is taught in history and the social sciences can be based upon evidence. If there are always "multiple truths," then what is taught as content becomes simply a matter of competing opinions. In recent years, the anti-intellectual implications of postmodernism have been a major topic of criticism by academics on the Left and Right, and there is even some evidence that postmodernism is becoming passé in the academy (Sweezy et al., 1995). Yet none of the controversy over its negative, nihilistic, and relativistic implications is present in the writings of social studies theorists. Postmodern ahli teori Perspektif bersikap suatu tantangan serius kepada gagasan di mana apa [yang] diajar sejarah dan ilmu-ilmu sosial dapat didasarkan bukti. Jika ada selalu " berbagai kebenaran," kemudian apa [yang] diajar [ketika;seperti] isi menjadi hanya sesuatu yang bersaing pendapat. Di tahun terakhir, anti-intellectual implikasi postmodernism telah (menjadi) suatu topik kritik [yang] utama oleh akademis pada sisi kiri dan Benar, dan di sana bahkan beberapa bukti yang postmodernism sedang menjadi passé di (dalam) akademi [itu] (Sweezy et Al., 1995). Namun tidak satupun dari kontroversi (di) atas hal negatif nya, nihilistis, dan implikasi relativistic hadir di (dalam) tulisan ahli teori ilmu kemasyarakatan.

To the contrary, their writings are, if anything, extremely relativistic regarding every conceivable cultural and minority group except so-called "European-Americans," where they usually take an absolute stance of negativity. Many hold the opinion that the values and norms of the various subcultures within a society should be equally protected by law and sanctified by and celebrated in curricula. In other words, the multiplicity of values and norms should be uncritically enshrined in the classroom. But as the late Albert Shanker (1996) cautioned: Untuk penyimpangannya, tulisan mereka adalah, meskipun terdapat perbedaan, [yang] relativistic mengenai tiap-tiap kelompok [yang] minoritas dan budaya dapat dikayalkan kecuali yang disebut " European-Americans," [di mana/jika] mereka pada umumnya mengambil suatu cara berpendirian kemutlakan negatif. Banyak pegangan pendapat [bahwa/yang] nilai-nilai dan norma-norma berbagai cabang kebudayaan di dalam suatu masyarakat harus dengan sama dilindungi di depan hukum dan yang disucikan oleh dan yang masyhur/dirayakan curricula. Dengan kata lain,

serbaragam berharga dan norma-norma harus secara tanpa kritik diabadikan kelas [itu]. Tetapi [sebagai/ketika] almarhum Albert Tulang kering (1996) cautioned:

The claims of multiculturalists and other separatists reflect the attitude that no one group may make a judgment on any other, since all "depends on your point of view." This extremely relativistic viewpoint conflicts with the need that all societies have of establishing some basic values, guidelines, and beliefs. And, it should be pointed out that those who reject this claim are ironically making an absolute value of tolerance, for in its name they are unwilling to make any other value judgment (para. 13). Klaim multiculturalists dan lain separatis mencerminkan sikap [itu] yang tak seorangpun kelompok boleh membuat suatu pertimbangan pada [atas] lainnya, [karena;sejak] semua " tergantung pada sasaran kamu memandang." Ini sudut pandang sangat relativistic bertentangan dengan kebutuhan [itu] bahwa semua masyarakat mempunyai menetapkan beberapa nilai-nilai basis dasar, petunjuk, dan kepercayaan. Dan, haruslah ditunjukkan bahwa [mereka/yang] yang menolak klaim ini ironisnya membuat suatu nilai mutlak toleransi, untuk/karena dalam nama nya [yang] mereka adalah enggan untuk membuat pertimbangan nilai lain (para. 13).

Taken to its logical extreme, the theorists' refusal to make cultural value judgments would have us teaching tolerance of any number of practices repugnant to most Americans, such as female genital mutilation (practiced in 28 countries in the Middle East and sub-Saharan Africa), immolation of Hindu widows on their husbands' funeral pyres, amputations as punishments for theft, ethnic cleansing, and attacking innocent people in the Pentagon and the World Trade Center to avenge alleged grievances. yang diambil Ke [yang] ekstrim logis nya, penolakan ahli teori untuk membuat nilai budaya pertimbangan ingin mempunyai [kita/kami] mengajar toleransi tentang segala jumlah praktek yang menjijikkan ke kebanyakan Orang Amerika, seperti perusakan genital wanita (yang dilatih/dipraktekkan 28 negara-negara di (dalam) timur tengah dan sub-Saharan Afrika), Pengorbanan Hindu Para janda pada [atas] tumpukan bahan bakar pemakaman suami mereka, pemotongan [sebagai/ketika] hukuman untuk pencurian, pembersihan kesukuan, dan menyerang orang-orang tidak bersalah di (dalam) Segilima dan Dunia Berdaganglah Pusat untuk membalas dendam keluhan dituduh.

The theorists' focus on emphasizing ethnic differences as a means of empowering young people of color is not supported by evidence. It is also potentially dangerous to the fabric of American society. Fokus ahli teori pada [atas] menekankan perbedaan kesukuan sebagai alat pemberian kuasa orang-orang warna [yang] muda tidaklah didukung oleh bukti. Ini juga berpotensi berbahaya kepada pabrik [dari;ttg] Masyarakat Amerika.

Theorists contend that multicultural education improves interethnic relations and minority self-esteem, thereby improving academic performance. But they cite little evidence. In *The Handbook of Research on Multicultural Education*, several theorists themselves acknowledged the paucity of studies that support the effectiveness of educational interventions designed to improve intergroup attitudes. The notion that an ethnic group's self-esteem and subsequent academic achievement can improve through the study of its own culture has almost no supporting evidence. In fact, the counterevidence is strong. It is well known that American students think better of their own performance in mathematics than do Chinese, Japanese, or Korean students, even as Asians objectively do better. Within the United States, the achievements of Asians and Jews, who had no multiculturalism designed to make them feel better about being Asian or Jewish, are well documented; blacks, who on average have lower levels of academic achievement than other ethnic groups, generally show up in research as having higher self-esteem than other groups (Glazer, 1997, p. 54). Ahli teori menetapkan bahwa multicultural pendidikan meningkatkan minoritas dan hubungan interethnic mengagumi diri sendiri, dengan demikian meningkat;kan capaian akademis. Tetapi mereka mengutip bukti [kecil/sedikit]. Di (dalam) Pedoman Riset pada [atas] Multicultural Pendidikan, beberapa ahli teori diri mereka mengakui kekurangan studi yang mendukung efektivitas [dari;ttg] intervensi bidang

pendidikan yang dirancang untuk meningkatkan intergroup sikap. Dugaan yang suatu kelompok kesukuan mengagumi diri sendiri dan prestasi akademis yang berikut dapat meningkatkan melalui/sampai studi tentang kepunyaan kultur nya mempunyai hampir tidak (ada) mendukung bukti. Sesungguhnya, counterevidence adalah kuat. [Itu] sungguh [baik] diketahui bahwa Para siswa Amerika mengubah pikiran capaian mereka sendiri di (dalam) matematika dibanding lakukan Cina, Jepang, atau Para siswa Korea, bahkan waktu Orang asia [yang] secara obyektif melakukan secara lebih baik. Di dalam Amerika Serikat, prestasi Orang asia Dan Yahudi, [siapa] yang tidak punya multiculturalism yang dirancang untuk membuat [mereka/nya] merasakan lebih baik tentang menjadi Asia Atau Yahudi, sungguh [baik] didokumentasikan; hitam, [siapa] yang pada [atas] rata-rata mempunyai tingkat yang lebih rendah untuk prestasi akademis dibanding lain kelompok kesukuan, [yang] biasanya muncul riset seperti mempunyai;nikmati lebih tinggi mengagumi diri sendiri dibanding lain kelompok (Pelat datar

The divisive results for American society of a multicultural education that dwells on the injustices whites have committed toward ethnic minorities and ignores the substantial evidence of improvement in U.S. relations should not be taken lightly. Glazer, a Harvard emeritus professor of sociology and education, illustrated the point well when he wrote: Hasil yang bersifat memecah belah untuk Masyarakat Amerika suatu multicultural pendidikan yang memikirkan ketidakadilan [itu] orang kulit putih sudah melakukan ke arah minoritas kesukuan dan mengabaikan bukti peningkatan yang substansiil di (dalam) U.S. hubungan harus tidak diambil dengan enteng. Pelat datar, suatu Harvard profesor pendidikan dan sosiologi pensiun, menggambarkan titik [itu] yang baik ketika ia menulis:

What would be better for young blacks to believe: That everyone is against them? That all their protections are shams? That whites will always stop them from getting ahead? That their oppression has been scarcely reduced since the days before the civil rights revolution and the Civil Rights Act? Or would it be better for them to believe the reverse: That the vast majority of Americans wish them well? That their civil rights are protected by the laws of the land? That their historic oppression at the hand of citizens and law enforcement officials is slowly but steadily declining? (Glazer, 1997, p. 47). Apa yang akan lebih baik untuk [yang] hitam muda untuk percaya: Bahwa semua orang adalah melawan terhadap [mereka/nya]? Bahwa semua perlindungan mereka adalah pura-pura? Orang kulit putih itu akan selalu stop [mereka/nya] dari menjadi di depan? Bahwa tekanan mereka telah jarang-jarang mengurangi [karena;sejak] hari [sebelum/di depan] revolusi hak-hak warga negara dan [Hak/ kebenaran] Yang sipil Bertindaklah? Atau akan [itu] lebih baik untuk [mereka/nya] untuk percaya kebalikan [itu]: [Bahwa/Yang] mayoritas luas Orang Amerika ingin [mereka/nya] dengan baik? Bahwa hak-hak warga negara mereka dilindungi menurut hukum itu daratan? Bahwa tekanan [yang] bersejarah mereka di tangan warganegara dan pejabat pelaksanaan hukum pelan-pelan tetapi dengan mantap merosot? (Pelat datar, 1997, p. 47).

What is tragic is that most multicultural theorists waste scarce pre- and in-service teacher time by completely ignoring legitimate educational problems related to ethnicity. The outstanding case in point is the grave academic problem faced by many blacks and Hispanics in the United States.

It has been widely documented by such scholars as Jenks and Phillips (1998), Abigail Thernstrom (2002), and Ornstein and Levine (2003) that a significant academic achievement gap exists between blacks and Hispanics on the one hand and their Asian and white peers on the other. In both reading and math, on average, blacks and Hispanics who are high school seniors perform about as well as white and Asian freshmen on standardized tests. Apa yang adalah tragis adalah bahwa kebanyakan multicultural ahli teori memboroskan langka sebelum- dan dalam jabatan waktu guru dengan dengan sepenuhnya mengabaikan permasalahan bidang pendidikan sah berhubungan dengan ethnicas. Kasus yang

terkemuka yang tepat adalah kuburan masalah akademis yang dihadapi oleh banyak hitam dan Hispanics di (dalam) Amerika Serikat.
[Itu] telah secara luas mendokumentasikan dengan seperti sarjana Jenks dan Phillips (1998), Abigail Thernstrom (2002), dan Ornstein Dan Levine (2003) bahwa suatu gap prestasi [yang] akademis penting ada antar[a] hitam dan Hispanics pada [atas] [yang] satu menyampaikan dan Asia mereka Dan panutan putih pada [atas] lain. Di (dalam) kedua-duanya [yang] membaca dan math, pada [atas] rata-rata, hitam dan Hispanics [siapa] yang adalah sekolah menengah yang senior melaksanakan sekitar seperti halnya putih dan Freshmen Asia pada [atas] test distandardisasi.

If blacks and Hispanics are to realize substantial educational and economic improvement, this problem must be solved. Making future and practicing teachers aware of the academic achievement gap and assisting them in devising ways to narrow it should be a major agenda item in every department and college of education in the U.S. The strategies that successful schools serving minorities have employed to reduce the achievement gap by raising math and reading scores should constitute primary multicultural course content in the training of teachers. However, because of the Social Reconstructionist leanings of the theorists, this serious problem is not being addressed because it remains invisible to most education majors and teachers. Jika hitam dan Hispanics adalah untuk [merealisir/sadari] peningkatan ekonomi dan bidang pendidikan substansiil, masalah ini harus dipecahkan. Pembuatan masa depan dan para guru praktek sadar akan gap prestasi yang akademis dan membantu [mereka/nya] di (dalam) memikirkan jalan untuk membatasi haruslah suatu item agenda utama di (dalam) tiap-tiap departemen dan perguruan tinggi pendidikan di (dalam) [itu] U.S. Strategi yang sukses sekolah minoritas melayani sudah mempekerjakan untuk mengurangi gap prestasi [itu] dengan peningkatan math dan pembacaan score [perlu] [mendasari/membuat] multicultural isi kursus utama di (dalam) pelatihan para guru. Bagaimanapun, oleh karena Reconstructionist Yang sosial [yang] menyandarkan ahli teori, masalah [yang] serius ini tidak sedang ditujukan sebab [itu] tinggal tak kelihatan ke kebanyakan jurusan pendidikan dan para guru.

A survey of a widely used multicultural reader intended for future teachers indicated that not one of the 37 articles in the publication included a discussion of the achievement gap (Schultz, 2003). Although the typical student in a multicultural class is inundated with materials about European-American racism, "white privilege," and the particular educational needs of every conceivable ethnic and cultural group, including Gypsies, the racial-ethnic achievement gap is an invisible issue in multicultural courses. Suatu survei suatu multicultural pembaca [yang] digunakan berniat untuk para guru [yang] masa depan tidak menunjukkan bahwa salah satu [dari] yang 37 artikel di (dalam) penerbitan mencakup suatu diskusi gap prestasi (Schultz, 2003). Walaupun siswa yang khas di (dalam) suatu multicultural kelas dibanjiri dengan material tentang European-American Rasisme, " perlakuan khusus putih," dan kebutuhan bidang pendidikan yang tertentu dari tiap kelompok budaya dan kesukuan dapat dikayalkan, mencakup Orang gipsi, gap prestasi yang racial-ethnic adalah suatu isu tak kelihatan di (dalam) multicultural kursus.

Not only do multicultural theorists fail to prepare teachers to deal with such bona fide educational concerns, their insistence that American society should be radically transformed and that public school students must be trained to be change agents is a waste of public monies and, arguably, a violation of the public trust. There is no evidence that the vast majority of Americans concur with the theorists' perceptions of the United States or are even aware of the radical nature of much multicultural content that future teachers are required to study. Tidak hanya lakukan multicultural ahli teori gagal untuk siap[kan para guru untuk berhubungan dengan . seperti (itu) bona fide perhatian bidang pendidikan, desakan/permintaan tegas mereka bahwa Masyarakat Amerika harus secara radikal diubah dan para siswa sekolah negeri itu harus dilatih;terlatih untuk;menjadi ber;ubah agen adalah suatu barang sisa publik monies dan, yang dapat dibantah, suatu pelanggaran orang banyak/masyarakat percaya. Tidak ada bukti [bahwa/yang] mayoritas luas Orang Amerika setuju dengan persepsi ahli teori Amerika

Serikat atau bahkan sadar akan alam[i] yang radikal banyak multicultural isi yang masa depan para guru diperlukan untuk belajar.

Although conservatives traditionally have worried about the potential impact of radical multiculturalism upon the fabric of American society, Glazer, a political moderate, is only one of several distinguished nonconservative academics who seriously challenge the extremism of separatist multiculturalism. Pulitzer Prizewinning historian Arthur Schlesinger (1998) incurred the wrath of the theorists when, in a book on multiculturalism, he identified assimilation as our greatest achievement. "The genius of America," Schlesinger wrote, "lies in its capacity to forge a single nation from peoples of remarkably diverse racial, religious, and ethnic origins" (p. 142). Walaupun konservatif secara kebiasaan sudah cemas akan dampak yang potensial [dari;ttg] multiculturalism radikal [atas/ketika] pabrik [dari;ttg] Masyarakat Amerika, Pelat datar, suatu moderat politis, hanya salah satu dari beberapa nonconservative dibedakan yang akademis [siapa] yang dengan serius menghadapi tantangan pendirian yang radikal separatis multiculturalism. Pulitzer Prizewinning sejarawan Arthur Schlesinger (1998) yang terjadi kegusaran ahli teori ketika, di (dalam) suatu buku pada [atas] multiculturalism, ia mengenali asimilasi [sebagai/ketika] prestasi terbesar [kita/kami]. " Genius Amerika," Schlesinger menulis, " berada dalam kapasitas nya untuk menempa bangsa tunggal dari orang-orang [dari;ttg] religius berbeda, dan asal kesukuan" (p. 142).

Political liberal E.D. Hirsch Jr. who, through the Core Knowledge movement, promotes greater curricular and social cohesion for all students, has also been pilloried by the theorists. One reviewer of his book, writing in the *Harvard Educational Review*, accused Hirsch of posing ". . . serious threats to a social order already unjust and unequal" (Buras, 1999, p. 91). Apparently the theorists who attack Hirsch completely ignore the substantial content on ethnic minorities to be found in the Core Knowledge Curricular Sequence that is utilized by elementary schools (Core Knowledge Foundation, 1999). E.D Liberal politis. Hirsch Jr. [siapa] yang, melalui/sampai Pergerakan Pengetahuan Inti, mempromosikan curricular lebih besar dan kohesi sosial untuk semua para siswa, telah pula dipermalukan oleh ahli teori [itu]. Satu penulis resensi buku [dari;ttg] buku nya, memberi suara dg tertulis Harvard [itu] Tinjauan ulang Bidang pendidikan, Hirsch yang di/tertuduh bersikap"... ancaman serius [bagi/kepada] suatu [order/ pesanan] sosial telah berbeda dan tak adil" (Buras, 1999, p. 91). Kelihatannya ahli teori [siapa] yang menyerang Hirsch [yang] dengan sepenuhnya mengabaikan isi yang substansiil pada [atas] minoritas kesukuan untuk ditemukan Pengetahuan Inti Curricular Urutan yang digunakan oleh sekolah dasar (Yayasan/Pondasi Pengetahuan Inti, 1999).

While September 11 caused many thoughtful Americans to wonder if more should be done in our schools to renew a sense of national identity and strengthen social cohesion, the theorists did not tone down their rhetoric. They even urged students to search for explanations as to what the U.S. had done to deserve such retaliatory acts of terrorism. The theorists asserted that still more multicultural education is necessary, since Americans seem not to "understand" the perspectives of the terrorists and the cultures and religions that spawn them. [Selagi/Sedang] September 11 banyak orang disebabkan Orang Amerika bijaksana untuk ingin tahu jika lebih harus dilaksanakan sekolah [kita/kami] untuk memperbaharui suatu [perasaan/pengertian] kepribadian nasior dan memperkuat kohesi sosial, ahli teori tidak berbicara lebih pelan [yang] retorik mereka. Mereka genap para siswa dihimbau untuk mencari-cari penjelasan seperti apa yang [itu] U.S. dilaksanakan yang telah untuk [berhak/layak] . seperti (itu) tindakan terorisme bersifat pembalasan. Ahli teori menyatakan bahwa masih ada lagi multicultural pendidikan adalah perlu, karena Orang Amerika tidak nampak untuk " memahami" perspektif teroris dan kultur dan agama yang bertelur [mereka/nya].

MULTICULTURALISM ABROAD

Critical separatist multiculturalism is not exclusive to this country. Throughout the West and elsewhere, an entire cadre of intellectuals promotes a body of ideas that scholar John Fonte identifies as "Transnational Progressivism" (Fonte, 2002). They contend that group rights transcend those of the individual, that all societies have oppressor and victim groups, and that national symbols, narratives, and the very idea of national citizenship should be eradicated in order for human society to evolve. There is mounting evidence from abroad that any country in which separatist multi- culturalism becomes influential will encounter the kinds of social discord that now threaten us. Like Fonte, Stephen Heyneman (2001, p. 6) has also studied social cohesion and argues that schooling should "provide a common underpinning for citizenship." He asserts that the purpose of education should be to develop social capital and foster nation building. Separatis kritis Multiculturalism tidaklah eksklusif pada negeri ini . Sepanjang;Seluruh Barat dan di tempat lain, suatu keseluruhan kader [dari;ttg] intelektual mempromosikan tubuh dari gagasan yang sarjana Yohanes Fonte mengidentifikasi [ketika;seperti] " Transnational Progressivism" (Fonte, 2002). Mereka menetapkan bahwa [hak/ kebenaran] kelompok melebihi mereka yang dari individu, bahwa semua masyarakat mempunyai penindas dan kelompok korban, dan lambang nasional itu, naratif, dan sangat gagasan untuk kewarga negaraan nasional harus dibasmi dalam urutan untuk masyarakat manusia untuk meningkatkan. Ada memasang bukti dari luar negeri bahwa semua negeri di mana separatis multi- culturalism menjadi berpengaruh akan menghadapi macam [dari;ttg] perselisihan sosial yang sekarang mengancam [kita/kami]. [Seperti;Suka] Fonte, Stephen Heyneman (2001, p. 6) juga telah belajar kohesi sosial dan membantah bahwa pendidikan yang diterima di sekolah [perlu] " menyediakan suatu tiang penyokong umum untuk kewarga negaraan." Ia menyatakan [bahwa/yang] tujuan pendidikan harus untuk kembang;kan modal sosial dan membantu perkembangan pembangunan kebangsaan.

Eaton (2002) recently studied the development of the highly multicultural curricula that have taken root in some of the Russian Federation republics during the past decade. The development of multicultural curricula at the local and regional levels was viewed by proponents, including many Western think tanks, government agencies, and nonprofits, as giving voice to groups that had been marginalized or ignored in the former, Russocentric curriculum of the USSR. But Eaton found that the extreme multiculturalism that has developed in some of the wealthier, "sovereignty-minded" republics in particular, has resulted in curricula that foster hyper-pluralism, interethnic tensions, religious conflict, and center (Moscow)-periphery clashes. Eaton (2002) baru-baru ini belajar pengembangan sangat multicultural curricula yang sudah mulai tumbuh dalam beberapa Republik Federasi Orang Rusia maY yang lampau dekade. Pengembangan multicultural curricula di tingkatan regional dan yang lokal telah dipandang oleh penganjur, mencakup banyak orang Yang barat berpikir tangki/tank, para agen pemerintah, dan tidak mencari keuntungan, [seperti/ketika] memberi suara ke kelompok yang tadinya marginalized atau yang diabaikan yang terdahulu, Kurikulum [yang] Russocentric USSR [itu]. Tetapi Eaton menemukan [bahwa/yang] multiculturalism yang ekstrim yang telah mengembang;kan dalam beberapa yang lebih kaya, " sovereignty-minded" republik khususnya, telah mengakibatkan curricula yang membantu perkembangan hyper-pluralism, tegangan interethnic, konflik religius, dan pusat (Moscow)-Periphery berselisih. ation membangun.

Separatist multicultural ideas put into practice in Great Britain have contributed to fragmentation and violent conflict in that country. The Labor Party's far-left wing, supported by black nationalists and radical political groups, has succeeded in instituting multicultural policies over the past two decades (Hyland, 2001). In well-intentioned efforts to respect cultural differences in the pluralistic city of Bradford, the Bradford Council implemented such policies top-down in an attempt to diffuse racial and cultural tension. To say that these policies boomeranged is an understatement. Separatis Multicultural Gagasan mempraktekkan menerapkan Britania Raya sudah mendukung pemecahan menjadi kepingan dan konflik kejam di (dalam) yang negeri. Tenaga kerja Far-Left [pesta/pihak] Sayap, yang didukung oleh nasionalis hitam dan kelompok politis radikal, telah berhasil;menggantikan mendirikan/memulai multicultural

kebijakan (di) atas masa lalu dua dekade (Hyland, 2001). Di (dalam) usaha bermaksud baik untuk menghormati perbedaan budaya di (dalam) kota besar Bradford yang keadaan jamak, Bradford Dewan menerapkan . seperti (itu) kebijakan top-down dalam percobaan untuk menghamburkan tegangan budaya dan rasial. Untuk kata[kan bahwa kebijakan ini yang boomeranged adalah suatu laporan kurang dari sebenarnya.

The premise underpinning these policies was that "every section of the community 'had an equal right to maintain its own identity, culture, language, religion and customs'" (Malik, 2001, Multiculturalism transformed, para. 4). The Bradford Council proceeded to meet demands for Muslim-only schools, for separate education for girls, and for funding various religious and cultural groups' projects. The Labor Party sanctioned and subsidized faith- based religious education in state schools. Authors of a 2001 report on the Bradford situation found "63 supplementary schools for Muslim children in Bradford, five Hindu schools, six Sikh schools and five Eastern and Western European schools" (Hyland, 2001, para. 22). Tiang penyokong Pendapat kebijakan ini adalah bahwa " tiap-tiap bagian masyarakat ' yang telah suatu hak yang same untuk memelihara identitas sendiri, kultur, bahasa, agama dan kebiasaan'" (Malik, 2001, Multiculturalism menjelma, para. 4). Bradford Dewan yang diteruskan memenuhi permintaan untuk Muslim-Only sekolah, untuk/karena pendidikan [yang] terpisah untuk anak-anak perempuan, dan untuk membiayai berbagai proyek kelompok budaya dan religius. [Pesta/Pihak] Tenaga kerja menghukum dan memberi subsidi iman- pendidikan religius yang didasarkan di (dalam) sekolah status. Pengarang suatu 2001 laporan pada [atas] Bradford Situasi menemukan " 63 sekolah pengganti untuk Anak-Anak Orang Islam di (dalam) Bradford, lima Hindu Sekolah, enam Sikh Sekolah dan lima Ketimuran dan Sekolah mengenai Eropa Barat" (Hyland, 2001, para. 22).

Increasingly, these culturally and racially based groups engaged in bitter competition to increase their shares of government subventions, pitting one group against another and further fragmenting the community. The community became polarized and consumed by tension that erupted into violent riots, which then prompted a review of Bradford's multicultural policies (Hyland, 2001). It found that "multiculturalism has helped segregate communities far more effectively than racism. It has not simply entrenched the divisions created by racism, but made cross-cultural interaction more difficult by encouraging people to assert their cultural differences" (Malik, 2001, in Bradford, Multiculturalism, para. 6). "It also contributed to a system of educational apartheid in the state sector, in which schools are increasingly 'monocultural,' either all white or all Asian" (Hyland, 2001). Terus meningkat, ini secara cultural dan sesuai rasnya mendasarkan kelompok terlibat dalam kompetisi pahit untuk meningkat/kan [bagian;saham] subsidi pemerintah mereka, pitting satu kelompok melawan terhadap yang lain dan lebih lanjut membagi-bagi masyarakat [itu]. Masyarakat menjadi dipertentangkan dan yang dikonsumsi oleh tegangan yang meletus ke dalam kekacauan kejam, yang kemudian membisikkan suatu tinjauan ulang [dari;ttg] Multicultural Bradford's Kebijakan (Hyland, 2001). [Itu] menemukan bahwa " multiculturalism telah membantu memencilkan masyarakat yang jauh lebih secara efektif dibanding rasisme. [Itu] belum hanya berkubu divisi [itu] yang diciptakan oleh rasisme, tetapi buat interaksi antar budaya yang lebih sulit dengan memberi harapan [kepada] orang-orang untuk menyatakan perbedaan budaya mereka" (Malik, 2001, di (dalam) Bradford, Multiculturalism, Para. 6). " [Itu] juga mendukung suatu sistem [dari;ttg] pembedaan ras bidang pendidikan di (dalam) sektor status, di mana sekolah terus meningkat ' monocultural,' baik semua putih maupun semua Asia" (Hyland, 2001).

One might reason that Britain's inclusive multicultural policies would foster greater identification with the nation, since the varied curricula would give voice to diverse elements within the society that had previously felt excluded or marginalized. However, a well-publicized survey by an Asian radio station of 500 Muslims in Greater London indicated that 98 percent would not fight for Britain while 48 percent would fight for Osama bin Laden or Islam (Appleton, 2001). The "community of communities" policies, which foster and endorse

enclaves of separate groups with their own particular identities within the larger polity, have had the effect of destroying any sense of allegiance beyond the various separate "communities," thus corroding community and national cohesion. Satu kekuatan memberi alasan bahwa Multicultural [yang] inclusif Britain's Kebijakan akan membantu perkembangan identifikasi lebih besar dengan bangsa, [karena;sejak] curricula yang bervariasi akan memberi suara ke unsur-unsur berbeda di dalam masyarakat yang telah sebelumnya merasa[kan marginalized atau dikeluarkan. Bagaimanapun, suatu survei dengan baik dipublikasikan oleh suatu Stasiun radio Asia 500 Orang Islam di (dalam) London Lebih besar menunjukkan bahwa 98 persen tidak akan [berjuang/ berkelahi] untuk Inggris [selagi/sedang] 48 persen akan [berjuang/ berkelahi] untuk Osama Bak/Peti Yang dimuati atau Islam (Appleton, 2001). " Masyarakat masyarakat" kebijakan, yang membantu perkembangan dan menguasakan daerah kantong [dari;ttg] kelompok terpisah dengan identitas [yang] tertentu mereka sendiri di dalam pemerintahan yang lebih besar, pasti mempunyai efek membinasakan manapun [perasaan/pengertian] kesetiaan di luar berbagai terpisah " masyarakat," [dengan] begitu berkarat masyarakat dan kohesi nasional.

Great Britain and the Russian Federation are not the only examples of the dangers of excessive multiculturalism. Hyperpluralism and tribalization have well-established histories of shattering nation-states, as has been evidenced recently in the Balkans and more than a few African countries. Given the realities of today's world, the potential balkanization of America via extreme multicultural approaches to education is not the answer for solving the remaining problems perceived by groups within our society. Britania Raya dan Federasi Orang Rusia bukanlah satu-satunya contoh bahaya [dari;ttg] multiculturalism berlebihan. Hyperpluralism Dan Tribalisasi mempunyai sejarah [yang] berkedudukan kuat menghancurkan nation-states, seperti telah (menjadi) evidenced baru-baru ini di (dalam) Balkans dan lebih dari beberapa Negara-Negara Dari Afrika. Dengan kenyataan [dari;ttg] dunia masa kini, balkanisasi Amerika yang potensial via multicultural ekstrim mendekati ke pendidikan bukanlah jawaban untuk memecahkan permasalahan yang sisa[nya] yang dirasa oleh kelompok di dalam masyarakat [kita/kami].

If 9/11 taught us anything, it should have been the value of national unity within a democratic framework in confronting the daunting challenges of terrorism and fanaticism. Such unity comes from continually holding in mind that teaching our common culture is a paramount educational goal. Jika 9/11 diajar [kita/kami] apapun, [itu] harusnya telah nilai [dari;ttg] kesatuan nasional di dalam suatu kerangka demokratis di (dalam) menghadapi menakutkan tantangan terorisme dan fanatisme. . seperti (itu) kesatuan datang dari secara terus menerus pikiran pemilikan yang mengajar kultur [yang] umum [kita/kami] adalah suatu gol bidang pendidikan tertinggi.

MULTICULTURALISM BASED ON THE EVIDENCE

Historian Diane Ravitch (1990) aptly described the role of multiculturalism in American schools when she wrote, "Paradoxical though it may seem, the United States has a common culture that is multicultural" (p. 339). In social studies, it is essential that youth learn specific information about the common political ideals and institutions that make us American and, at the same time, learn specific content about the different cultural and ethnic groups that live in our nation. Classicist Mary Lefkowitz (1996), in reference to a question about what constitutes appropriate classroom content, asserted, "When it comes to deciding what one can or cannot say in class, the question of ethnicity or of motivation, whether personal or cultural, is or ought to be irrelevant. Sejarawan Diane Ravitch (1990) benar-benar uraikan peran multiculturalism di (dalam) Sekolah Amerika ketika dia menulis, " Asa yang berlawanan meskipun [demikian] mungkin nampak, Amerika Serikat mempunyai suatu kultur umum yang adalah multicultural" (p. 339). Di (dalam) ilmu kemasyarakatan, adalah penting bahwa [masa/kaum] muda belajar informasi spesifik tentang ideal politis yang umum dan institusi yang membuat [kita/kami] Amerika Dan, pada waktu yang sama, belajar isi spesifik tentang kelompok kesukuan

dan budaya yang berbeda yang tinggal di bangsa [kita/kami]. Classicist Mary Lefkowitz (1996), berhubungan/mengenai suatu pertanyaan tentang apa [yang] [mendasari/membuat] isi kelas sesuai, menyatakan, " Ketika [itu] datang [bagi/kepada] memutuskan apa [yang] seseorang dapat atau tidak bisa kata[kan kelas, pertanyaan ethnicas atau motivasi, apakah [yang] budaya atau pribadi, adalah atau hendaknya tidak relevan.

What matters is whether what one says is supported by facts and evidence, tests or formulae" (p. 162). Social studies teachers who select multicultural content based on evidence are more likely to transmit accurate information to students than teachers who view the class, race, or gender of authors as more important than the quality of their works. When social studies educators make the criterion of evidence-based content paramount in selecting multicultural materials, then the danger is minimized that ideological goals will distort the educational process. Apa yang berbagai hal adalah apakah apa [yang] sese]orang kata[kan didukung oleh fakta dan bukti, test atau formulae" (p. 162). Para guru Ilmu kemasyarakatan [siapa] yang memilih multicultural isi berdasar pada bukti jadilah lebih mungkin untuk memancarkan informasi akurat ke para siswa dibanding para guru [siapa] yang memandang kelas [itu], [ras/lomba], atau jenis kelamin pengarang [sebagai/ketika] lebih penting dibanding mutu [dari;ttg] pekerjaan mereka. Kapan pendidik ilmu kemasyarakatan membuat ukuran [dari;ttg] isi evidence-based tertinggi memilih multicultural material, kemudian bahaya diperkecil gol [yang] ideologis itu akan menyimpangkan proses yang bidang pendidikan [itu].

Before the 1960s, the dominant message in school history and social studies was that white males were exclusively responsible for the development of the United States, and depictions of people of color and women contained serious flaws. As a nation, we have come a long way from the racism and sexism that underpinned "white male" American history. It is very important that social studies teachers develop high quality multicultural education programs. The best way to achieve this goal is to base multicultural education on evidence and sound scholarship, instead of the ideological and affective perspectives that the theorists espouse. [Sebelum/Di depan] 1960s, pesan yang dominan di (dalam) sejarah sekolah dan ilmu kemasyarakatan adalah bahwa [jantan/pria] putih [yang] bertanggung jawab untuk pengembangan Amerika Serikat, dan lukisan orang-orang warna dan wanita-wanita berisi kekurangan serius. Sebagai bangsa, kita sudah datang suatu merindukan [jalan/cara] dari rasisme dan sexism yang underpinned " [jantan/pria] putih" Sejarah Amerika. [Itu] adalah sangat penting yang para guru ilmu kemasyarakatan kembang;kan mutu tinggi multicultural program pendidikan. [Jalan/Cara] yang terbaik untuk mencapai gol ini adalah untuk mendasarkan multicultural pendidikan pada [atas] bukti dan ilmu pengetahuan bunyi;serasi, sebagai ganti yang ideologis dan secara cenderung perspektif [bahwa/yang] ahli teori menyertai.

RECOMMENDATIONS

First, teachers should develop American history courses that fairly describe the experiences and contributions of minority groups. Accurate U.S. history instruction will send the message that, as a nation, we are now one of the world's most advanced societies in treatment of minority groups. In part due to this positive development, teachers can and should draw upon a multicultural pantheon of people of color who have realized the American dream. No heterogeneous society has entirely harmonious relations among its ethnic and cultural groups. However, in their attempt to correct for past neglect of minorities in U.S. history courses, multicultural theorists have distorted and even suppressed the truth about America's progress in race relations and successes of people of color. The perpetration of these inaccuracies must end. Pertama, para guru [perlu] kembang;kan Kursus Sejarah Amerika yang [secara] wajar menguraikan kontribusi dan pengalaman kelompok minoritas [itu]. Akurat U.S. sejarah instruksi akan mengirimkan pesan [itu] yang, sebagai bangsa, kita kini salah satu [dari] dunia paling mengedepan masyarakat di (dalam) perawatan kelompok minoritas. Pada sebagian dalam kaitan dengan pengembangan positif ini, kaleng para guru dan [perlu] [menggambar/menarik] di atas multicultural kuil untuk semua dewa orang-orang warna [siapa] yang sudah [merealisir/sadari]

Mimpi Amerika [itu]. Tidak (ada) masyarakat heterogen mempunyai hubungan seluruhnya harmonis antar kelompok budaya dan kesukuan nya. Bagaimanapun, di (dalam) usaha mereka untuk mengoreksi untuk pengabaian yang lampau [dari;ttg] minoritas U.S. kursus sejarah, multicultural ahli teori sudah simpangkan dan bahkan menindas kebenaran [itu] tentang Kemajuan America's di (dalam) hubungan antar suku dan sukses orang-orang mewarnai. Perlakuan [dari;ttg] ketidaktepatan ini harus ber;akhir;i.

Second, social studies instructors at all levels should reject the theorists' notion that all cultures are equal; that fanaticism, terrorism, and inhumanity should be tolerated if they can be rationalized; and that we have no right to criticize and condemn evil. This can be most effectively done by the development of content-oriented world history, geography, and cultures courses. If these are well taught, students will learn numerous instances of good and evil in the human experience and have opportunities to compare and contrast cultural practices. Ke dua, instruktur ilmu kemasyarakatan pada semua tingkat [perlu] menolak dugaan ahli teori [itu] bahwa semua kultur adalah sama; fanatisme itu, terorisme, dan hal tak berperikemanusiaan harus dimaklumi jika mereka dapat dirasionalkan; dan bahwa kita tidak mempunyai hak untuk mengkritik dan [menghukum/ mengutuk] jahat. Ini dapat paling secara efektif yang dilaksanakan dengan pengembangan [dari;ttg] sejarah dunia berorientasi isi, geografi, dan kursus kultur. Jika ini sungguh [baik] diajar, para siswa akan belajar banyak kejadian [dari;ttg] baik dan buruk pengalaman manusia dan mempunyai peluang untuk bandingkan dan membandingkan praktek budaya.

Third, educators should teach about unity in the United States, as well as disunity, about our accomplishments as well as our blemishes, and about the value of working together as a whole to achieve common objectives. We should also teach students to take pride in the achievements and progress of the nation since its inception. Building a sense of reasoned patriotism is an integral part of creating social cohesion, identification with the nation, and a civil society. This does not mean that we should teach or preach blind nationalism, ethnocentrism, or jingoism. But all societies use education as a means of inculcating patriotic values; this is the socialization process. The danger in placing the locus of American identity in its separate minorities, rather than in the nation as the unifying unit, is tribalization, the balkanization of our country at a time when greater cohesion is needed to confront the challenges to both our way of life and global security. Ketiga, pendidik [perlu] mengajar sekitar kesatuan di (dalam) Amerika Serikat, seperti halnya perpecahan, sekitar pemenuhan [kita/kami] seperti halnya [yang] cacat [kita/kami], dan tentang nilai bekerja bersama secara keseluruhan untuk mencapai sasaran hasil umum. Kita [perlu] juga mengajar para siswa untuk merasa bangga akan prestasi [itu] dan kemajuan bangsa [karena;sejak] permulaan nya. Bangunan suatu [perasaan/pengertian] [dari;ttg] patriotisme diberi alasan adalah suatu bagian integral menciptakan kohesi sosial, identifikasi dengan bangsa, dan suatu masyarakat sipil. Ini tidak berarti bahwa kita [perlu] mengajar atau kotbahkan nasionalisme buta, etnosentris, atau cinta tanah air berlebihan. Tetapi semua masyarakat menggunakan pendidikan sebagai alat mengajar berulang/menanamkan nilai-nilai patriotik; ini adalah proses sosialisasi [itu]. Bahaya di (dalam) menempatkan tempat [dari;ttg] Identitas Amerika dalam minoritas terpisah nya , dibanding/bukannya di (dalam) bangsa [sebagai/ketika] mempersatukan unit, tribalisasi, balkanisasi [dari;ttg] negeri [kita/kami] pada waktu yang sama ketika kohesi lebih besar diperlukan untuk menghadapi tantangan [bagi/kepada] kedua-duanya jalan hidup [kita/kami] dan keamanan global.

Fourth, teachers should not assume the role of social activists who dwell upon the negatives in our society and urge students to struggle against various oppressors. Rather, our students should be taught to develop their own interpretations and analyses of history and culture after becoming thoroughly grounded in evidence-based studies that do not represent the views of one ideologue or another. Likewise, they should develop, through the study of American government and politics, a thorough understanding of how to effect needed changes through

democratic processes. Keempat, para guru mestinya tidak mengasumsikan peran [dari;ttg] aktifis sosial [siapa] yang tinggal [atas/ketika] yang negatif masyarakat [kita/kami] dan para siswa himbauan untuk berjuang melawan terhadap berbagai penindas. Melainkan, para siswa [kita/kami] harus diajar untuk kembang;kan penafsiran mereka sendiri dan analisa sejarah dan kultur setelah menjadi secara menyeluruh mendasarkan pada studi evidence-based yang tidak menghadirkan pandangan satu ideologue atau yang lain. Demikian juga, mereka [perlu] berkembang, melalui/sampai studi [dari;ttg] Politik Dan Pemerintah Amerika, suatu pemahaman [yang] saksama bagaimana cara mempengaruhi perubahan diperlukan melalui/sampai proses demokratis.

Finally, teachers should reject the theorists and demand content-based multicultural teaching materials. Policy makers and the general public must be made fully aware that radical leftist multicultural ideas have been institutionalized in teacher education programs through such things as NCATE requirements that compel the nation's future teachers to learn distortions of reality that are antithetical to what most Americans believe. We believe that once policy makers and the larger public are fully informed that their tax dollars actually support the inculcation of radical multicultural notions in future and practicing history and social studies teachers, the stage will be set for changing those requirements. Akhirnya, para guru [perlu] menolak ahli teori [itu] dan menuntut multicultural content-based yang mengajar material. Pembuat kebijaksanaan dan kalayak ramai harus dibuat secara penuh sadar anggota sayap kiri [yang] radikal itu multicultural gagasan telah dilembagakan program pendidikan guru melalui/sampai hal-hal seperti NCATE kebutuhan yang memaksa para guru masa depan bangsa [itu] untuk belajar penyimpangan kenyataan yang adalah antithetical [bagi/kepada] apa [yang] kebanyakan Orang Amerika percaya. Kita percaya bahwa sekali ketika pembuat kebijaksanaan dan publik yang lebih besar secara penuh diberitahukan bahwa dolar pajak mereka [yang] benar-benar mendukung inculcation [dari;ttg] multicultural barang kelontong radikal pada masa depan dan sejarah praktek dan para guru ilmu kemasyarakatan, langkah akan [jadi] di-set untuk mengubah kebutuhan itu.

NOTE

1. A shorter version of this essay was published in *Social Studies*, March-April 1998, 89(2), 57-60.

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BAB V

Teacher-Centered Instruction

The Rodney Dangerfield of Social Studies

Mark C. Schug

During the 1970s and 1980s, a line of educational research developed called "effective teaching." Effective teachers were reported to favor research-supported practices that, when properly implemented in the classroom, produced stronger academic achievement.

The name given to such instruction has varied. Terms like "active teaching" and "explicit instruction" were used from time to time. Such phrases conveyed the image of teachers on their feet in the front of the room with eyes open, asking questions, making points, gesturing, writing key ideas on the board, encouraging, correcting, demonstrating, and so forth. The role of the teacher was obvious and explicit and tied to clearly identified content or skills. Sepanjang 1970s dan 1980s, satu baris riset bidang pendidikan yang dikembangkan [disebut/dipanggil] " pengajaran efektif." Para guru efektif telah dilaporkan untuk menyukai praktek research-supported yang, ketika [yang] diterapkan kelas, memproduksi prestasi akademis lebih kuat.

Nama berikan kepada . seperti (itu) instruksi telah memvariasi. Terminologi suka " pengajaran aktip" dan " instruksi tegas/eksplisit" telah digunakan dari waktu ke waktu. . seperti (itu) ungkapan menyampaikan gambaran para guru pada [atas] kaki mereka di depan ruang dengan penuh kesadaran, [minta;tanyakan] pertanyaan, memenangkan perdebatan, mengisyaratkan, menulis gagasan kunci pada [atas] [papan/meja], memberi harapan [kepada], mengoreksi, mempertunjukkan, dan sebagainya. Peran guru adalah diikat dan tegas/eksplisit dan jelas nyata untuk dengan jelas mengenali isi atau ketrampilan.

For the purposes of this paper, I use the term "teacher-centered instruction" to refer to this approach. It implies a high degree of teacher direction and a focus of students on academic tasks. And it vividly contrasts with student-centered or constructivist approaches in establishing a leadership role for the teacher. Teacher presentation, demonstration, drill and practice, posing of numerous factual questions, and immediate feedback and correction are all key elements.

Teacher-centered instruction has again and again proven its value in studies that show it to be an especially effective instructional method. Yet, when self-appointed education leaders meet to share best practices or write about effective teaching, teacher-centered

instruction, as the comedian Rodney Dangerfield used to say, gets no respect. Untuk kepentingan catatan/kertas ini, aku menggunakan istilah " instruksi teacher-centered" untuk mengacu pada ini mendekati. [Itu] menyiratkan suatu derajat tinggi arah guru dan suatu fokus para siswa pada [atas] tugas akademis. Dan [itu] dengan jelas membandingkan dengan student-centered atau constructivist mendekati menetapkan suatu peran kepemimpinan untuk guru [itu]. Presentasi Guru, Demonstrasi, Latihan dan praktek, bersikap banyak pertanyaan berdasar fakta, dan koreksi dan umpan balik segera adalah semua unsur-unsur kunci.

Instruksi Teacher-centered telah berulang-ulang membuktikan nilai nya di (dalam) studi yang menunjukkan kepada jadilah suatu metoda intervi [yang] efektif. Masih, ketika para pemimpin pendidikan self-appointed temu untuk berbagi praktek terbaik atau menulis tentang pengajaran efektif, instruksi teacher-centered, [seperti;sebagai;ketika] pelawak [itu] Rodney Dangerfield yang digunakan untuk kata[kan, tidak mendapat/kan apapun rasa hormat.

STUDENT-CENTERED INSTRUCTION

In fact, for most of the last century social studies leaders have fought hard against the idea of teacher-centered instruction. At nearly every opportunity—in journal articles, education textbooks, and speeches at professional meetings—slogans were voiced about teaching the child, not the subject, according to developmentally appropriate practices. Those who favor student-centered approaches suggest that: Sesungguhnya, untuk/karena kebanyakan dari ilmu kemasyarakatan abad yang ter]akhir para pemimpin sudah berkelahi [sulit/keras] melawan terhadap gagasan untuk instruksi teacher-centered. Pada hampir tiap-tiap opportunity-in artikel jurnal, buku teks pendidikan, dan pidato/suara pada profesional meetings-slogans telah dinyatakan tentang mengajar anak [itu], [yang] bukan pokok materi, menurut secara pengembangan praktek sesuai. Mereka yang menyukai pendekatan student-centered menyatakan bahwa:

•"Hands-on" activities are superior to teacher-led instruction. Projects, group work, field trips, almost any other approach is to be preferred.
• Integrated content is superior to discipline-specific content. The barriers between the disciplines such as history and geography are the artificial creations of self-serving academics. Integrated themes are regarded as having greater integrity.
• Cooperative, group-learning approaches are superior to whole group, teacher-led instruction. Students learn best by interacting with each other rather than by learning from adults.
• Academic content is inherently dull. Topics such as social issues have more relevance and appeal to students than subjects such as economics or geography.

*"Hands-on" aktivitas adalah instruksi teacher-led lebih pandai daripada. Proyek, Kerja kelompok, Darmawisata, hampir pendekatan lain (diharapkan) untuk lebih disukai.
* Isi yang terintegrasi adalah isi discipline-specific lebih pandai daripada. Penghalang antar[a] disiplin seperti sejarah dan geografi adalah ciptaan yang tiruan self-serving [yang] akademis. Tema yang terintegrasi dihormati seperti mempunyai;nikmati integritas lebih besar.
* Kerjasama, group-learning pendekatan adalah kelompok utuh lebih pandai daripada, instruksi teacher-led. Para siswa belajar terbaik oleh saling berinteraksi satu sama lain dibanding/bukannya dengan pelajaran dari orang dewasa.
* Isi akademis dengan tak terpisahkan tumpul. Topik seperti isu sosial mempunyai lebih keterkaitan dan mohon ke para siswa dibanding pokok seperti ekonomi atau geografi.

Is there an alternative to student-centered instruction? If so, what research supports it and how does it look in practice? Let's examine the often-overlooked case for teacher-centered instruction. Apakah suatu alternatif ke instruksi student-centered? Jika demikian, riset apa [yang] mendukung ia/nya dan bagaimana cara [itu] lihat dalam praktek? Mari kita menguji kasus yang often-overlooked untuk instruksi teacher-centered.

RESEARCH ON TEACHER-CENTERED INSTRUCTION: DIRECT INSTRUCTION IN READING

Teacher-centered instruction derives from two lines of scholarship and curriculum development (Schug, Tarver, and Western, 2001). One is associated primarily with the work of Siegfried Engelmann and his colleagues, whose approach is widely referred to as "Direct Instruction" and whose research focused predominantly on reading. The other line of scholarship is associated primarily with the work of Barak Rosenshine and his colleagues, whose "process-outcome" research identified the teacher practices that were associated with improving student learning. Instruksi Teacher-centered berasal dari dua bentuk ilmu pengetahuan dan pengembangan kurikulum (Schug, Tarver, dan Barat, 2001). Satu dihubungkan terutama semata dengan pekerjaan [dari;ttg] Engelmann Siegfried dan para rekan kerja nya, pendekatan siapa secara luas dikenal sebagai " Instruksi Langsung" dan riset siapa memusat sebagian besar pada [atas] membaca. Garis ilmu pengetahuan lain dihubungkan terutama semata dengan pekerjaan Barak Rosenshine dan para rekan kerja nya, siapa " process-outcome" riset mengenali praktek guru [itu] yang telah dihubungkan dengan meningkat;kan siswa belajar.

Engelmann's work derives from close analysis of the comprehension and reasoning skills needed for successful student performance in reading or mathematics, skills that provide the intellectual substance of the Direct Instruction programs he developed. In the case of reading, its substance is found in the sound system of spoken English and the ways in which English sounds are represented in writing—a major reason why Direct Instruction in reading is associated with phonemic awareness or phonics. But it is not equivalent to phonics. Direct Instruction can be used to teach things other than phonics—mathematics and social studies, for example—and phonics can be taught by means other than Direct Instruction. Pekerjaan Engelmann's berasal dari analisa [yang] dekat pengertian dan ketrampilan pemikiran yang diperlukan untuk capaian siswa [yang] sukses di (dalam) membaca atau matematika, ketrampilan yang menyediakan unsur yang intelektual Program Instruksi Yang langsung [yang] ia mengembang;kan. Di (dalam) kasus membaca, unsur nya ditemukan sistem bunyi;serasi [dari;ttg] Bahasa Inggris percakapan dan [jalanan/tatacara] di mana Bunyi;Serasi Bahasa Inggris diwakili writing-a alasan utama mengapa Instruksi Langsung di (dalam) membaca dihubungkan dengan kesadaran berkenaan dengan fonem atau berenaan dengan bunyi. Tetapi [itu] bukanlah setara dengan berenaan dengan bunyi. Mengarahkan Instruksi dapat digunakan untuk mengajar berbagai hal selain dari phonics-mathematics dan ilmu kemasyarakatan, untuk/karena example-and kaleng berenaan dengan buny

The detailed character of the Direct Instruction approach developed by Englemann derives from a learning theory and a set of teaching practices linked to that theory. The learning theory focuses on how children generalize from present understanding to understanding new examples. This theory informs the sequencing of classroom tasks for children and the means by which teachers lead children through those tasks. The means include a complex system of scripted remarks, questions, and signals to which children provide individual and choral responses in extended, highly interactive sessions. Children in Direct Instruction classrooms also do written work in workbooks or on activity sheets. Karakter yang terperinci Pendekatan Instruksi Yang langsung yang dikembangkan oleh Englemann berasal dari suatu belajar teori dan satu set praktek pengajaran berhubungan untuk teori itu . Teori Pelajaran memusat pada [atas] bagaimana anak-anak menyamaratakan dari pemahaman [kini/hadir] ke pemahaman contoh baru. Teori ini menginformasikan peruntunan tugas kelas untuk anak-anak dan rata-rata dengan mana para guru memimpin anak-anak melalui tugas itu . Rata-Rata meliputi suatu sistem kompleks [dari;ttg] keterangan scripted, pertanyaan, dan isyarat [bagi/kepada] anak-anak yang (mana) menyediakan individu dan tanggapan berkenaan dengan koor di (dalam) sesi diperluas, [yang] sangat interaktip. Anak-Anak di (dalam) Kelas Instruksi Langsung juga menulis pekerjaan di (dalam) buku catatan atau pada [atas] lembar;seprai aktivitas.

An impressive body of research over 25 years attests to the efficacy of Engelmann's model. In the most comprehensive review, Adams and Engelmann (1996) identified 34 well-designed studies in which Direct Instruction interventions were compared to other teaching strategies. These studies reported 173 comparisons, spanning the years from 1972 to 1996. The comparison yielded two major results. First, 87 percent of posttreatment test score averages favored Direct Instruction, compared to 12 percent favoring other approaches. Second, 64 percent of the statistically significant outcomes favored Direct Instruction compared to only one percent favoring other approaches, and 35 percent favoring neither. Suatu badan riset [yang] mengesankan (di) atas 25 tahun menegaskan kemanjuran [dari;ttg] Model Engelmann's. Di (dalam) tinjauan ulang [yang] yang paling menyeluruh, Adams dan Engelmann (1996) yang dikenali 34 studi dirancang dengan baik di mana Intervensi Instruksi Langsung telah dibandingkan untuk lain mengajar strategi. Studi ini melaporkan 173 perbandingan, memutar tahun [itu] dari 1972 untuk 1996. Perbandingan menghasilkan dua hasil utama. Pertama, 87 persen posttreatment menguji score rata-rata Instruksi Langsung dikasihi, membandingkan ke 12 persen yang mengasihi lain pendekatan. Ke dua, 64 persen hasil yang secara statistik penting yang dikasihi Instruksi Langsung yang dibandingkan untuk hanya satu persen yang mengasihi lain pendekatan, dan 35 persen yang mengasihi [bukan/tidak].

A meta-analysis of data from the 34 studies also yielded large effect sizes for Direct Instruction. Large gains were reported for both regular and special education students, for elementary and secondary students, and for achievement in a variety of subjects including reading, mathematics, spelling, health, and science. The average effect size for the 34 studies was .87; the average effect size calculated for the 173 comparisons was .97. This means that gain scores for students in Direct Instruction groups averaged nearly a full standard deviation above those of students in comparison groups. Effect sizes of this magnitude are rare in education research. Suatu meta-analysis data dari yang 34 belajar juga menghasilkan ukuran efek besar untuk Instruksi Langsung. Keuntungan besar telah dilaporkan untuk kedua-duanya para siswa pendidikan khusus dan reguler, untuk/karena para siswa sekunder dan dasar, dan untuk prestasi di (dalam) berbagai pokok [yang] mencakup pembacaan, matematika, ejaan, kesehatan, dan ilmu pengetahuan. Rata-Rata ukuran efek untuk yang 34 studi adalah . 87; rata-rata ukuran efek menghitung untuk yang 173 perbandingan adalah . 97. [Alat/ makna] ini yang memperoleh score untuk para siswa di (dalam) Kelompok Instruksi Langsung merata-ratakan hampir suatu simpangan baku penuh di atas mereka yang para siswa di (dalam) kelompok perbandingan. Ukuran Efek [dari;ttg] ini penting/besar adalah riset pendidikan jarang.

TEACHER-CENTERED INSTRUCTION IN READING AND OTHER SUBJECTS

The second line of research in teacher-centered instruction is based on a synthesis of findings from experimental studies conducted by many different scholars working independently, mostly in the 1980s. In these studies, teachers were trained to use specific instructional practices. The effects of these practices on student learning were determined by comparing similar students' learning in classes where the practices were not used. The synthesis growing out of these studies identified common "teaching functions" that proved effective in improving student learning. Garis riset yang kedua di (dalam) instruksi teacher-centered didasarkan pada suatu sintese penemuan dari studi bersifat percobaan yang diselenggarakan oleh banyak sarjana berbeda bekerja dengan bebas, kebanyakan di (dalam) [itu] 1980s. Di (dalam) studi ini, para guru telah dilatih;terlatih untuk menggunakan intervi spesifik praktek. Efek [dari;ttg] ini mengambil keuntungan pelajaran siswa telah ditentukan dengan membandingkan siswa serupa belajar kelas [di mana/jika] praktek tidaklah digunakan. Sintese meninggalkan studi ini mengenali umum " mengajar fungsi" [yang] efektif dibuktikan itu meningkat;kan siswa belajar.

This research reached its zenith in 1986 when Rosenshine and Robert Stevens co-authored a chapter in the *Handbook of Research on Teaching*. The chapter reviewed several empirical studies that focused on key instructional behaviors of teachers. In several of the experiments, they found that effective teachers attended to inappropriate student behavior, maintained the

attention of all students, provided immediate feedback and evaluation, set clear expectations, and engaged students as a group in learning. Rosenshine and Stevens (1986) distilled the research down to a set of behaviors that characterize well-structured lessons. Effective teachers, they said: Riset ini mencapai senit nya di (dalam) 1986 ketika Rosenshine Dan Robert Stevens co-authored suatu bab di (dalam) Pedoman Riset pada [atas] Mengajar. Bab meninjau beberapa studi empiris yang memusat pada [atas] perilaku intervi kunci para guru. Di (dalam) beberapa eksperimen, mereka menemukan bahwa para guru efektif yang menghadiri ke perilaku siswa tidak sesuai, merawat perhatian dari semua para siswa, menyajikan evaluasi dan umpan balik segera, menetapkan harapan jelas bersih, dan bertaut para siswa sebagai kelompok di (dalam) belajar. Rosenshine dan Stevens (1986) yang disaring riset hingga [menuju] ke satu set perilaku yang menandai pelajaran dengan baik tersusun. Para guru efektif, mereka berkata:

• Open lessons by reviewing prerequisite learning.
• Provide a short statement of goals.
• Present new material in small steps, with student practice after each step.
•Give clear and detailed instructions and explanations.
• Provide a high level of active practice for all students.
• Ask a large number of questions, check for understanding, and obtain responses from all students.
• Guide students during initial practice.
• Provide systematic feedback and corrections.
• Provide explicit instruction and practice for seatwork exercises and, where necessary, monitor students during seatwork.

Mbuka pelajaran dengan meninjau ulang prasyarat [yang] belajar.
o Sediakan suatu statemen gol pendek/singkat.
o Sajikan material baru di (dalam) langkah-langkah kecil, dengan siswa praktek setelah langkah masing-masing.
oGive bersih;kan dan memerinci instruksi dan penjelasan.
o Sediakan praktek aktip yang lebih tinggi untuk semua para siswa.
o [Minta;Tanya] sejumlah besar pertanyaan, melihat kemungkinan pemahaman, dan memperoleh tanggapan dari semua para siswa.
o Mandu para siswa selama praktek awal.
o Sediakan koreksi dan umpan balik sistematis.
o Sediakan instruksi tegas/eksplisit dan praktek untuk seatwork berlatih dan, [di mana/jika] perlu, para siswa monitor selama seatwork.

The major components of this sort of teacher-centered instruction are not all that unexpected. All teachers use some of these behaviors some of the time, but the most effective teachers use most of them nearly all the time. Interest in Rosenshine's second line of research was given an important boost from E.D. Hirsch, Jr.'s book, *The Schools We Need & Why We Don't Have Them* (1996). He summarized findings from several studies which contributed to the conclusion that teacher-centered instruction works well in classrooms. Komponen yang utama instruksi teacher-centered semacam ini bukanlah semua yang tak diduga. Semua para guru menggunakan sebagian dari perilaku ini sebagian dari waktunya, hanyalah para guru paling efektif menggunakan paling [mereka/nya] hampir semua waktunya. Tarik akan Garis Detik/Second riset Rosenshine's telah diberi suatu penting menaikkan tegangan dari E.D. Hirsch, Buku Jr.'s, Sekolah [Yang] kita Memerlukan& Mengapa Kita Tidak mempunyai [Mereka/Nya] (1996). Ia meringkas penemuan dari beberapa yang studi mendukung kesimpulan [itu] yang teacher-centered instruksi bekerja kelas baik.

The first was a series of "process-outcome" studies conducted from 1970 until 1973 at the University of Canterbury in New Zealand. They showed that time spent focused on content and the amounts of content taught were important factors in achievement. Whether a lecture or questioning format was used, careful structuring of content by the teacher followed by

summary reviews was the most effective method. Yang pertama adalah satu rangkaian " process-outcome" studi menyelenggarakan dari 1970 sampai 1973 di Universitas Canterbury di (dalam) Selandia Baru. Mereka menunjukkan bahwa waktu yang dibelanjakan dipusatkan pada [atas] isi dan sejumlah isi diajar adalah faktor penting di (dalam) prestasi. Apakah suatu ceramah kuliah atau format tanya jawab telah digunakan, hati-hati [yang] structuring isi oleh guru yang diikuti oleh tinjauan ulang ringkasan adalah metoda yang paling efektif [itu].

In a later series of studies, Jere Brophy and his colleagues (1973-1979) found that some teachers got consistently good results while others did not. They observed the teachers associated with good and poor academic outcomes and reached at least two startling conclusions—first, that teachers who produced the least achievement used approaches that were more concerned with the students' self-esteem, and second, that learning progressed best when the materials were not only new and challenging but could also be easily grasped by students. Brophy and his colleagues also found that the most effective teachers were likely to: Di (dalam) suatu rangkaian studi kemudiannya, Jere Brophy dan para rekan kerja nya (1973-1979) yang ditemukan yang beberapa para guru mendapat hasil secara konsisten baik [selagi/sedang] (orang) yang lain mereka. Tidak mengamati para guru [itu] berhubungan dengan hasil [yang] akademis lemah/miskin dan baik dan mencapai sedikitnya dua mengejutkan conclusions-first, bahwa para guru yang memproduksi prestasi paling sedikit [itu] menggunakan pendekatan yang jadilah lebih terkait dengan siswa [itu] mengagumi diri sendiri, dan detik/second, yang [itu] belajar maju terbaik ketika material tidaklah hanya baru dan menantang tetapi dapat juga mudah diserap oleh para siswa. Brophy dan para rekan kerja nya juga menemukan [bahwa/yang] para guru yang paling efektif mungkin untuk:

- Maintain a sustained focus on content.
- Involve all students.
- Maintain a brisk pace.
- Teach skills to the point of overlearning.
- Provide immediate feedback.

Melihara suatu fokus didukung pada [atas] isi.
- o Libatkan semua para siswa.
- o Melihara suatu langkah segar.
- o Ajar ketrampilan dengan tujuan untuk overlearning.
- o Sediakan umpan balik segera.

Finally, in a separate series of process-outcome studies that spanned the period from the 1960s to the 1980s, Gage and his colleagues at Stanford University found that effective teachers: Akhirnya, di (dalam) suatu rangkaian process-outcome [yang] terpisah belajar itu merentang periode [itu] dari 1960s kepada 1980s, Meteran dan para rekan kerja nya pada Stanford Universitas menemukan para guru efektif itu:

- Introduce materials with an overview or analogy.
- Use review and repetition.
- Praise and repeat student answers.
- Give assignments that offer practice and variety.
- Ensure questions and assignments are new and challenging yet easy enough to allow success with reasonable effort.

o Perkenalkan material dengan suatu ikhtisar atau analogi.
- o Gunakan tinjauan ulang dan pengulangan.
- o Muji dan mengulangi jawab siswa.
- o Beri tugas yang menawarkan praktek dan variasi.
- o Mastikan pertanyaan dan tugas adalah menantang dan baru namun cukup gampang untuk mengijinkan sukses dengan usaha layak.

TEACHER-CENTERED INSTRUCTION IN SOCIAL STUDIES

Though research on teacher-centered instruction focuses on the day-to-day work of teachers who favor this approach, the rhetoric of leaders in social studies education fails to take note of these highly successful teachers. A review of recent articles in *Theory and Research in Social Education*, the flagship research journal of the National Council for the Social Studies and the College and University Assembly, makes this point abundantly clear. The authors and editor emphasize issues of social justice, race, gender, and class, while failing to address what are the most *effective* teacher practices. Teachers who favor teacher-centered instruction are rarely the subjects of interviews or observation, and their teaching style and techniques are rarely mentioned. When such teachers are noticed at all by the leaders of the field, it is to use them as examples of what not to do in the classroom. Meskipun [demikian] riset pada [atas] instruksi teacher-centered memusat pada [atas] pekerjaan para guru yang sehari-hari [siapa] yang menyukai ini mendekati, yang retorik para pemimpin di (dalam) pendidikan ilmu kemasyarakatan gagal untuk memperhatikan para guru [yang] sangat sukses ini. Suatu tinjauan ulang [dari;ttg] artikel terbaru di (dalam) Teori Dan Riset di (dalam) Pendidikan Sosial, jurnal riset kapal pemimpin Dewan Yang nasional untuk Ilmu Kemasyarakatan dan Perguruan tinggi Dan Perakitan Universitas, membuat titik ini [yang] dengan berlimpah-limpah jelas bersih. Pengarang Dan Editor menekankan isu keadilan, [ras/lomba], jenis kelamin, dan kelas, [selagi/sedang] kekurangan untuk menunjuk apakah [yang merupakan] praktek guru yang paling efektif. Para guru [siapa] yang menyukai instruksi teacher-centered jarang pokok materi wawancara atau pengamatan, dan mereka mengajar gaya dan teknik jarang tersebut. Ketika . seperti (itu) para guru dicatat sama sekali oleh para pemimpin bidang, [itu] adalah untuk [tidak/jangan] menggunakan [mereka/nya] [sebagai/ketika/sebab] contoh dari apa [yang] untuk merusak kelas [itu].

After all, these teachers have rejected most of the hip, student-centered approaches. They are ignored or dismissed by the self-appointed leadership crowd—the folks who speak at professional meetings, write the textbooks for teachers, and dominate professional discussion. Again, Rodney Dangerfield's line might best describe such teachers. They get no respect! Betapapun, para guru ini sudah menolak kebanyakan dari pinggul, pendekatan student-centered. Mereka diabaikan atau dipecat/ dibubarkan oleh kepemimpinan yang self-appointed crowd-the sanak saudara [siapa] yang berbicara pada pertemuan-pertemuan profesional, tulis buku teks [itu] untuk para guru, dan mendominasi diskusi profesional. Lagi, Rodney Garis Dangerfield's cara terbaik menguraikan . seperti (itu) para guru. Mereka tidak mendapat/kan apapun rasa hormat!

There is some evidence that, despite the heavy emphasis placed on student-centered techniques, many social studies teachers might be successfully using teacher-centered instruction in the classroom. It is hard to be certain, however, because as Cuban (1991) observes, studies of classroom observations are rare in social studies. In his summary of the studies that are available, he concludes that the most common pattern of social studies teaching includes heavy emphasis on the teacher and the textbook as the sources of information for assignments and discussion, followed by tests and seatwork—in other words, teacher-centered instruction. Whole group instruction dominates. Cuban comments that this state of affairs seems nearly impervious to serious change. This observation is congruent with observations made by others of social studies classrooms (Goodlad, 1984). But, if this is so, is it as bad as Cuban implies? Ada beberapa bukti yang, di samping penekanan yang berat/lebat menempatkan pada [atas] teknik student-centered, banyak ilmu kemasyarakatan para guru boleh jadi dengan sukses menggunakan instruksi teacher-centered di (dalam) kelas [itu]. [Itu] adalah ke yakin, bagaimanapun, sebab [sebagai/ketika/sebab] Cuban (1991) mengamati, studi pengamatan kelas adalah ilmu kemasyarakatan jarang. Di (dalam) ringkasan nya studi yang ia, ada tersedia menyimpulkan [bahwa/yang] pola teladan ilmu kemasyarakatan [yang] [yang] umum [yang] mengajar meliputi penekanan berat/lebat pada [atas] guru dan buku teks [sebagai/ketika] sumber informasi untuk tugas dan diskusi, yang diikuti oleh test dan seatwork-in lain kata-kata,

instruksi teacher-centered. Instruksi Kelompok utuh mendominasi. Cuban berkomentar bahwa . ini kondisi nampak hampir tak dapat dilalui ke perubahan serius. Pengamatan ini adalah sama dan sebangun dengan pengamatan dibuat oleh (orang) yang lain kelas ilmu kemasyarakatan (Goodlad, 1984). Tetapi, jika ini adalah maka, apakah (itu) jelek seperti Cuban menyiratkan?

Educators who use teacher-centered approaches are generally reluctant to use esoteric forms of instruction, and many effective teachers have not found success using student-centered teaching approaches. Consider cooperative learning as an example. Its research base is impressive in terms of its potential to achieve academic and social outcomes (Slavin, 1990). But in practice, this potential is rarely achieved, primarily because in order for cooperative learning to be successful, teachers must follow specific steps, carefully organizing the content and skills that students are to "teach" each other. (After all, the students do not know this material as well as the teacher does.) Pendidik [siapa] yang menggunakan pendekatan teacher-centered biasanya segan untuk menggunakan format instruksi rahasia, dan banyak para guru efektif belum menemukan penggunaan sukses yang student-centered mengajar pendekatan. Pertimbangkan koperasi [yang] belajar sebagai suatu contoh. Dasar Riset nya adalah mengesankan dalam kaitan dengan potensi nya untuk mencapai hasil sosial dan akademis (Slavin, 1990). Tetapi dalam praktek, potensi ini jarang dicapai, terutama semata sebab dalam urutan untuk koperasi belajar agar berhasil, para guru harus mengikuti langkah-langkah spesifik, [yang] secara hati-hati mengorganisir ketrampilan dan isi [itu] yang para siswa untuk " mengajar" satu sama lain. (Betapapun, para siswa tidak mengetahui material ini seperti halnya guru mengerjakan.)

They must group students carefully with regard to academic ability, race, and gender; place students in groups of four or five students with a high, a low, and two or three medium-achieving students in each group; and compute student "improvement scores," an essential component in Slavin's work. In computing improvement scores, the teacher must first compute base scores for each student and for each group of students from past quizzes and tests. They then need to administer the test or quiz again to the class and convert the scores to improvement points. Mereka harus menggolongkan para siswa [yang] secara hati-hati mengenai kemampuan akademis, [ras/lomba], dan jenis kelamin; para siswa tempat di (dalam) kelompok empat atau lima para siswa dengan suatu tinggi, suatu rendah, dan dua atau tiga medium-achieving para siswa pada setiap kelompok; dan menghitung siswa " peningkatan mencetak (prestasi)," suatu komponen penting di (dalam) Pekerjaan Slavin's. Di (dalam) menghitung peningkatan mencetak (prestasi), guru harus pertama menghitung score dasar untuk masing-masing siswa dan untuk masing-masing kelompok para siswa dari masa lampau quizzes dan test. Mereka kemudian harus mengurus test [itu] atau ulangan/ ujian lagi kepada kelas dan mengkonversi score [itu] ke poin-poin peningkatan.

Failing at any one step could jeopardize the results that had been achieved when the approach was studied. Yet, few teachers follow all these steps. While some choose occasional group work, most do not do anything resembling the cooperative learning described in the literature—mostly because these well-intentioned techniques have been tried and have failed in practice. Instead, most social studies teachers discover on their own that teacher-centered techniques are among the best ways to improve student learning. This happens despite the fact that cooperative learning and similar student-centered approaches are stressed repeatedly in initial teacher training programs and at numerous professional conferences and workshops. Teachers reject these approaches because they conduct a common sense, cost benefit analysis. The costs of student-centered approaches are high, immediate, and certain. The most obvious costs are additional time to prepare such lessons and additional class time. To many teachers, the benefits of student-centered approaches—eventually improving student achievement—appear to be highly uncertain and distant. As a result, many place their faith in teacher-centered approaches. Kekurangan pada tiap orang langkah bisa membahayakan hasil [itu] yang telah dicapai ketika pendekatan telah dipelajari. Masih, sedikit para guru mengikuti

semua langkah-langkah ini . [Selagi/Sedang] beberapa memilih kerja kelompok sekali-kali, kebanyakan tidak lakukan apapun yang menirukan koperasi [itu] [yang] belajar diuraikan literature-mostly sebab teknik [yang] bermaksud baik ini telah dicoba dan sudah digagalkan dalam praktek. Sebagai ganti(nya), kebanyakan para guru ilmu kemasyarakatan menemukan pada [atas] teknik [yang] teacher-centered itu mereka sendiri adalah di antara jalan yang terbaik untuk meningkatkan siswa [yang] belajar. Jadi di samping fakta ini yang koperasi [yang] belajar dan pendekatan student-centered serupa ditekankan berulang-kali di (dalam) program pelatihan guru awal dan pada banyak tempat kerja dan konferensi profesional. Para guru menolak ini mendekati sebab mereka melakukan suatu akal sehat, analisis biaya keuntungan. Biaya-Biaya [dari;ttg] pendekatan student-centered adalah tinggi, segera, dan tertentu. Biaya-Biaya [yang] yang paling jelas nyata adalah waktu tambahan untuk siap[kan . seperti (itu) pelajaran dan waktu kelas tambahan. [Bagi/Kepada] banyak para guru, keuntungan-keuntungan student-centered approaches-eventually meningkat;kan siswa achievement-appear untuk jauh dan penuh ketidakpastian. Sebagai hasilnya, banyak tempat iman mereka di (dalam) pendekatan teacher-centered.

Of course, either knowing that a classroom is student-centered or knowing that it is teacher-centered reveals little about the quality of instruction in the classroom. It tells nothing about the facts and concepts being presented, examples being used, or interaction between teacher and students . Teachers who favor teacher-centered approaches, however, tend to focus on what content to teach, the sequence of ideas, the examples used, the demonstrations performed, the questions asked, and the students' responses, and they tend to be more interested in the details of instruction—all central components of effective teaching. Tentu saja, yang manapun pengetahuan yang suatu kelas adalah student-centered atau mengetahui bahwa teacher-centered mengungkapkan [kecil/sedikit] tentang mutu instruksi di (dalam) kelas [itu]. [Itu] ceritakan [kepada] tidak ada sesuatupun tentang fakta dan konsep diperkenalkan, contoh digunakan, atau interaksi antar[a] guru dan para siswa. Para guru [siapa] yang menyukai pendekatan teacher-centered, bagaimanapun, [tuju/ cenderung] untuk memusatkan pada isi apa untuk mengajar, urutan gagasan, contoh menggunakan, demonstrasi melakukan, pertanyaan [minta;tanya], dan tanggapan siswa, dan mereka [tuju/ cenderung] untuk;menjadi lebih tertarik akan detil instruction-all komponen [yang] pusat [dari;ttg] efektif mengajar.

In any case, regardless of one's personal preference for student- or teacher-centered instruction, the ultimate questions should be: What are the results of instruction? Do students achieve more? Under what conditions is learning enhanced? Research consistently shows that, while student-centered instruction may work in some cases, teacher-centered instruction works better with most students and with most teachers. Unfortunately, this is precisely what the leaders of the field who are focused on promoting student-centered methods ignore. Setidak-Tidaknya, dengan mengabaikan pilihan seseorang pribadi untuk siswa- atau instruksi teacher-centered, pertanyaan yang terakhir seharusnya: Apakah [yang merupakan] hasil instruksi? Apakah para siswa mencapai lebih []? Dengan syarat apa sedang belajar ditingkatkan? Riset [yang] secara konsisten menunjukkan bahwa, [selagi/sedang] instruksi student-centered boleh bekerja dalam beberapa hal, instruksi teacher-centered bekerja lebih baik dengan kebanyakan para siswa dan dengan kebanyakan para guru. [Yang] sungguh sial, ini adalah dengan tepat apa yang para pemimpin bidang [siapa] yang dipusatkan pada [atas] mempromosikan metoda student-centered mengabaikan.

WHAT DO SOCIAL STUDIES TEACHING METHODS BOOKS TEACH?

Though there is evidence that many teachers, parents, and administrators prefer teacher-centered instruction, leaders of the field still work overtime to push student-centered learning. In fact, today's teaching methods textbooks in social studies are nearly silent on how to develop teacher-led, teacher-centered instruction. Instead, the authors of these books are deeply influenced by the progressive legacy of student-centered instruction. Meskipun [demikian] ada bukti yang banyak para guru, orang tua, dan pengurus menyukai instruksi

teacher-centered, para pemimpin bidang masih bekerja lembur untuk mendorong pelajaran student-centered. Sesungguhnya, masa kini mengajar buku teks metoda di (dalam) ilmu kemasyarakatan hampir diam pada [atas] bagaimana cara kembang;kan instruksi teacher-centered teacher-led. Sebagai ganti(nya), pengarang [dari;ttg] buku ini sangat dipengaruhi oleh warisan yang progresif [dari;ttg] instruksi student-centered.

Some early methods books do provide a more balanced approach. Lee Ehman, Howard Mehlinger and John Patrick's (1974) book *Toward Effective Instruction in Secondary Social Studies*, for example, has some positive things to say about teacher presentations. The index shows nine references to expository instruction. The book devotes 10 full pages to expository instruction, giving advice on how to plan and deliver a good lecture. Prospective teachers are advised to begin a lesson by explaining what students are expected to learn. Then they define unfamiliar ideas or facts, proceed in a well-organized manner, provide immediate corrections to students, and close by reviewing the ideas that were taught. Beberapa awal metoda buku menyediakan suatu pendekatan [yang] lebih seimbang. Lee Ehman, Howard Mehlinger dan Yohanes Patrick'S (1974) membukukan Ke arah Instruksi Efektif di (dalam) Ilmu Kemasyarakatan Sekunder, sebagai contoh, mempunyai beberapa berbagai hal positif untuk kata[kan sekitar presentasi guru. Index menunjukkan sembilan acuan ke instruksi pemberi penjalasan. Buku mempersembahkan 10 halaman penuh ke instruksi pemberi penjalasan, memberi nasihat pada [atas] bagaimana cara merencanakan dan [menyampaikan/kirim] suatu ceramah kuliah baik. Para guru Calon dinasehatkan untuk mulai suatu pelajaran dengan menjelaskan para siswa apa [yang] diharapkan untuk belajar. Kemudian mereka menggambarkan fakta atau gagasan tidak familier, berproses [adalah] suatu cara terorganisir baik, menyediakan koreksi segera ke para siswa, dan dekat meninjau ulang gagasan [itu] yang telah diajar.

Most methods books from the latter half of the last century, however, give short shrift to teacher-centered methods. Edgar B. Wesley's 1950 book, *Teaching Social Studies in High Schools*, includes just seven references to lecture. And, though he discusses what lectures are and explains how many social studies teachers use "informal" lectures, the discussion is couched in his distaste for such teacher-centered methods: "the teacher who lectures in the public schools is likely to be charged with . . . cruelty to pupils." In another example, Maurice P. Hunt and Lawrence E. Metcalf's 1968 book, *Teaching High School Social Studies*, includes neither the phrase "direct instruction" nor the word "lecture" in the index. The book is, however, filled with references to "reflective thought" and issues related to power, class, and race. Kebanyakan metoda membukukan dari yang belakangan separuh abad yang ter]akhir, bagaimanapun, memberi waktu yang sangat sedikit ke metoda teacher-centered. Edgar B. Buku 1950 Wesley's, Mengajar Ilmu Kemasyarakatan di (dalam) Sekolah Menengah, meliputi [hanya;baru saja] tujuh acuan untuk memberi kuliah. Dan, meskipun [demikian] ia mendiskusikan ceramah kuliah apa [yang] adalah dan menjelaskan berapa banyak penggunaan para guru ilmu kemasyarakatan " informal" memberi kuliah, diskusi diletakkan [yang] [yang] tak suka nya untuk metoda teacher-centered seperti itu : " guru [siapa] yang memberi kuliah orang banyak/masyarakat sekolah adalah nampaknya akan [didakwa/ dipenuhi]... kekejaman ke para murid." Di (dalam) contoh lain, Maurice P. Pencarian Dan Lawrence E. Buku 1968 Metcalf's, Mengajar Ilmu Kemasyarakatan Sekolah Menengah, meliputi [bukan/tidak] ungkapan " instruksi langsung" maupun kata[an] " memberi kuliah" di (dalam) index [itu]. Buku adalah, bagaimanapun, diisi dengan acuan untuk " pikiran yang memantulkan cahaya" dan isu berhubungan dengan [kuasa/ tenaga], kelas,

Additional evidence of the disproportionate emphasis on student-centered instruction can be found in the *Handbook of Research on Social Studies Teaching and Learning*. This is regarded as a highly authoritative, landmark work in the field. Edited by James P. Shaver (1931), it includes 53 chapters. These carefully selected and meticulously edited chapters address numerous concerns in social studies education. Yet, the index has a single reference to direct

instruction—Peter Martorella mentions it in his chapter on teaching concepts, devoting four paragraphs (in a book of over 600 pages) to this form of teaching. Even here, though, there is no respect for teacher-centered instruction. Martorella summarizes the work of Barak Rosenshine but then dismisses it. He explains that teacher-centered instruction is only useful for low-level cognitive objectives and probably not worth employing in social studies classrooms. Bukti [yang] tambahan penekanan yang tidak sebanding pada [atas] instruksi student-centered dapat ditemukan Pedoman Riset pada [atas] Pengajaran Ilmu Kemasyarakatan Dan Pelajaran. Ini adalah dihormati sebagai [yang] sangat berwenang/berwibawa, hal menonjol bekerja bidang [itu]. yang diterbitkan Oleh Yakobus P. Alat cukur (1931), [itu] meliputi 53 bab. Ini secara hati-hati memilih dan dengan teliti bab yang diterbitkan menunjuk banyak perhatian di (dalam) pendidikan ilmu kemasyarakatan. Masih, index mempunyai acuan tunggal untuk mengarahkan instruction-Peter Martorella menyebutkan ia/nya di (dalam) bab nya pada [atas] mengajar konsep, mempersembahkan empat [paragrap/ayat] (di (dalam) suatu buku (di) atas 600 halaman) pada format ini mengajar. Bahkan di sini, meskipun [demikian], tidak ada rasa hormat untuk instruksi teacher-centered. Martorella meringkas pekerjaan Barak Rosenshine akan tetapi memecat/membubarkan itu. Ia tidak menjelaskan instruksi [yang] teacher-centered itu hanya [yang] bermanfaat untuk sasaran hasil teori [yang] low-level dan mungkin berharga memanfaatkan kelas ilmu kemasyarakatan.

Perhaps most disturbing is that these are not isolated instances of neglect. In fact, a brief review of the most widely used social studies methods textbooks exposes a widespread disregard for direct instruction.

• In Jack Zevin's (2000) *Social Studies for the Twenty-First Century: Methods and Materials for Teaching in Middle and Secondary Schools,* neither the phrase "direct instruction" nor the word "lecture" appears in the index. Didactic roles of teachers are described but such roles receive short shrift and little enthusiasm when compared to descriptions of "reflective" and "affective" roles. Didactic approaches are described in order to be contrasted with other, better approaches. Zevin never suggests how to plan and deliver any sort of teacher-led presentation. Barangkali paling mengganggu adalah bahwa ini tidaklah terisolasi kejadian melalaikan. Sesungguhnya, suatu tinjauan ulang [yang] ringkas paling secara luas menggunakan pembeberan buku teks metoda ilmu kemasyarakatan [adalah] suatu tersebar luas tak mengindahkan untuk instruksi langsung.
o Di (dalam) Dongkrak Zevin'S (2000) Ilmu Kemasyarakatan untuk Twenty-First Abad: Metoda Dan Material untuk Mengajar Pertengahan Dan Sekolah Menengah, [bukan/tidak] ungkapan " instruksi langsung" maupun kata[an] " ceramah kuliah" nampak index [itu]. Peran para guru [yang] didaktis diuraikan tetapi . seperti (itu) peran menerima waktu yang sangat sedikit dan gairah [kecil/sedikit] ketika dibandingkan ke uraian " yang memantulkan cahaya" dan " secara cenderung" peran. Pendekatan didaktis diuraikan untuk dibandingkan dengan lain, pendekatan lebih baik. Zevin tidak pernah menyarankan bagaimana cara merencanakan dan [menyampaikan/kirim] presentasi teacher-led macam apapun .

• Peter H. Martorella's (2001) *Teaching Social Studies in Middle and Secondary Schools* follows a similar pattern. Neither the phrase "direct instruction" nor the word "lecture" appears in the index. Little attention is given to how such teacher-centered instruction might work or what research might support such an approach. Even a short section on expository approaches turns out to supply scant advice on what such instruction might entail. Petrus H. Martorella'S (2001) Mengajar Ilmu Kemasyarakatan di (dalam) Pertengahan Dan Sekolah Menengah mengikuti suatu pola teladan serupa. [Bukan/Tidak] ungkapan " instruksi langsung" maupun kata[an] " ceramah kuliah" nampak index [itu]. Perhatian [kecil/sedikit] diberikan kepada bagaimana . seperti (itu) instruksi teacher-centered mungkin bekerja atau riset apa [yang] mungkin mendukung pendekatan seperti itu. Bahkan suatu bagian pendek/singkat pada [atas]

pendekatan pemberi penjalasan menghasilkan untuk menyediakan nasihat tidak cukup pada apa . seperti (itu) instruksi mungkin memerlukan.

• In Thomas L. Dynneson and Richard E. Gross's (1999) *Designing Effective Instruction for Secondary Social Studies*, neither the phrase "direct instruction" nor the word "lecture" appears in the index. Nearly every sort of instruction is described, including suggestions for using technology, motivating students, and teaching about values. A single paragraph is devoted to giving a lecture. Di (dalam) Thomas L. Dynneson Dan Richard E. Milik gross (1999) Perancangan Instruksi Efektif untuk Ilmu Kemasyarakatan Sekunder, [bukan/tidak] ungkapan " instruksi langsung" maupun kata[an] " ceramah kuliah" nampak index [itu]. [Yang] hampir tiap-tiap sort;jenis instruksi diuraikan, mencakup usul untuk . yang menggunakan teknologi, memotivasi para siswa, dan pengajaran tentang nilai-nilai. [Paragrap/Ayat] tunggal diabdikan bagi memarahi.

• In Walter C. Parker's (2001) *Social Studies in Elementary Education*, neither the phrase "direct instruction" nor the word "lecture" appears in the index. By contrast, cooperative learning, curriculum integration, and literacy have whole chapters of their own. Di (dalam) Walter C. Milik tukang parkir (2001) Ilmu Kemasyarakatan di (dalam) Pendidikan Dasar, [bukan/tidak] ungkapan " instruksi langsung" maupun kata[an] " ceramah kuliah" nampak index [itu]. Sebagai pembanding, koperasi [yang] belajar, pengintegrasian kurikulum, dan melek huruf mempunyai bab [yang] utuh milik mereka sendiri.

• George W. Maxim's (2003) *Dynamic Social Studies for Elementary Classrooms* is the exception. He includes a chapter called "direct instruction." While constructivism and other incongruencies are also included in this chapter, Maxim is clear about the important role of instruction wherein the teacher presents lessons to the whole class, provides immediate feedback, and monitors student performance. He is also clear that teachers need a deep understanding of factual information if they are to be successful direct instruction teachers. George W. Milik peribahasa (2003) Ilmu Kemasyarakatan Dinamis untuk Kelas [yang] Dasar adalah perkecualian [itu]. Ia meliputi suatu bab [disebut/dipanggil] " instruksi langsung." [Selagi/Sedang] constructivism dan lain incongruencies adalah juga tercakup di bab ini, Peribahasa harus jelas tentang peran instruksi yang penting dalam mana guru menghadiahi pelajaran kepada seluruh kelas, menyediakan umpan balik segera, dan capaian siswa monitor. Ia adalah juga jelas bersih yang para guru memerlukan suatu pemahaman [yang] dalam [dari;ttg] informasi berdasar fakta jika mereka (diharapkan) untuk para guru instruksi langsung sukse

These examples clearly illustrate that teaching methods textbooks in social studies are nearly silent on how to develop teacher led, teacher-centered instruction. The authors of these books are deeply influenced by the progressive legacy of student-centered instruction and they allow this influence to misrepresent social studies classrooms as student-centered, when in reality classroom observation suggests otherwise. Contoh ini [yang] dengan jelas menggambarkan itu mengajar buku teks metoda di (dalam) ilmu kemasyarakatan hampir diam pada [atas] bagaimana cara kembang;kan guru memimpin, instruksi teacher-centered. Pengarang [dari;ttg] buku ini sangat dipengaruhi oleh warisan yang progresif [dari;ttg] instruksi student-centered dan mereka mengijinkan ini mempengaruhi untuk salah menggambarkan kelas ilmu kemasyarakatan [sebagai/ketika] student-centered, ketika pada kenyataannya pengamatan kelas menyarankan cara lainnya.

IS THE FAILURE TO PROMOTE TEACHER-CENTERED INSTRUCTION A PROBLEM?

Does the social studies establishment's attachment to student- centered approaches and the rejection of teacher-centered instruction cause problems? Yes, especially for beginning teachers. First- year teachers arrive each year in their classrooms ill prepared to teach. They

know a few tricks. They know how to write an objective. If they are lucky, they know some of the state's social studies standards. They might understand Piaget's stages of cognitive development and Bloom's Taxonomy. Apakah ilmu kemasyarakatan pemasangan penetapan ke siswa- pendekatan yang memusat dan penolakan [dari;ttg] instruksi teacher-centered menyebabkan permasalahan? Ya, terutama untuk mulai para guru. Pertama- para guru tahun tiba tahun masing-masing di (dalam) penyakit kelas mereka yang disiapkan untuk mengajar. Mereka mengetahui beberapa muslihat. Mereka mengetahui bagaimana cara tulis suatu sasaran. Jika mereka adalah keberuntungan, mereka mengetahui sebagian dari standard ilmu kemasyarakatan status. Mereka mungkin memahami Langkah-Langkah pengembangan teori Piaget's dan Taksonomi Bunga.

But it soon dawns on the fledging teachers that their students come to class every day, five days a week. High school teachers often see over 100 students each day. New teachers are often assigned the most difficult students. And deportment varies greatly. Some students won't stay in their seats. Others won't participate in groups— especially when the teacher assigns the group members. Some students become unruly. Fights break out. Other students sit quietly, using social studies time to finish their math assignments. Many won't work at all. Yet all look to the teacher for classroom leadership, subject knowledge, and classroom order—precisely the things for which most social studies teachers are not well trained. The methods they have been taught at the university—the vast majority of which are the student-centered approaches stressed in the college textbooks—are simply not equal to the task of real world teaching. Tetapi [itu] segera mulai nyata fledging para guru yang para siswa mereka yang yang datang ke kelas tiap hari, lima hari per minggu. Para guru Sekolah menengah sering memeriksa . dengan teliti 100 para siswa masing-masing hari. Para guru baru adalah sering ditugaskan para siswa [yang] yang paling sulit. Dan pengembalian bervariasi sangat. Beberapa para siswa tidak akan tinggal di dalam tempat duduk mereka. (Orang) yang lain tidak akan mengambil bagian kelompok- [yang] terutama ketika guru menugaskan anggota kelompok [itu]. Beberapa para siswa menjadi tak mau patuh. Perkelahian terjadi tiba-tiba. Lain para siswa duduk dengan tenang, menggunakan waktu ilmu kemasyarakatan untuk menyelesaikan math tugas mereka. Banyak orang tidak akan bekerja sama sekali. Namun semua menantikan guru [itu] untuk kepemimpinan kelas, pengetahuan pokok, dan kelas [yang] order-precisely berbagai hal di mana kebanyakan para guru ilmu kemasyarakatan tidak [sehat/baik] dilatih;terlatih. Metoda [yang] mereka telah diajar di mayoritas luas yang university-the [di/yang/ttg] mana adalah pendekatan yang student-centered tidak menekankan perguruan tinggi [itu] textbooks-are [yang] hanya sepadan dengan tugas dunia nyata mengajar.

Where should first-year teachers turn for help? The culture of many high schools is like the TV show "Survivor." Experienced teachers, the very teachers who could help out the beginners, often resent sharing their experiences. After all, they learned how to teach the hard way. They struggled at first. It took them several years to discover what works. Why shouldn't today's newcomers do the same? The rookies should be "first off the island." [Di mana/jika] [perlu] putaran para guru tahun pertama untuk membantu? Kultur dari banyak sekolah menengah seperti PERTUNJUKAN TV " Orang yang selamat." Para guru yang berpengalaman, seluruh para guru [siapa] yang bisa membantu pemula [itu], sering marah berbagi pengalaman mereka. Betapapun, mereka mempelajari bagaimana cara mengajar [jalan/cara] yang [sulit/keras] [itu]. Mereka berjuang pada mulanya. [Itu] mengambil [mereka/nya] beberapa tahun untuk menemukan pekerjaan apa [yang] . Mengapa seharusnya tidak pendatang baru masa kini lakukan yang sama? Rookies seharusnya " pertama-tama pulau."

What are first-year teachers to do when the approaches taught by their professors of education fail them? For those who want to survive, the answer is simple. The new teachers have to train themselves—often by relying on trial and error—to find methods that truly work. Many will discover the benefits of teacher-centered instruction on their own. This perhaps is the best that we could hope for, despite the fact that they will do many students little good in

the first years of teaching. Apa yang adalah para guru tahun pertama untuk lakukan ketika pendekatan yang diajar oleh profesor pendidikan mereka gagal [mereka/nya]? Bagi mereka yang ingin survive, jawaban adalah sederhana. Para guru yang baru harus melatih themselves-often dengan kepercayaan sedang diadili dan error-to temukan metoda yang sungguh-sungguh bekerja. Banyak orang akan menemukan [itu] keuntungan-keuntungan instruksi teacher-centered pada [atas] milik mereka sendiri. Ini barangkali adalah yang terbaik bahwa kita bisa mengharapkan, di samping fakta bahwa mereka akan lakukan banyak para siswa yang [kecil/sedikit] baik tahun pertama mengajar.

Unfortunately, when the student-centered methods these teachers were taught fail, if teachers are not prepared to use the more rigorous and reliable teacher-centered methods, many beginning teachers will discover that they can manage a classroom better with "noninstruction." To be sure, these teachers will monitor students, assign seatwork and homework, but ultimately they will not impart much substantive knowledge and they will not challenge students to learn the content found in the readings, worksheets, and homework they assign. These teachers essentially give up on either teacher *or* student-centered instruction and merely "keep school." Noninstruction, after all, often leads to an orderly and tranquil classroom. It is a low-challenge environment to which many students and administrators would not object. If this happens, noninstruction may go unchallenged for years. Few incentives exist for principals to weed out poor teachers who actually manage their classrooms relatively well. Either way—whether beginning teachers discover teacher-centered instruction or noninstruction— the training these teachers received at colleges and universities failed them. They are left to train themselves. Sungguh sial, ketika metoda yang student-centered para guru ini telah diajar gagal, jika para guru tidaklah disiapkan untuk menggunakan metoda [yang] semakin teacher-centered dapat dipercaya dan kaku, permulaan banyak orang para guru akan menemukan bahwa mereka dapat mengatur suatu kelas lebih baik dengan " noninstruction." Untuk memastikan, para guru ini akan memonitor para siswa, menugaskan seatwork dan pekerjaan rumah, tetapi akhirnya mereka tidak akan mengabarkan banyak pengetahuan kata benda dan mereka tidak akan menghadapi tantangan para siswa untuk belajar isi [itu] menemukan pembacaan, worksheets, dan pekerjaan rumah [yang] mereka menugaskan. Para guru ini [yang] sangat utama memberi berdasar pada baik guru maupun instruksi student-centered dan melulu " mengurus sekolah." Noninstruction, betapapun, sering memimpin ke arah suatu kelas tenang dan rapi. [Ini] merupakan suatu low-challenge lingkungan [bagi/kepada] para siswa banyak orang dan pengurus yang (mana) tidak akan menolak. Jika ini terjadi, noninstruction boleh pergi tidak tertandingi bertahun-tahun. Sedikit perangsang ada untuk [yang] prinsip untuk membuang para guru lemah/miskin [siapa] yang benar-benar mengatur kelas mereka [yang] secara relatif dengan baik. Yang manapun way-whether para guru permulaan menemukan instruksi teacher-centered atau noninstruction- pelatihan para guru ini menerima pada perguruan tinggi dan universitas gagal;kan [mereka/nya]. Mereka ditinggalkan untuk melatih diri mereka.

THE COVER-UP: REMEDIAL TEACHER EDUCATION

Up until now, we have somehow managed to avoid the worst consequences of failing to train teachers to use direct instruction. We have done so in part by expensive, stopgap measures: reducing class size to allow ill-trained teachers to more easily organize their classrooms so that more learning can eventually take place; assigning peer mentors to new teachers to pick up the slack for the education schools and train them in more effective teacher-centered instruction techniques. (Many large urban school districts have launched large-scale peer mentoring programs as a way to compensate for failures in teacher education.) atas Hingga sekarang, kita sudah bagaimanapun juga mengatur untuk menghindari yang terburuk konsekwensi tidak berhasil untuk melatih para guru untuk menggunakan instruksi langsung. Kita sudah juga pada sebagian oleh mahal, ukuran pengganti sementara: mengurangi ukuran kelas untuk mengijinkan para guru ill-trained ke dengan mudah mengorganisir kelas mereka sedemikian sehingga lebih belajar kaleng [yang] secepatnya berlangsung; menugaskan

penasihat panutan ke para guru baru untuk mengambil kendor [itu] untuk sekolah pendidikan dan melatih [mereka/nya] di (dalam) teknik instruksi teacher-centered lebih efektif. (Banyak sekolah [yang] berkenaan dengan kota besar daerah sudah meluncurkan panutan besar-besaran yang penasihat program sebagai [jalan/cara] untuk mengganti kerugian untuk kegagalan di (dalam) pendidikan guru.)

How long can the cover-up continue? Not forever. Most states are facing huge budget deficits and their ability to fully fund such policies as reduced class size and peer-mentoring programs may be severely limited. Moreover, by focusing on results rather than theories, the new accountability requirements of the No Child Left Behind Act make it difficult for colleges and universities as well as the public schools to cling to the failed approaches of the past. The widespread failure of teacher education is being exposed. Berapa lama dapat menutupi semua melanjut? Tidak [untuk] selamanya. Kebanyakan negara sedang menghadapi defisit anggaran sangat besar dan kemampuan mereka untuk secara penuh membiayai seperti kebijakan ukuran kelas dikurangi dan peer-mentoring program mungkin (adalah) sungguh terbatas. Lebih dari itu, dengan memusatkan pada [atas] hasil dibanding/bukannya teori, kebutuhan tanggung-jawab yang baru Tidak (ada) Anak Meninggalkan Tindakan membuat ia/nya [yang] sulit untuk perguruan tinggi dan universitas seperti halnya orang banyak/masyarakat sekolah untuk bertaut pada pendekatan yang digagalkan masa lalu. Kegagalan pendidikan guru yang tersebar luas diarahkan.

RESULTS SHOULD MATTER

By holding schools and districts accountable for results, the federal No Child Left Behind Act shifts the education debate from an argument over which theory is better to an argument over what works. Unfortunately, this law currently only holds schools accountable for results in reading, math, and eventually science. Education leaders should extend these principles to social studies and should consider: Dengan pemilikan sekolah dan daerah bertanggung jawab untuk hasil, yang pemerintah pusat Tidak (ada) Anak Meninggalkan Tindakan bergeser pendidikan [itu] berdebat dari suatu argumentasi di mana teori menjadi lebih baik [bagi/kepada] suatu argumentasi (di) atas pekerjaan apa [yang] . [Yang] sungguh sial, hukum ini [yang] sekarang ini hanya [memegang/menjaga] sekolah bertanggung jawab untuk mengakibatkan pembacaan, math, dan secepatnya ilmu pengetahuan. Pendidikan Para pemimpin [perlu] meluas prinsip ini ke ilmu kemasyarakatan dan [perlu] mempertimbangkan:

• Specifying academic levels of success for individual schools. Levels should include reference to student performance on state content tests and should take into account the value-added approaches used in some states. So, for example, high schools where 80 percent of the students are proficient or advanced in social studies at grade 8 might be classified as successful.
• Defining schools that have failed social studies programs in terms of specific student test results. So, for example, high schools where less than 80 percent of the students are proficient or advanced might be classified as failing.

o Netapkan tingkatan sukses [yang] akademis untuk sekolah individu. Tingkatan [perlu] meliputi acuan ke capaian siswa pada [atas] test isi status dan [perlu] mempertimbangkan pendekatan yang nilai tambah menggunakan dalam beberapa negara. Maka, sebagai contoh, sekolah menengah [di mana/jika] 80 persen para siswa adalah pandai atau yang [maju/lanjut] ilmu kemasyarakatan pada dataran yang sama 8 kekuatan digolongkan [ketika;seperti] sukses.
o Lukiskan sekolah yang sudah gagal;kan program ilmu kemasyarakatan dalam kaitan dengan hasil percobaan siswa spesifik. Maka, sebagai contoh, sekolah menengah [di mana/jika] kurang dari 80 persen para siswa adalah pandai atau mengedepan boleh jadi digolongkan [ketika;seperti] tidak berhasil.

•Offering financial incentives to assist failing schools that are willing to make changes.

Principals and teachers in failing schools should be invited to study the programs at successful schools to see what these schools are doing right. They should imitate the schools that have been successful rather than set out in some new, experimental direction. If these formerly failing schools become successful, then they too should be eligible for additional funding to expand their programs. The cost of failure should be high. If schools fail after some specified period of time (e.g., two years?), they should be closed, reconstituted, or turned over to a charter school operator.

oOffering perangsang keuangan untuk membantu tidak berhasil sekolah yang akan membuat perubahan. Utama Dan Para guru di (dalam) tidak berhasil sekolah harus diundang untuk belajar program [itu] pada sekolah sukses untuk lihat sekolah ini apa [yang] sedang lakukan benar. Mereka [perlu] meniru sekolah [itu] yang telah sukses dibanding/bukannya memperkenalkan dalam beberapa arah bersifat percobaan baru. Jika ini tadinya/dahulu sekolah kekurangan menjadi sukses, kemudian mereka terlalu harus dapat dipilih sebagai pembiayaan tambahan untuk memperluas program mereka. Ongkos kegagalan harus tinggi. Jika sekolah gagal setelah periode tertentu beberapa waktu (e.g., dua tahun?), mereka harus tertutup, disusun kembali, atau diserahkan untuk suatu operator sekolah piagam.

CONCLUSION

Teacher-centered instruction is supported by a strong set of empirical results conducted over several decades. And yet, these approaches are ignored by the leaders of the profession, as evidenced by the content in textbooks used to train teachers and in authoritative reviews of research. To discuss teacher-centered instruction is not even considered polite conversation. Nevertheless, now is the time for social studies leaders as well as legislators and parents to acknowledge the obvious weaknesses of student-centered approaches and begin to correct the excesses. We should acknowledge that poor teaching and learning do indeed exist in this field and, just as important, that it is not because of teacher-led, content-focused instruction. Results from the National Assessment of Educational Progress have shown repeatedly that U.S. students have scant understanding of history, geography, and civics. It is likely that this dismal state of affairs is the result of a century of ignoring content and promoting instructional practices with little chance of classroom success. Instruksi Teacher-centered didukung oleh suatu [yang] kuat satuan hasil empiris menyelenggarakan (di) atas beberapa dekade. Namun juga, pendekatan ini diabaikan oleh para pemimpin profesi, [sebagai/ketika/sebab] evidenced oleh isi di (dalam) buku teks dulu para guru kereta dan di (dalam) tinjauan ulang riset berwenang/berwibawa. Untuk mendiskusikan instruksi teacher-centered bukanlah genap dipertimbangkan percakapan sopan. Meskipun demikian, sekarang adalah waktunya untuk para pemimpin ilmu kemasyarakatan seperti halnya pembuat undang-undang dan orang tua untuk mengakui adanya kelemahan yang jelas nyata [dari;ttg] pendekatan student-centered dan mulai untuk mengoreksi kelebihan [itu]. Kita [perlu] mengakui adanya bahwa pelajaran dan pengajaran lemah/miskin lakukan tentu saja ada bidang ini dan, sama [halnya] penting, bahwa bukan oleh karena instruksi content-focused teacher-led. Akibatkan oleh Penilaian [yang] Yang nasional [dari;ttg] Kemajuan Bidang pendidikan sudah menunjukkan berulang-kali bahwa U.S. para siswa mempunyai pemahaman sejarah tidak cukup, geografi, dan pelajaran kewarga negaraan. Ada kemungkinan bahwa kondisi [yang] suram ini adalah hasil suatu abad mengabaikan isi dan intervi promosi praktek dengan kesempatan sukses kelas [

The failure to improve academic achievement should be placed at the doorstep of the progressive theorists who brought us here and, just as important, are almost certainly incapable of leading us in a new direction. Perhaps an emphasis on results-oriented reforms can create a new energy in social studies to help us focus our attention on academic achievement rather than prolonging the endless debate between the advocates of teacher-centered and student-centered approaches in social studies. Kegagalan untuk meningkatkan prestasi akademis harus ditempatkan di doorstep ahli teori yang progresif [siapa] yang membawa [kita/kami] di sini dan, sama [halnya] penting, hampir bisa dipastikan tidak mampu untuk

terkemuka [kita/kami] di (dalam) suatu arah baru. Barangkali suatu penekanan pada [atas] perubahan results-oriented dapat menciptakan suatu energi baru di (dalam) ilmu kemasyarakatan untuk membantu [kita/kami] memusatkan perhatian [kita/kami] pada [atas] prestasi akademis dibanding/bukannya memperpanjang debat yang tak ada akhirnya antar[a] advokat [dari;ttg] pendekatan student-centered dan teacher-centered di (dalam) ilmu kemasyarakatan.

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BAB VI
Garbage In, Garbage Out

Expanding environments, constructivism, and content knowledge in social studies

Bruce Frazee and Samuel Ayers

Imagine, for a moment, a child learning to play chess. Even if the child were old enough, and intellectually developed enough, to learn how to play chess, it would do no good to plunk him or her in front of a board and say, "Play the game." There is prior knowledge required; the rules of movement, orientation of the board, the function of each piece—each of these are pieces of knowledge you have to know to successfully play the game.

Once you know these things, you can begin to accrue strategies and tactics that will make you a master chess player by playing against other players. But if you don't know how to move your pieces, you're not apt to build your knowledge of chess. In chess, substantive content knowledge is the prerequisite for learning. Bayangkan, sebentar, seorang pelajaran anak untuk main catur. Sekalipun anak adalah cukup tua, dan dengan beralasan mengembang;kan cukup, untuk belajar bagaimana cara main catur, [itu] akan tidak melakukan baik untuk memetik dia atau [papan/meja] suatu di depan nya dan kata[kan, " Matuhi peraturan." Ada pengetahuan [utama/lebih dulu] diperlukan; ketentuan-ketentuan pergerakan, orientasi [papan/meja], fungsi dari tiap piece-each [dari;ttg] ini adalah potongan pengetahuan [yang] kamu harus mengetahui untuk dengan sukses mematuhi peraturan.
Sekali anda mengetahui berbagai hal ini, kamu dapat mulai untuk mengakui strategi dan taktik yang akan membuat kamu seorang pemain catur guru dengan permainan melawan terhadap lain pemain. Tetapi jika kamu tidak mengetahui bagaimana cara pindah;gerakkan potongan mu, kamu adalah tidak cenderung untuk membangun pengetahuan catur mu. Di (dalam) catur, pengetahuan isi kata benda adalah prasyarat untuk belajar.

The same is true in education, and specifically in the social studies: you have to possess some basic skills and knowledge before you can begin to tackle the higher tasks of analysis and critical thinking. Content knowledge is also the backbone of good teaching. To be effective, pedagogy must begin by identifying the specific knowledge a teacher expects students to learn and establishing clear assessment procedures. Only then can teachers begin to determine *how* to teach content to their students. Yang sama adalah pendidikan benar, dan secara rinci di (dalam) ilmu kemasyarakatan: kamu harus menguasai beberapa pengetahuan dan ketrampilan basis dasar [sebelum/di depan] kamu dapat mulai untuk mengerjakan tugas analisa yang lebih tinggi dan pemikiran kritis. Isi Pengetahuan adalah juga tulang punggung [dari;ttg] pengajaran baik. Untuk bisa efektip, ilmu mendidik harus mulai dengan mengidentifikasi pengetahuan yang spesifik [adalah] seorang guru harapkan para siswa untuk belajar dan menetapkan prosedur penilaian jelas bersih. Baru setelah itu dapat para guru mulai untuk menentukan bagaimana cara mengajar isi kepada para siswa mereka.

Unfortunately, the delivery of content in elementary social studies is frequently hampered by two popular but misguided theories— "expanding environments" and "constructivism." Both are ineffective because they focus on how social studies should be taught in elementary classrooms rather than on the content knowledge that should be the centerpiece for teaching and learning. Sungguh sial, penyerahan isi di (dalam) ilmu kemasyarakatan dasar sering dihambat oleh dua populer tetapi teori tersesat- " ber;kembangkan lingkungan" dan " constructivism." Kedua-Duanya adalah tidak efektip sebab mereka memusatkan pada [atas] bagaimana ilmu kemasyarakatan harus diajar kelas dasar dibanding/bukannya pada [atas] pengetahuan isi yang harus merupakan benda hiasan di tengah meja [itu] untuk mengajar dan belajar.

Expanding environments is the basic curriculum that most states, textbook companies, and curriculum leaders use to organize elementary (K-6) social studies, and it has dominated

elementary school social studies for nearly 75 years. The basic premise is that at each grade level, each year, students are exposed to a slowly widening social environment that takes up, in turn, self/home (kindergarten), families (1st grade), neighborhoods (2nd), communities (3rd), state (4th), country (5th), and world (6th). While this approach appears to provide an organized curricular sequence, it lacks substantial content, especially in the early elementary grades, and children tend to find its narrow focus deeply boring. In fact, expanding environments actually *impedes* content knowledge because of its trivial and repetitious sequence. ;Kembangkan lingkungan adalah kurikulum yang basis dasar yang kebanyakan negara, perusahaan buku teks, dan para pemimpin kurikulum menggunakan untuk mengorganisir dasar (K-6) Ilmu kemasyarakatan, dan [itu] telah mendominasi ilmu kemasyarakatan sekolah dasar untuk hampir 75 tahun. Pendapat yang basis dasar adalah bahwa pada masing-masing menyusun/menilai tingkatan, masing-masing tahun, para siswa diunjukkan ke suatu pelan-pelan melebarkan lingkungan sosial yang memungut, pada gilirannya, self/home (taman kanak kanak), keluarga-keluarga (1st nilai/kelas), lingkungan (2nd), masyarakat (3rd), status (4th), negeri (5th), dan dunia (6th). [Selagi/Sedang] pendekatan ini nampak untuk menyediakan suatu curricular urutan di/terorganisir, [itu] kekurangan isi substansiil, [yang] terutama nilai/kelas pada awal dasar, dan anak-anak [tuju/ cenderung] untuk temukan fokus [yang] sempit nya [yang] yang sangat membosankan. Sesungguhnya, ber;kembangkan lingkungan [yang] benar-benar menghalangi/merintangi pengetahuan isi oleh karena urutan berisi ulangan dan sepele nya.

For example, students in grades K-3 are taught about "community helpers" like mail carriers, milkmen, and fire fighters. Such lessons are superfluous (what kindergartener does not know about firefighters?) but more damagingly do not even begin to lay the groundwork for later study of history, heroes, struggles, victories, and defeats. Instead, they limit children's instruction to persons and institutions with which children are already familiar. Sebagai contoh, para siswa menurut golongan K-3 diajar sekitar " penolong masyarakat" [seperti;suka] pengantar pos, milkmen, dan pemadam kebakaran. . seperti (itu) pelajaran adalah berlebih-lebihan (apa [yang] taman kanak kanak tidak memahami tentang anggota pemadam api?) tetapi lebih secara merusakkan tidak genap mulai untuk meletakkan dasar untuk studi sejarah kemudiannya, pahlawan, perjuangan, kemenangan, dan kekalahan. Sebagai ganti(nya), mereka membatasi instruksi anak-anak ke para orang dan institusi dengan mana anak-anak telah umum dikenal.

Constructivism is a theory that holds that humans learn when they analyze, interpret, create, and construct meaning from experience and knowledge. At its root is a belief that only self-discovered knowledge is understood and remembered. Constructivists believe that students must be self-directed while learning in order to create their own meaningful experiences that will be retained when moving forward in life. While there is no doubt that some worthwhile learning may occur this way, it is difficult, if not impossible, to achieve self-created meaning unless specific content knowledge is a prerequisite. Constructivism adalah suatu teori yang [memegang/menjaga] bahwa manusia belajar ketika mereka meneliti, menginterpretasikan, menciptakan, dan membangun maksud/arti dari pengalaman dan pengetahuan. Pada akar nya adalah suatu kepercayaan yang hanya pengetahuan self-discovered dipahami dan diingat. Constructivists percaya bahwa para siswa harus self-directed [selagi/sedang] pelajaran dalam rangka menciptakan pengalaman [yang] penuh arti mereka sendiri yang akan [jadi] ditahan ketika bergerak maju dalam hidup. [Selagi/Sedang] tidak ada keraguan yang beberapa bermanfaat pelajaran boleh terjadi [jalan/cara] ini, [itu] adalah sulit, jika tidak mustahil, untuk mencapai maksud/arti self-created kecuali jika pengetahuan isi spesifik adalah suatu prasyarat.

Proponents of both approaches—expanding environments and constructivism—stress the importance of active learning over content knowledge as a necessary component of historical or geographical understanding. Yet just as the chess player needs to know how to move the pieces before he or she can begin the process of mastering chess, the elementary student needs content knowledge as the basis of thinking critically about history, civics, geography,

economics, and all the other disciplines that make up the social studies. Content knowledge, we argue, must come first when making teaching and learning decisions. Penganjur kedua-duanya yang approaches-expanding lingkungan dan constructivism-stress pentingnya pelajaran aktip (di) atas pengetahuan isi sebagai komponen [yang] perlu [dari;ttg] pemahaman geografis atau historis. Namun sama [halnya] pemain catur harus mengetahui bagaimana cara pindah;gerakkan potongan [itu] [sebelum/di depan] ia atau dia dapat mulai proses menguasai catur, siswa yang dasar memerlukan pengetahuan isi [sebagai/ketika] basis berpikir dengan kritis sekitar sejarah, pelajaran kewarga negaraan, geografi, ekonomi, dan semua disiplin lain yang menyusun;merias ilmu kemasyarakatan [itu]. Pengetahuan Isi, kita membantah, harus datang pertama ketika pembuatan pengajaran dan belajar keputusan.

EXPANDING ENVIRONMENTS IN ELEMENTARY SCHOOL SOCIAL STUDIES

The scope and sequence of elementary social studies in American schools has seen little substantive change in three quarters of a century. As Maxim (1991) comments, "No one knows exactly how this system first evolved, but some time during the 1930s an organizational pattern emerged" (p. 21). Although several individuals and events contributed to its formation, this durable curriculum is most closely associated with educator Paul Hanna. The sequence is known by a jumble of vague names, including "expanding environments," "expanding horizons," "expanding communities," "widening horizons," "expanding interests," "widening interests," and—Paul Hanna's favorite term—"expanding communities of men." LeRiche (1987) summarizes the concept in this way: Lingkup Dan Urutan [dari;ttg] ilmu kemasyarakatan dasar di (dalam) Sekolah Amerika telah melihat perubahan kata benda [kecil/sedikit] di (dalam) tiga triwulan;perempat suatu abad. [Sebagai/Ketika/Sebab] Peribahasa (1991) berkomentar, " Tak seorangpun mengetahui persisnya bagaimana sistem ini lebih dulu ditingkatkan, tetapi sekali waktu sepanjang 1930s suatu pola teladan organisatoris muncul" (p. 21). Walaupun beberapa individu dan peristiwa mendukung formasi nya, kurikulum [yang] tahan lama ini adalah paling lekat berhubungan dengan pendidik Paul Hanna. Urutan dikenal oleh suatu jumble [dari;ttg] nama samar-samar, termasuk " ber;kembangkan lingkungan," " ber;kembangkan kaki langit," " ber;kembangkan masyarakat," " melebarkan kaki langit," " ber;kembangkan minat," " melebarkan minat," and-Paul Favorit Hanna's yang term-"expanding masyarakat orang." Leriche (1987) meringkas konsep [itu] dengan cara ini:

"The basic idea is that the child's understanding grows like a set of widening concentric circles and that the child should study social life based on this presumed sequence of conceptual development" (p. 139). Following this theory, elementary students are to begin their formal social studies experiences by studying themselves and other people influencing their lives, then gradually enlarge the circle. " Gagasan yang basis dasar adalah bahwa pemahaman anak tumbuh seperti satu set melebarkan lingkaran-lingkaran konsentris dan [bahwa/yang] anak [perlu] belajar hidup sosial berdasar pada urutan [yang] dikira ini [dari;ttg] pengembangan konseptual" (p. 139). Berikut teori ini, para siswa dasar adalah untuk mulai pengalaman ilmu kemasyarakatan [yang] formal mereka dengan mempelajari diri mereka dan orang lain [yang] mempengaruhi hidup mereka, kemudian secara berangsur-angsur memperbesar lingkaran [itu].

William Kilpatrick, Harold Rugg, and John Dewey, all influential progressive educators of the 1920s and 1930s, helped lead the charge to revise the K-12 curriculum by replacing the study of history and heroes with a new focus on social, political, and economic problems. Ravitch (1987) explains that they sought "to make the curriculum less academic, more utilitarian, less 'subject-centered,' and more closely related to students' interests and experiences"
(p. 345). William Kilpatrick, Harold Rugg, dan Yohanes Dewey, semua pendidik [yang] progresif berpengaruh 1920s dan 1930s, [petunjuk/ ujung/ laju-awal] yang dibantu [beban/ tugas] untuk meninjau kembali K-12 [itu] Kurikulum dengan menggantikan studi sejarah dan pahlawan dengan suatu fokus baru pada [atas] sosial, politis, dan masalah ekonomi. Ravitch (1987) menjelaskan

bahwa mereka mencari " untuk membuat kurikulum [itu] lebih sedikit akademis, [yang] lebih bermanfaat, lebih sedikit ' subject-centered,' dan [yang] lebih berhubungan erat ke para siswa' minat dan pengalaman"
(p. 345).

As a graduate student and young college faculty member, Hanna was greatly influenced by Kilpatrick, Rugg, and Jesse Newlon, a trio that Stallones (1999) says exposed Hanna to social reconstructionism. Hanna then served as a consultant on the social studies for Virginia, where he was instrumental in social studies curriculum reform in that state. According to Gill (1974), the new curriculum replaced history, civics, and geography with a study of "unitary life experiences" emphasizing human relationships. First grade students studied relationships within the home and school, second grade students studied relationships in the neighborhood, third grade students studied environmental forces in the community, and fourth grade students studied exploration and settlement. The sequence was eventually dubbed "expanding horizons" or "expanding environments." Sebagai siswa lulusan dan anggota fakultas/pancaindera perguruan tinggi muda, Hanna sangat dipengaruhi oleh Kilpatrick, Rugg, dan Jesse Newlon, suatu trio bahwa Stallones (1999) kata[kan Hanna diarahkan ke reconstructionism sosial. Hanna kemudian bertindak sebagai suatu konsultan pada [atas] ilmu kemasyarakatan untuk Virginia, [di mana/jika] ia adalah kurikulum ilmu kemasyarakatan sebagai penolong/musik ubah yang menyatakan. Menurut Insang (1974), kurikulum yang baru menggantikan sejarah, pelajaran kewarga negaraan, dan geografi dengan suatu studi pengalaman hidup kesatuan" menekankan hubungan manusia. Para siswa Nilai/Kelas pertama belajar hubungan di dalam rumah dan sekolah, para siswa nilai/kelas kedua belajar hubungan di (dalam) lingkungan, para siswa nilai/kelas ketiga belajar kekuatan lingkungan di (dalam) masyarakat, dan para siswa nilai/kelas keempat belajar explorasi dan penyelesaian. Urutan secepatnya digelari " ber;kembangkan kaki langit" atau " ber;kembangkan lingkungan.

As one of the primary advocates of this new elementary social studies curriculum, Hanna became identified with the broader social studies movement, which emphasized everyday life and problem solving. Gill (1974) states that Hanna's professional association with Scott Foresman and Company led to his development of a formal K-12 social studies program consisting of textbooks and student activity suggestions for early elementary grades, which proved to be a financial success. Over the course of his career, Hanna continually promoted expanding environments and exerted national influence on both colleges of education and textbook publishers. [Seperti/Ketika] salah satu [dari] advokat yang utama [dari;ttg] kurikulum ilmu kemasyarakatan dasar baru ini, Hanna menjadi dikenali dengan pergerakan ilmu kemasyarakatan yang lebih luas, yang menekankan pemecahan masalah dan hidup sehari-hari. Insang (1974) negara bahwa Asosiasi Profesional Hanna's dengan Scott Foresman Dan [Perusahaan/ rombongan] menuju/mendorong pengembangan nya suatu K-12 Program Ilmu kemasyarakatan formal terdiri dari buku teks dan usul aktivitas siswa untuk awal nilai/kelas dasar, yang membuktikan untuk menjadi sukses keuangan. Setelah lewat karier nya, Hanna [yang] secara terus menerus yang dipromosikan ber;kembangkan lingkungan dan menggunakan pengaruh nasional pada [atas] perguruan tinggi kedua-duanya pendidikan dan penerbit buku teks.

Today expanding environments continues to dominate elementary social studies programs, textbooks, and social studies methods courses that thousands of future teachers take each year. Welton (2002) notes, "You may find occasional variations on the expanding-environments approach to social studies, but for all practical purposes it is a national curriculum" (p. 70). Ravitch (1987) points out, "So widespread is this pattern in American public schools that one might assume that this particular sequence represents the accumulated wisdom of generations of educational research" (p. 345), even though it is based on a philosophy of learning rather than research in cognitive psychology or child development. Hari ini ber;kembangkan lingkungan melanjut untuk mendominasi program ilmu kemasyarakatan

dasar, buku teks, dan kursus metoda ilmu kemasyarakatan yang beribu-ribu para guru masa depan mengambil tahun masing-masing. Welton (2002) [nada/catatan], " Kamu boleh temukan variasi sekali-kali pada [atas] expanding-environments mendekati ke ilmu kemasyarakatan, tetapi untuk semua tujuan [yang] praktis [ini] merupakan suatu kurikulum nasional" (p. 70). Ravitch (1987) poin-poin ke luar, " [yang] sangat tersebar luas Adalah ini mempola Sekolah negeri Amerika yang satu kekuatan berasumsi bahwa urutan [yang] tertentu ini menghadirkan kebijaksanaan generasi yang ter/dikumpulkan [dari;ttg] riset bidang pendidikan" (p. 345), sungguhpun [itu] didasarkan pada suatu filosofi terpelajar dibanding/bukannya riset di (dalam) psikologi teori atau pengembangan anak.

CRITICISM OF EXPANDING ENVIRONMENTS

For the past several decades, many educators have criticized expanding environments for its lack of substantive content knowledge. The first three years, for example, are simply repetition, since the family, neighborhood, and community are topics children know before coming to school. Larkins et al. (1987) assert that much of the K-3 social studies curriculum is "redundant, superfluous, and needlessly superficial" and blame "adherence to the sequence of family, neighborhood, community . . . for the trivialization of social studies in the first three grades" (p. 300). By limiting the curriculum to persons and institutions directly relevant to the student, expanding environments precludes many high interest historical figures, significant events, meaningful achievements, and diverse cultures. Karena masa lalu beberapa dekade, banyak pendidik sudah mengkritik ber;kembangkan lingkungan untuk pengetahuan isi kata benda ketiadaan nya. Tiga tahun awal, sebagai contoh, hanya pengulangan, [karena;sejak] keluarga, lingkungan, dan masyarakat adalah anak-anak topik mengetahui [sebelum/di depan] datang sekolah. Larkins et al. (1987) menyatakan bahwa sebagian besar K-3 Kurikulum Ilmu kemasyarakatan adalah " berlebih lebihan, berlebih-lebihan, dan tanpa memerlukan dangkal" dan menyalahkan " kesetiaan kepada urutan keluarga, lingkungan, masyarakat... untuk/karena trivialisasi ilmu kemasyarakatan di (dalam) yang tiga yang pertama nilai/kelas" (p. 300). Dengan pembatasan kurikulum [itu] ke para orang dan institusi [yang] secara langsung relevan kepada siswa, ber;kembangkan lingkungan menghalangi banyak orang [bunga/minat] tinggi figur historis, peristiwa penting, prestasi penuh arti, dan kultur berbeda.

Veteran teachers Gwen Souter and Shelly Reid (personal communication, November 25, 2002) state that "the traditional social studies curriculum focusing on self, neighborhood, and community helpers is just plain boring. The typical daycare, preschool, and Sunday school curricula all have a similar focus on self. Such a curriculum is repetitive and of low interest to young school children." Zarrillo (2000) contends, "Devoting four grades to family, school, and community provides children with too limited a view" (p. 17). The dull nature of expanding horizons influences many elementary teachers to simply spend little or no classroom time on any social studies topics. Para guru Veteran Gwen Souter dan Shelly Orang yang tak punya naluri kembali (Komunikasi pribadi, November 25, 2002) menyatakan bahwa " kurikulum ilmu kemasyarakatan yang tradisional yang memusatkan pada [atas] diri, lingkungan, dan penolong masyarakat [hanya;baru saja] membosankan [sederhana/datar]. Daycare yang khas, Sebelum masuk sekolah, dan Sekolah Minggu Curricula semua mempunyai suatu fokus serupa pada [atas] diri. Kurikulum seperti itu adalah berulang dan [tentang] [bunga/minat] rendah ke anak-anak sekolah muda." Zarrillo (2000) berkelahi, " Persembahan empat nilai/kelas ke keluarga, sekolah, dan masyarakat menyediakan anak-anak dengan terlalu terbatas suatu pandangan" (p. 17). Alam[I] yang tumpul ber;kembangkan kaki langit mempengaruhi banyak orang para guru dasar untuk hanya membelanjakan [kecil/sedikit] atau tidak (ada) waktu kelas pada [atas] manapun topik ilmu kemasyarakatan.

More importantly, as Rooze and Foerster (1972) note, the expanding environments sequence is based on a faulty assumption: that children can only understand the environment nearest in time and space to their personal experiences. This assumption ignores the vast exposure to media that is a hallmark of modern childhood, which greatly increases a child's experiential

base. J.S. Leming (personal communication, November 23, 2002) points out that this organizational approach, if applied to science education, would dictate that children should learn about cockroaches rather than dinosaurs since bugs are closer to their experience base and they are limited in their ability to comprehend subjects so far removed in time and space—a nonsensical notion, as anyone who has taken children to a natural history museum can attest. Lebih penting lagi, [sebagai/ketika/sebab] Rooze dan Foerster (1972) mencatat, ber;kembangkan urutan lingkungan didasarkan pada suatu asumsi salah/cacat: anak-anak itu hanya dapat memahami lingkungan [itu] yang paling dekat pada waktunya dan [ruang;spasi] kepada pengalaman pribadi mereka. Asumsi ini mengabaikan ekspose yang luas ke media yang adalah suatu tanda [dari;ttg] masa kanak-kanak modern, yang [yang] sangat meningkat/kan suatu experiential dasar anak. J.S. Leming (komunikasi pribadi, November 23, 2002) menunjuk ke luar bahwa . ini pendekatan organisatoris, jika diberlakukan bagi pendidikan ilmu pengetahuan, akan mendikte bahwa anak-anak [perlu] belajar sekitar lipas dibanding/bukannya dinosaurus [karena;sejak] kutu busuk adalah semakin dekat kepada pengalaman mereka mendasarkan dan mereka terbatas kemampuan mereka untuk memahami pokok sejauh ini yang dipindahkan pada waktunya dan space-a dugaan bukan bukan, [sebagai/ketika/sebab] seseorang [siapa] yang telah mengambil anak-anak [bagi/kepada] suatu sejarah alami musium dapat menjadi bukti.

In fact, expanding environments not only impedes the acquisition of knowledge, it is actually based on a rather questionable reading of child developmental psychology. Joseph Adelson, quoted in Bennett (1988), professor of psychology at the University of Michigan, contends, "There is nothing in the cognitive science, or in developmental research, which supports the present way of doing things" (p. 26). Akenson (1987) points out that while young students may need to begin with the simple and move to the complex, "dependency upon developmental psychology, interpretations of what constitute children's immediate experiences and interests, the artificially happy and conflict free picture of society, and the manner in which the social world presents itself to children suggest flaws of major dimensions" (p. 169). Sesungguhnya, ber;kembangkan lingkungan [yang] tidak hanya menghalangi/merintangi pengadaan [itu] pengetahuan, [itu] benar-benar didasarkan pada suatu pembacaan anak [yang] [yang] diragukan psikologi pengembangan. Joseph Adelson, yang dikutip Bennett (1988), profesor psikologi di Universitas Michigan, berkelahi, " Tidak ada apapun ilmu pengetahuan teori, atau di (dalam) riset pengembangan, yang mendukung [jalan/cara] [yang] saat ini melakukan berbagai hal" (p. 26). Akenson (1987) poin-poin ke luar bahwa [selagi/sedang] para siswa muda boleh harus mulai dengan yang sederhana dan bergerak ke yang kompleks, " ketergantungan [atas/ketika] psikologi pengembangan, penafsiran dari apa [yang] [mendasari/membuat] minat dan pengalaman anak-anak segera, yang secara palsu bahagia dan konflik bebaskan gambar-an masyarakat, dan cara di mana dunia yang sosial menghadiahi [dirinya] sendiri ke anak-anak menyarankan kekurangan [dari;ttg] dimensi utama" (p. 169).

Despite these criticisms, the National Council for the Social Studies (NCSS) continues to support expanding environments as the preferred scope and sequence for elementary social studies programs. The NCSS Task Force on Scope and Sequence affirmed this approach in 1983 and again in 1989 and continued its advocacy of expanding horizons. While three alternative curriculum models for social studies were also endorsed, none offered a radical departure from the traditional framework. Maxim (1991) explains that, "Reaction to the report of the Task Force on Scope and Sequence was divided. . . . Despite its vocal dissenters, the expanding environments approach remains the overwhelming choice for curriculum organization among social studies program developers and textbook publishers today" (p. 23). Di samping kritik ini, Dewan Yang nasional untuk Ilmu Kemasyarakatan (NCSS) melanjut untuk mendukung ber;kembangkan lingkungan [sebagai/ketika] urutan dan lingkup yang lebih disukai untuk program ilmu kemasyarakatan dasar. NCSS Gugus Tugas pada [atas] Lingkup Dan Urutan menyatakan ini mendekati 1983 dan lagi di (dalam) 1989 dan melanjut pembelaan nya ber;kembangkan kaki langit. [Selagi/Sedang] tiga kurikulum alternatif model untuk ilmu

kemasyarakatan adalah juga dikuasakan, tidak ada menawarkan suatu keberangkatan radikal dari kerangka yang tradisional [itu]. Peribahasa (1991) menjelaskan bahwa, " Reaksi kepada laporan Gugus Tugas pada [atas] Lingkup Dan Urutan telah dibagi.... Di samping orang yang tidak menyetujui berkenaan dengan suara nya, ber;kembangkan sisa pendekatan lingkungan pilihan yang berlimpahan untuk organisasi kurikulum antar pengembang program ilmu kemasyarakatan dan penerbit buku teks hari ini" (p. 23).

Why does expanding environments endure among textbook companies, in college social studies methods classes, and in the elementary curriculum? Akenson (1989) attributes the persistent dominance of expanding environments to "cultural, bureaucratic, and economic realities" (p. 50) that make entrenched groups prefer the status quo. Textbook publishers have made a profit addressing these topics for decades; teacher educators have been comfortable endorsing this sequence in social studies methods textbooks and in their classrooms; and teachers and parents have simply accepted the supposed expertise of this textbook-driven sequence. Kenapa ber;kembangkan lingkungan memikul/ bertahan antar perusahaan buku teks, di (dalam) kelas metoda ilmu kemasyarakatan perguruan tinggi, dan di (dalam) kurikulum yang dasar? Akenson (1989) menujukan kekuasaan yang gigih ber;kembangkan lingkungan untuk " budaya, birokratis, dan kenyataan ekonomi" (p. 50) buatan itu berkubu kelompok menyukai keadaan tetap pada suatu saattertentu [itu]. Buku teks Penerbit sudah buat suatu laba [yang] menujukan topik ini untuk dekade; guru pendidik telah (menjadi) penguasaan nyaman urutan ini di (dalam) buku teks metoda ilmu kemasyarakatan dan di (dalam) kelas mereka; dan para guru dan orang tua sudah hanya menerima keahlian yang diharapkan [dari;ttg] textbook-driven urutan ini.

CONSTRUCTIVISM

Constructivism is a method of instruction based on a descriptive theory about the thought processes involved in learning. It is deeply popular among educators—so popular, in fact, that few have stopped to consider that in this case, the emperor has no clothes. Few practitioners know or understand the varied and confusing applications and interpretations of constructivism. Bredo (2000) notes that constructivism is a massive logical feedback loop; any attempt to define constructivism "that does not take into account the variety in definitions will itself be a created construct; constructivism is its own first problem" (p. 128). Airasian and Walsh (1997) comment that "constructivism is not an instructional approach; it is a theory about how learners come to know. Although instructional approaches are typically derived from such epistemologies, they are distinct from them" (pp. 444-445). Constructivism adalah suatu metoda instruksi berdasar pada suatu teori deskriptif tentang proses berpikir melibatkan belajar. [Itu] sangat populer antar educators-so populer, sesungguhnya, bahwa sedikit sudah menghentikan untuk mempertimbangkan bahwa dalam hal ini, kaisar tidak punya pakaian. Sedikit praktisi mengetahui atau memahami yang bervariasi dan mengacaukan aplikasi dan penafsiran constructivism. Bredo (2000) mencatat constructivism itu adalah suatu pengulangan/jerat umpan balik logis raksasa(masive); manapun usaha untuk menggambarkan constructivism " itu tidak mempertimbangkan variasi [itu] di (dalam) definisi akan [dirinya] sendiri jadilah suatu diciptakan membangun; constructivism kepunyaan masalah pertama nya " (p. 128). Airasian Dan Walsh (1997) berkomentar bahwa " constructivism bukanlah suatu intervi mendekati; [ini] merupakan suatu teori tentang bagaimana pelajar mengenali. Walaupun pendekatan intervi secara khas diperoleh dari . seperti (itu) filsafat hal asal, mereka adalah beda dari [mereka/nya]" (pp. 444-445).

No matter that few know (or care) what constructivism is. It remains popular with many professors and authors of social studies methods textbooks because it is somehow thought to account for the process of student learning. Again, left aside in the perplexing descriptions and definitions of constructivism is the importance and necessity of content knowledge. Constructivism also complicates the teacher's role in teaching and implementing elementary school social studies. A review of the definitions and descriptions of constructivism points to

the problem. Bukan masalah bahwa sedikit mengetahui (atau mempedulikan) constructivism apa [yang] adalah. [Itu] tinggal populer di antara profesor banyak orang dan pengarang buku teks metoda ilmu kemasyarakatan sebab [itu] bagaimanapun juga pikir untuk meliputi proses siswa [yang] belajar. Lagi, meninggalkan ke samping di (dalam) membingungkan uraian dan definisi constructivism adalah arti penting dan keperluan pengetahuan isi. Constructivism juga mempersulit peran guru [itu] di (dalam) mengajar dan menerapkan ilmu kemasyarakatan sekolah dasar. Suatu tinjauan ulang definisi dan uraian constructivism menunjuk kepada masalah [itu].

TYPES OF CONSTRUCTIVISM

Amid the cacophony, two types of constructivism stand out. The first is cognitive constructivism, based on Piaget's theory of developmental stages. He believed that cognitive development facilitates learning through actively involving the learner, and that learning can only occur when the child is at the appropriate cognitive development stage. Cognitive constructivists believe that students move through developmental stages that enable them to experience reality through active learning. The teacher's role is to facilitate student learning by challenging a student's reality through active experiences and the creation of new ideas (Piaget, p. 122). The second, even more opaque, type of constructivism is based on Vygotsky's belief that social interaction is crucial for learning. Di antara yang bunyi tak enak didengar, dua jenis constructivism menonjol. Yang pertama adalah teori constructivism, berdasar pada Teori Piaget's [dari;ttg] langkah-langkah pengembangan. Ia percaya pengembangan teori itu memudahkan pelajaran melalui/sampai dengan aktip menyertakan pelajar [itu], dan bahwa pelajaran hanya dapat terjadi ketika anak adalah di langkah pengembangan teori yang sesuai. Teori constructivists percaya bahwa gerak para siswa melalui/sampai langkah-langkah pengembangan yang memungkinkan [mereka/nya] untuk mengalami kenyataan melalui/sampai pelajaran aktip. Peran guru adalah untuk memudahkan pelajaran siswa dengan menantang suatu kenyataan siswa melalui/sampai pengalaman aktip dan ciptaan [dari;ttg] gagasan baru (Piaget, p. 122). Yang kedua, lebih buram lagi , jenis constructivism didasarkan pada Kepercayaan Vygotsky's yang sosial interaksi adalah rumit untuk belajar.

Vygotsky (p. 122) identifies two mechanisms for acquiring knowledge: "scaffolding" and "zone of proximal development." Scaffolding provides temporary support for the child until the child is capable of doing a given task alone. The zone of proximal development provides learning through social interaction experiences. Social constructivists believe that if a child is within the zone of proximal development and has scaffolding, he or she can learn anything. They believe that teachers must collaborate with students during learning, since social interaction is the key ingredient to learning. These two types of constructivist theories require elementary social studies teachers to adapt to a variety of new active and social roles emphasizing process over content. Vygotsky (p. 122) mengidentifikasi dua mekanisme untuk memperoleh pengetahuan: " perancah" dan " zone proximal pengembangan." Perancah menyediakan pen;dukungan temporer untuk anak sampai anak adalah mampu untuk melakukan tugas ditentukan sendiri. Zone proximal pengembangan menyediakan pelajaran melalui/sampai pengalaman interaksi sosial. Sosial constructivists percaya bahwa jika seorang anak adalah di dalam zone proximal pengembangan dan mempunyai perancah, ia atau dia dapat belajar apapun. Mereka percaya bahwa para guru harus bekerja sama/ berkhianat dengan para siswa selama pelajaran, [karena;sejak] interaksi [yang] sosial adalah ramuan utama [bagi/kepada] belajar. Dua ini jenis constructivist teori memerlukan para guru ilmu kemasyarakatan dasar untuk menyesuaikan [bagi/kepada] berbagai [yang] aktip baru dan peranan sosial yang menekankan proses (di) atas isi.

CONSTRUCTIVISM IN SOCIAL STUDIES TEACHING

Education journals add to the confusion surrounding constructivism. Writers use a welter of jargon to describe the many roles of a constructivist teacher in a social studies classroom. All serve to emphasize the social aspect of teaching and learning with little recognition of the importance of content knowledge in the teaching process. For example, Scheurman (1998)

offers a hierarchy of jargon to label and describe constructivist teachers. One type of teacher is a *transmitter* (behaviorist) who presents information in small parts to students through listening, lecturing, rehearsing, and reciting. Transmitter teachers are criticized for stressing right and wrong answers and not promoting student involvement. Far more preferable are *managers* (information processors), who assist students in gathering and processing information. The teacher as manager helps students connect to prior knowledge by "chunking" information so students can use their own thought processes. Jurnal Pendidikan menambah kebingungan [itu] melingkupi constructivism. Para penulis menggunakan suatu tumpukan yang kacau jargon untuk menguraikan peran orang banyak seorang constructivist guru di (dalam) suatu kelas ilmu kemasyarakatan. Semua servis untuk menekankan aspek/pengarah yang sosial mengajar dan belajar dengan pengenalan [yang] [kecil/sedikit] pentingnya pengetahuan isi di (dalam) [itu] mengajar proses. Sebagai contoh, Scheurman (1998) menawarkan suatu hirarki jargon ke label dan menguraikan constructivist para guru. Satu jenis guru adalah suatu pemancar (behaviorist) [siapa] yang menghadiahi informasi di (dalam) [part;bagian] kecil ke para siswa melalui/sampai mendengarkan, memberi kuliah, berlatih, dan menceriterakan. Para guru Pemancar dikritik untuk menekan/kan [hak/ kebenaran] dan bersalah [kepada] jawab dan tidak mempromosikan keterlibatan siswa. lebih baik lebih jauh Adalah para manajer (pengolah informasi), [siapa] yang membantu para siswa di (dalam) mengumpulkan dan memproses informasi. Guru [sebagai/ketika] para siswa bantuan manajer menghubungkan ke pengetahuan [utama/lebih dulu] oleh " gumpal" informasi maka para siswa dapat menggunakan proses be

Scheurman also describes the teacher as *facilitator* (cognitive constructivism) or *collaborator* (social constructivism). The facilitator challenges and guides students while monitoring their reflective thinking. The collaborator participates with students in constructing their reality using open-ended strategies and authentic resources. Scheurman concedes that factual knowledge plays a role in learning. "For example," he writes, "it is difficult to imagine any learning encounter without a certain transmission of knowledge on the part of the teacher—even the most collaborative exercise requires instructions and prerequisite information" (p. 8). Constructivist education professors tend to overlook the last part of this quotation in their enthusiasm for collaborative and facilitative learning methods. Scheurman juga menguraikan guru [itu] [sebagai/ketika] facilitator (teori constructivism) atau kolaborator (constructivism sosial). Facilitator menghadapi tantangan dan memandu para siswa [selagi/sedang] monitoring pemikiran yang memantulkan cahaya mereka. Kolaborator mengambil bagian dengan para siswa di (dalam) membangun kenyataan mereka [yang] menggunakan strategi terbuka dan sumber daya asli. Scheurman mengizinkan pengetahuan [yang] berdasar fakta itu berperanan dalam pelajaran. " Sebagai contoh," ia tulis, " [itu] sukar untuk membayangkan manapun belajar pertemuan tanpa suatu transmisi pengetahuan [yang] tertentu pada pihak teacher-even latihan [yang] yang paling kolaboratif memerlukan instruksi dan informasi prasyarat" (p. 8). Constructivist Profesor Pendidikan [tuju/ cenderung] untuk melewatkan yang ter]akhir bagian dari kutipan ini di (dalam) gairah mereka untuk [yang] kolaboratif dan facilitative yang belajar metoda.

In another article intended for educators, Scheurman and Newmann (1998) describe three criteria to guide teachers in evaluating their own and their students' work. They state, "[R]ather than assume that either response—transmission teaching or doing constructivism—will achieve the goals of social education, we believe it is necessary to first articulate criteria for authentic intellectual achievement, and then to see what practices tend to result in student performances that meet those criteria" (p. 23). Newmann, Marks, and Gamoran (1996) describe the teacher's role as a "cognitive apprenticeship" in a social setting. Here the teacher guides the student to make choices for discovering information. Di (dalam) artikel lain berniat untuk pendidik, Scheurman Dan Newmann (1998) menguraikan tiga ukuran-ukuran untuk memandu para guru di (dalam) mengevaluasi pekerjaan siswa mereka dan mereka sendiri. Mereka menyatakan, "[R]Ather dibanding berasumsi bahwa yang manapun response-transmission pengajaran atau melakukan constructivism-will mencapai gol [dari;ttg] pendidikan sosial, kita percaya ia/nya adalah [bagi/kepada] pertama mengartikulasikan ukuran-ukuran untuk

prestasi intelektual asli, dan kemudian untuk lihat praktek apa [yang] [tuju/ cenderung] untuk mengakibatkan capaian siswa yang temu ukuran-ukuran itu" (p. 23). Newmann, Tanda, dan Gamoran (1996) menguraikan peran guru [itu] sebagai " masa magang teori" di (dalam) suatu sosial [yang] menentukan. Di sini guru memandu siswa [itu] untuk membuat aneka pilihan untuk menemukan informasi.

Put aside the fact that this flurry of jargon wraps the profession of teaching in a fog so thick as to be impenetrable. These constructivist descriptions of teacher roles constitute unrealistic expectations for both teachers and students. Teachers become so engaged in the active social constructivist role that the content knowledge crucial to the success of these "experiences" is lost. In short, everyone is so caught up in structuring a learning environment no one gives much thought to what is—or is not—*actually learned*. yang disimpan Fakta bahwa curahan jargon ini membungkus profesi mengajar dalam kebingungan [yang] sangat tebal seperti tak dapat tembus. Constructivist ini Uraian peran guru [mendasari/membuat] harapan tak realistis untuk kedua-duanya para guru dan para siswa. Para guru menjadi [yang] yang terlibat dalam sosial yang aktip constructivist peran [bahwa/yang] pengetahuan isi yang rumit kepada sukses [dari;ttg] ini " pengalaman" hilang. Singkatnya, semua orang menjadi sangat ditangkap atas structuring suatu belajar lingkungan tak seorangpun memberi banyak pikiran [bagi/kepada] is-or apa [yang] not-actually [dipelajari/terpelajar].

The damage to children is far worse, however. Elementary students have limited experiences and knowledge and few are mature enough to determine what they need to learn. Yet constructivism plays a dirty little trick on them by shifting responsibility for creating and acquiring knowledge from the teacher to the learner regardless of age, background, or experience. Does the child know little or nothing about history, civics, or geography? Well, the child must be developmentally late, or perhaps incapable of "self-direction." Off to special ed with him. Since the teacher is merely a "cognitive coach" and is not responsible for selecting and transmitting appropriate knowledge, you can't pin on the teacher a student's failure to construct meaning. Kerusakan pada anak-anak adalah lebih buruk jauh, bagaimanapun. Para siswa dasar sudah membatasi pengalaman dan pengetahuan dan sedikit adalah mendewasakan cukup untuk menentukan . apa yang mereka perlukan untuk belajar. Namun constructivism main suatu muslihat [yang] [kecil/sedikit] kotor pada [atas] [mereka/nya] dengan pergeseran tanggung jawab untuk menciptakan dan memperoleh pengetahuan dari guru kepada pelajar dengan mengabaikan [umur/zaman], latar belakang, atau pengalaman. Apakah anak mengetahui hampir tidak ada sesuatu sekitar sejarah, pelajaran kewarga negaraan, atau geografi? Dengan baik, anak harus secara pengembangan terlambat, atau barangkali tidak mampu untuk " self-direction." Batal/Mulai ke ed khusus dengan dia. [Karena;Sejak] guru melulu a " pelatih teori" dan tidaklah [yang] bertanggung jawab untuk memilih dan memancarkan pengetahuan sesuai, kamu tidak bisa memasang dengan peniti guru [itu] [adalah] suatu kegagalan siswa untuk membangun maksud/arti.

Teacher preparation programs promote constructivism by disguising it as teaching "best practices," or by describing it with such popular slogans as "discovery learning" and "self-directed learning." Of course, a variety of methods are necessary to deliver content knowledge that engages students successfully in learning. We are not opposed to imaginative ways of reinforcing learning. But again, the key ingredient for constructed meaning is content knowledge. Without such knowledge, it is impossible for students to engage in the higher order thinking and critical analysis that purveyors of constructivism claim as the goal of this method. Program Persiapan Guru mempromosikan constructivism dengan menyembunyikan ia/nya [seperti/ketika] mengajar " praktek terbaik," atau dengan menguraikan ia/nya dengan seperti semboyan populer " penemuan [yang] belajar" dan " pelajaran self-directed." Tentu saja, berbagai metoda adalah diperlukan untuk [menyampaikan/kirim] pengetahuan isi yang melibatkan para siswa [yang] dengan sukses di (dalam) belajar. Kita tidaklah dipertentangkan dengan jalan [yang] imajinatif menguatkan pelajaran. Tetapi lagi, ramuan utama untuk

maksud/arti [yang] dibangun menjadi berguna pengetahuan. Tanpa . seperti (itu) pengetahuan, adalah mustahil untuk para siswa untuk terlibat dalam [order/ pesanan] yang lebih tinggi [yang] berpikir dan analisis kritis yang leveransir constructivism mengakui [ketika;seperti] gol [dari;ttg] metoda ini.

For example, teachers who have students make pyramids from sugar cubes, create Native American necklaces from macaroni, or build Conestoga wagons from Popsicle sticks (all methods solidly within the constructivist model) without actually teaching students about Egypt, Native American cultures, or the frontier inhibit understanding and create inaccurate associations. Not to sound pedantic, but the Egyptians did not build pyramids from sugar cubes. Students need to know first about Egyptian culture to make such a project relevant—if it is at all. Sebagai contoh, para guru [siapa] yang mempunyai para siswa membuat piramida dari dadu/kubus gula, menciptakan Asli Kalung Amerika dari makroni, atau membangun Conestoga Gerbong dari Es loli mecucuk/lekat/julurkan (semua metoda [yang] dengan tangguh di dalam constructivist model) tanpa benar-benar mengajar para siswa tentang Mesir, Asli Kultur Amerika, atau perbatasan menghalangi pemahaman dan menciptakan asosiasi tidak akurat. [Yang] bukan untuk bunyi suka menonjolkan keilmuannya, tetapi Orang Mesir tidak membangun piramida dari dadu/kubus gula. Para siswa harus mengetahui pertama sekitar Kultur Orang mesir untuk membuat proyek seperti itu relevant-if [itu] sama sekali.

Constructivism will increasingly find itself at odds with the standards and testing movement as the latter gathers momentum among policy makers and parents. Constructivism has no value to the standards movement without the acknowledgment of the importance of building and increasing a substantive and meaningful content knowledge base. Constructivism akan terus meningkat temukan [dirinya] sendiri berselisih dengan standard dan menguji pergerakan [sebagai/ketika] daya gerak lipatan yang belakangan antar pembuat kebijaksanaan dan orang tua. Constructivism tidak punya nilai kepada pergerakan yang baku tanpa pengakuan pentingnya bangunan dan terus meningkat [adalah] suatu dasar pengetahuan isi penuh arti dan kata benda.

No one can deny that children simply don't know enough about history, civics, and geography. The National Assessment of Educational Progress results, along with lesser-known studies, have indicated for years that most American children leave elementary school with little knowledge of these critical subjects. As long as social studies leaders tolerate the expanding environments curriculum and promote social constructivism without emphasizing content knowledge, the situation is unlikely to improve. A radical overhaul of the social studies is needed—one that gives children the tools they need, in the form of actual content knowledge, and jettisons faulty approaches built on questionable theories like expanding environments and constructivism. Tak seorangpun dapat menyangkal anak-anak itu [yang] hanya tidak mengetahui cukup sekitar sejarah, pelajaran kewarga negaraan, dan geografi. Penilaian [yang] Yang nasional [dari;ttg] Kemajuan Bidang pendidikan menghasilkan, bersama dengan lesser-known studi, sudah menandai bertahun-tahun itu paling Anak-Anak Amerika me/tinggalkan sekolah dasar dengan pengetahuan [yang] [kecil/sedikit] [dari;ttg] pokok kritis ini. Sepanjang para pemimpin ilmu kemasyarakatan memaklumi [itu] ber;kembangkan kurikulum lingkungan dan mempromosikan constructivism sosial tanpa menekankan pengetahuan isi, situasi tidak mungkin untuk meningkatkan. Suatu [yang] radikal memeriksa secara seksama ilmu kemasyarakatan adalah needed-one yang memberi anak-anak perkakas [yang] mereka memerlukan, dalam wujud pengetahuan isi nyata, dan membuang muatan(meringankan pesawat) pendekatan salah/cacat membangun pada teori diragukan seperti ber;kembangkan lingkungan dan constructivism.

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BAB VII

Ignorant Activists

Social change, "higher order thinking," and the failure of social studies[1]

James S. Leming

A core belief among contemporary social studies educators is that in order to promote the capacity for citizenship one must educate youth to think critically about public policy issues. It is argued that citizens of a democracy must decide what positions to hold on major public policy issues of the day. From the inception of social studies in the early years of the 20th century, this impulse to infuse the subject with controversial public issues has shaped the field's development. In this chapter, I examine this idea and show how it has served to weaken both the practice of effective social studies education and the preparation of future citizens. In brief, my argument is that this use of social studies as a vehicle for promoting social change has rested on faulty assumptions about the intellectual capacities of youth and has deflected social studies leaders' attention away from the important role of developing students' understandings of important subject matter in history, geography, economics, and civics. Suatu kepercayaan inti antar pendidik ilmu kemasyarakatan jaman ini adalah bahwa dalam rangka mempromosikan kapasitas [itu] untuk kewarga negaraan sese]orang harus mendidik [masa/kaum] muda untuk berpikir dengan kritis sekitar kebijakan publik mengeluarkan. [Itu] berargumentasi bahwa warganegara suatu demokrasi harus memutuskan posisi apa untuk menunggu isu kebijakan publik utama hari [itu]. Dari permulaan ilmu kemasyarakatan [yang] pada awal tahun abad 20, dorongan/gerakan hati ini untuk menuangkan ke dalam pokok materi dengan publik gemar bertengkar isu mempunyai shaped pengembangan bidang [itu]. Di (dalam) bab ini, aku menguji gagasan ini dan menunjukkan bagaimana ia/nya telah melayani untuk memperlemah kedua-duanya praktek [dari;ttg] pendidikan ilmu kemasyarakatan efektif dan persiapan [dari;ttg] warganegara masa depan. Pendek kata, argumentasi ku adalah bahwa penggunaan ilmu kemasyarakatan ini sebagai sarana (angkut) untuk mempromosikan perubahan [yang] sosial telah beristirahat pada [atas] asumsi salah/cacat tentang kapasitas [masa/kaum] muda yang intelektual dan telah membelokkan ilmu kemasyarakatan perhatian pemimpin [men]jauh dari peran yang penting mengembang;kan pemahaman siswa [dari;ttg] pokok penting di (dalam) sejarah, geografi, ekonomi, dan pelajaran kewarga negaraan.

I conclude that this impulse has contributed to a curricular field that is in a state of crisis, lacking both solid curricula and effective pedagogy. I turn first to the roots and underlying ideology of this perspective and its development. Aku menyimpulkan bahwa . ini dorongan/gerakan hati telah mendukung suatu curricular bidang yang adalah dalam keadaan krisis, kekurangan kedua-duanya curricula padat dan ilmu mendidik efektif. Aku berbalik pertama ke akar [itu] dan mendasari ideologi [dari;ttg] perspektif ini dan pengembangan nya.

HISTORICAL PERSPECTIVE

An important milestone in the history of the school curriculum was the *Report of the Committee on Social Studies* (Dunn, 1916). It urged a new synthesis of subjects that included history (ancient to current U.S.), civics, geography, and economics. The proposed integration was designed to refocus the study of such subjects on current issues, social problems, and the needs and interests of students and their communities. In the end, this would gravely change the traditional disciplines. Suatu tonggak mil penting di [dalam] sejarah kurikulum sekolah adalah Laporan Panitia pada [atas] Ilmu Kemasyarakatan (Dunn, 1916). [Itu] menghimbau suatu sintese pokok [yang] baru yang mencakup sejarah (masa lampau ke sekarang U.S.), pelajaran kewarga negaraan, geografi, dan ekonomi. Pengintegrasian yang diusulkan telah dirancang ke refocus studi . seperti (itu) pokok pada [atas] isu sekarang, permasalahan sosial, dan kebutuhan dan minat para siswa dan masyarakat mereka. Pada akhirnya, ini akan perubahan genting [yang] disiplin yang tradisional [itu].

In the 1920s, the national debate about the purpose of education focused upon whether it should emphasize socialization and the transmission of traditions, or developing in students the desire and skills to help create a new social order. It is a tribute to the persuasiveness of its arguments that the 1916 committee report effectively won the hearts and minds of at least one segment of the population: the intellectual leaders of the educational profession. A typical example of that era's readiness to jettison tradition can be found in a statement by the Superintendent of the Denver Public Schools in the *Tenth Yearbook of the Department of Superintendence of the National Education Association* (Threlkeld, 1931): Di (dalam) 1920s, debat yang nasional tentang tujuan pendidikan memusat [atas/ketika] apakah [itu] [perlu] menekankan sosialisasi dan transmisi tradisi, atau mengembang;kan para siswa keinginan dan ketrampilan untuk membantu menciptakan suatu sosial baru memesan. [Ini] merupakan suatu upeti kepada hal membujuk (merayu) tentang argumentasi nya [bahwa/yang] yang 1916 panitia melaporkan secara efektif menang [hati/jantung] [itu] dan pikiran sedikitnya satu segmen populasi: para pemimpin yang intelektual profesi yang bidang pendidikan [itu]. Suatu contoh khas (menyangkut) kesiap-siagaan jaman itu untuk membuang muatan(meringankan pesawat) tradisi dapat ditemukan [adalah] suatu statemen oleh Pengawas Denver Sekolah Negeri di [dalam] Buku tahunan Kesepuluh Departemen Pengawasan Asosiasi Pendidikan Yang nasional (Threlkeld, 1931):

The whole of this tradition (relying upon great thinkers and traditions) is warped by the vicious assumption that each generation will live substantially amid the conditions governing the lives of its fathers and will transmit those conditions to mold with equal force the lives of its children. *We are living in the first period of human history for which this assumption is false*. Relativity must replace absolutism in the realm of morals as well as in the spheres of physics and biology (p. 23, italics added). Keseluruhan tradisi ini (kepercayaan [atas/ketika] tradisi dan pemikir besar) melengkung oleh asumsi yang ganas/jahat/hebat yang masing-masing generasi akan [tinggal/hidup] pada hakekatnya di antara kondisi-kondisi yang mengatur hidup tentang para bapak nya dan akan memancarkan kondisi-kondisi itu untuk membentuk dengan kekuatan sama hidup tentang anak-anak nya . Kita sedang tinggal di periode sejarah manusia yang pertama di mana asumsi ini adalah sumbang/palsu. Relatifitas harus menggantikan pengampunan dosa di (dalam) dunia akhlak seperti halnya lapisan ilmu fisika dan biologi (p. 23, huruf miring menambahkan).

It was also the judgment of many educational theorists in the 1920s and 1930s that the American experiment in democracy and free markets was faltering. To educate children by teaching only respect for the nation's cultural heritage would not advance the new social order that was urgently needed. How then was the curriculum to be organized, especially that part of it where the cultural heritage was most embedded? By reconceptualizing the social studies curriculum as interdisciplinary and focusing its goals on social change, education theorists of the era hoped they could break the grip of cultural tradition with its emphasis on rugged individualism and ensure that the curriculum would instead serve to advance a more collective

social order. [Itu] adalah juga pertimbangan dari banyak ahli teori bidang pendidikan di (dalam) 1920s dan 1930s [bahwa/yang] Eksperimen Amerika di (dalam) demokrasi dan pasar bebas sedang bimbang. Untuk mendidik anak-anak dengan pengajaran hanya menghormati untuk warisan/pusaka bangsa budaya tidak akan membantu [order/ pesanan] sosial yang baru yang sangat diperlukan. Bagaimana kemudian adalah kurikulum untuk di/terorganisir, terutama bahwa bagian dari [itu] [di mana/jika] warisan/pusaka yang budaya adalah [yang] paling ditempelkan? Dengan reconceptualizing kurikulum ilmu kemasyarakatan [itu] [sebagai/ketika] interdisciplinary dan memusatkan gol nya pada [atas] perubahan sosial, ahli teori pendidikan jaman mengharapkan mereka bisa pecah;kan genggaman [dari;ttg] tradisi budaya dengan penekanan nya pada [atas] individualisme tidak datar dan memastikan bahwa kurikulum [itu] akan sebagai ganti(nya) melayani untuk membantu suatu [order/ pesanan] sosial [yang] lebih kolektif.

The full flowering of this "progressive" view of the social studies curriculum occurred in the 1930s with the success of Harold Rugg's junior high school textbook series, *Man and His Changing Society*. It sold 1,317,960 books and 2,867,000 workbooks between 1929 and 1939 (Winters, 1967). Rugg's goal was to rid social studies of disciplinary compartments. From his perspective, the curriculum should instead focus pupil attention on contemporary problems, teach students to become aware and critical of social and economic injustices, and encourage them to participate actively in bringing about needed changes. Yang penuh berbunga ini " [yang] progresif" pandangan kurikulum ilmu kemasyarakatan terjadi 1930s dengan sukses Harold Rangkaian Buku teks Sekolah menengah pertama Rugg's, Orang [laki-laki] dan Nya Mengubah Masyarakat. [Itu] menjual 1,317,960 buku dan 2,867,000 buku catatan antar[a] 1929 dan 1939 (Musim dingin, 1967). Gol Rugg's adalah untuk membersihkan ilmu kemasyarakatan [dari;ttg] kompartemen teratur. Dari perspektif nya, kurikulum [perlu] sebagai ganti(nya) memusatkan perhatian murid pada [atas] permasalahan jaman ini, mengajar para siswa untuk menjadi sadar dan kritis untuk ketidakadilan sosial dan ekonomi, dan mendorong [mereka/nya] untuk mengambil bagian dengan aktip di (dalam) menyempurnakan perubahan diperlukan.

Themes in the Rugg textbook series included the excesses of laissez faire capitalism, unfair distribution of income and wealth, unemployment, class conflict, immigration, rapid cultural change, and imperialism. Their presentation included thought provoking questions designed to encourage students to criticize selected aspects of contemporary society and tradition. Rugg and other progressives of that era hoped that students would thereby become aware of society's many flaws and develop a desire to ameliorate those ills, thus making it difficult, if not impossible, for the curriculum to instill a spirit of nationalism or respect for American culture. Tema di (dalam) Rugg Rangkaian Buku teks mencakup kelebihan [dari;ttg] kapitalisme laissez faire, distribusi kekayaan dan pendapatan secara tak wajar, pengangguran, konflik kelas, imigrasi, perubahan budaya cepat, dan kekaisaran. Presentasi mereka mencakup pikiran yang menggusarkan pertanyaan yang dirancang untuk mendorong para siswa untuk mengkritik aspek [yang] terpilih [dari;ttg] tradisi dan masyarakat jaman ini. Rugg dan lain progresif (menyangkut) jaman itu berharap agar para siswa akan dengan demikian menjadi sadar akan kekurangan banyak orang masyarakat dan kembang;kan suatu keinginan untuk memperbaiki penyakit itu, [dengan] begitu membuat ia/nya sulit, jika tidak mustahil, untuk/karena kurikulum ke instill [adalah] suatu roh nasionalisme atau rasa hormat untuk Kultur Amerika.

Even while progressive educational practice experienced a temporary decline in the 1950s, this vision for social studies was kept alive in Hunt and Metcalf's (1955, 1968) *Teaching High School Social Studies* methods textbook. They argued that the problem areas in contemporary American culture (referred to as "closed areas") were saturated with prejudice and taboos. In order to become a more democratic society, they argued, it was necessary for social studies teachers to expose these areas to rational inquiry in their classrooms. The closed areas included in their textbook were power and the law, economic inequities, nationalism and patriotism, social class, religion and morality, race, and sexual morality. One finds little difference in the basic approach of Rugg and Hunt and Metcalf except that Rugg's focus was

on the school curriculum while Hunt and Metcalf focused on training social studies teachers. Bahkan [selagi/sedang] praktek [yang] bidang pendidikan progresif mengalami suatu kemunduran temporer di (dalam) 1950s, visi ini untuk ilmu kemasyarakatan telah dipertahankan Pencarian dan Metcalf'S (1955, 1968) Mengajar buku teks metoda Ilmu Kemasyarakatan Sekolah Menengah. Mereka berargumentasi bahwa lingkup masalah [itu] di (dalam) jaman ini Kultur Amerika (dikenal sebagai " area yang tertutup") telah dipenuhi dengan prasangka dan tabu. Agar supaya menjadi suatu masyarakat [yang] lebih demokratis, mereka membantah, [itu] adalah (yang) penting bagi para guru ilmu kemasyarakatan untuk menyingkapkan area ini ke pemeriksaan masuk akal di (dalam) kelas mereka. Area yang tertutup tercakup di buku teks mereka adalah [kuasa/ tenaga] dan hukum, ekonomi inequas, nasionalisme dan patriotisme, kelas sosial, agama dan kesusilaan, [ras/lomba], dan kesusilaan seksual. Sese]Orang temukan perbedaan [kecil/sedikit] di (dalam) pendekatan Dasar Rugg Dan Pencarian Dan Metcalf kalau tidak Fokus Rugg's adalah pada [atas] kurikulum sekolah [selagi/sedang] Pencarian Dan Metcalf memusat pada [atas] para guru ilmu kemasyarakatan pelatihan.

The progressive impulse in social studies education has survived and remains a strong characteristic of the field today. In 2003, the official National Council for the Social Studies definitional statement contains a strong interdisciplinary focus as well as a continuing preoccupation with solving social ills and downplaying subject matter: Dorongan/Gerakan hati yang progresif di (dalam) ilmu kemasyarakatan pendidikan telah selamat dan tinggal suatu karakteristik [yang] kuat bidang hari ini. Di (dalam) 2003, pejabat Dewan Nasional untuk statemen bagan Ilmu Kemasyarakatan berisi suatu interdisciplinary fokus kuat seperti halnya suatu keasyikan berkelanjutan dengan pemecahan penyakit sosial dan downplaying pokok:

. . . the integrated study of the social sciences and humanities to promote civic competence." Within the school program, social studies provides coordinated, systematic study drawing upon such disciplines as anthropology, archaeology, economics, geography, history, law, philosophy, political science, psychology, religion, and sociology, as well as appropriate content from the humanities, mathematics, and natural sciences. In essence, social studies promotes knowledge of and involvement in civic affairs. And because civic issues—such as health care, crime, and foreign policy—are multidisciplinary in nature, understanding these issues and *developing resolutions to them* (italics added) require multidisciplinary education. These characteristics are the key defining aspects of social studies. studi yang terintegrasi ilmu-ilmu sosial dan ras manusia untuk mempromosikan kemampuan/ wewenang kewarganegaraan." Di dalam program sekolah, ilmu kemasyarakatan menyediakan studi sistematis dikoordinir yang menggambar;menarik [atas/ketika] seperti disiplin ilmu antropologi, arkeologi, ekonomi, geografi, sejarah, hukum, filosofi, ilmu pengetahuan politis, psikologi, agama, dan sosiologi, seperti halnya isi sesuai dari ras manusia, matematika, dan ilmu pengetahuan alam. Pada pokoknya, ilmu kemasyarakatan mempromosikan pengetahuan dan keterlibatan di (dalam) afair kewarganegaraan. Dan sebab kewarganegaraan issues-such [sebagai/ketika] pelayanan kesehatan, kejahatan, dan asing policy-are multidisciplinary secara alami, pemahaman isu ini dan mengembang;kan resolusi kepada [mereka/nya] (huruf miring menambahkan) memerlukan multidisciplinary pendidikan. Karakteristik ini adalah kunci yang melukiskan aspek ilmu kemasyarakatan.

Thus, 87 years after the appearance of the 1916 report, the nation's leading professional social studies organization defines the field in a way that subordinates content knowledge to a focus on solving society's ills. It is to both the practicality of such a focus and its deleterious consequences for history and social science instruction that I now turn. Seperti itu, 87 tahun setelah penampilan yang 1916 melaporkan, terkemuka bangsa organisasi ilmu kemasyarakatan profesional menggambarkan bidang [itu] dengan cara yang pengetahuan isi para bawahan;subordinat [bagi/kepada] suatu fokus pada [atas] memecahkan penyakit masyarakat. [Itu] adalah [bagi/kepada] kedua-duanya practicalas [dari;ttg] fokus seperti itu dan konsekwensi [yang] mengganggu nya untuk sejarah dan instruksi ilmu sosial yang aku sekarang memutar.

CONTROVERSIAL PUBLIC ISSUES

Despite the repeated calls for social studies to teach students to think critically about social issues, achieving this objective has been elusive. In what follows, I try to explain why efforts to teach thinking in secondary social studies classrooms have been unsuccessful. I then outline what social studies can reasonably achieve in the development of thoughtfulness in students. Di samping yang diulangi meminta ilmu kemasyarakatan untuk mengajar para siswa untuk berpikir dengan kritis sekitar isu sosial, menuju keberhasilan sasaran ini telah (menjadi) terabaikan. Di (dalam) apa [yang] mengikuti, aku mencoba untuk menjelaskan mengapa usaha untuk mengajar berpikir ilmu kemasyarakatan sekunder kelas telah (menjadi) gagal. Aku kemudian menguraikan secara singkat ilmu kemasyarakatan apa [yang] dapat layak mencapai pengembangan keprihatinan di (dalam) para siswa.

The "public issues" approach is arguably the most influential attempt to teach thinking in social studies. It emerged from the Harvard Social Studies Project (Oliver and Shaver, 1966). Rather than using a general model of reasoning, its proponents advocated engaging youth in open and critical discourse about public affairs and required students to draw upon historical and social science knowledge to reach defensible positions on issues of public concern. To demonstrate higher order thinking on a public policy task, students are expected to clearly state the issue, move beyond initial "nonreflective" positions, examine the facts of a case, elaborate the reasons behind a point of view, critically challenge the thinking and assumptions of others, and draw systematically on ethical and legal principles to develop a defensible position of their own. The important question is whether it is possible, through educational interventions, to produce in school-aged youth the advanced forms of thoughtfulness required by public policy analysis. I now turn to the evidence on this question. " Isu yang publik" Pendekatan yang dapat dibantah usaha [yang] yang paling berpengaruh untuk mengajar berpikir ilmu kemasyarakatan. [Itu] muncul dari Harvard Proyek Ilmu Kemasyarakatan (Oliver dan Alat cukur, 1966). Dibanding/Bukannya menggunakan suatu model [yang] umum memberi alasan, penganjur nya yang yang didukung melibatkan [masa/kaum] muda di (dalam) ceramah [yang] kritis dan terbuka tentang afair publik dan memerlukan para siswa untuk [menggambar/menarik] [atas/ketika] historis dan pengetahuan ilmu sosial untuk menjangkau posisi dapat dipertahankan pada [atas] isu [dari;ttg] perhatian publik. Untuk mempertunjukkan [order/ pesanan] lebih tinggi yang berpikir pada [atas] suatu tugas kebijakan publik, para siswa diharapkan untuk dengan jelas menyatakan isu [itu], pindah;gerakkan di luar awal " nonreflective" posisi, menguji fakta suatu kasus, merinci pertimbangan [itu] di belakang pandangan, dengan kritis menghadapi tantangan [itu] pemikiran dan pengambil-alihan (orang) yang lain, dan [menggambar/menarik] secara sistematis pada [atas] prinsip [yang] sah/tentang undang-undang dan etis untuk kembang;kan suatu posisi [yang] dapat dipertahankan milik mereka sendiri. Pertanyaan yang penting adalah apakah [itu] adalah mungkin, melalui/sampai intervensi bidang pendidikan, untuk menghasilkan [masa/kaum] muda school-aged format keprihatinan yang [maju/lanjut] yang diperlukan oleh analisa kebijakan publik. Aku sekarang berbalik . ke bukti [itu] pada [atas] pertanyaan ini.

THREE CONTROLLED STUDIES

A brief review of three efforts to teach students the skills associated with the analysis of controversial public issues illustrates both the curricular approach and the difficulties associated with attempting to effect changes in adolescents' ways of thinking via educational interventions. Suatu tinjauan ulang [yang] ringkas tiga usaha untuk mengajar para siswa ketrampilan berhubungan dengan analisa [dari;ttg] isu publik gemar bertengkar menggambarkan kedua-duanya curricular pendekatan dan berbagai kesulitan berhubungan dengan mencoba untuk mempengaruhi perubahan di (dalam) cara pikir anak remaja via intervensi bidang pendidikan.

As part of an evaluation of the Harvard Social Studies Project, four project members taught junior high school classes for extended periods of time throughout two school years. In these classes, a political analysis model was taught where students explored how different positions

on public issues might be justified within a framework of constitutional principles. In this study, approximately half of the instructional time in social studies classes was devoted to public issues instruction. When program effects were evaluated, students in experimental classes were able to describe and identify the components of quality arguments when compared to control classes. Sebagai bagian dari suatu evaluasi Harvard Ilmu Kemasyarakatan Rancang, empat anggota proyek mengajar kelas sekolah menengah pertama untuk periode waktu [yang] diperluas sepanjang;seluruh dua tahun pelajaran. Di (dalam) kelas ini, suatu model analisa politis telah diajar [di mana/jika] para siswa menyelidiki bagaimana posisi berbeda pada [atas] isu publik boleh jadi dibenarkan di dalam suatu kerangka [dari;ttg] prinsip konstitutional. Di (dalam) studi ini, [yang] kira-kira separuh waktu intervi di (dalam) kelas ilmu kemasyarakatan telah diabdikan bagi instruksi isu publik. Kapan efek program telah dievaluasi, para siswa di (dalam) kelas bersifat percobaan bisa menguraikan dan mengidentifikasi komponen [dari;ttg] argumentasi berkwalitas ketika dibandingkan untuk mengendalikan kelas.

However, on the most revealing form of assessment—student ability to state and support a decision on a public issue in student-led discussions—experimental pupils failed to improve upon prior performance. The research team conjectured that perhaps people ". . . develop persuasive arguments not because of the soundness of logic, but because of more general temperamental factors such as verbal fluency or interpersonal competence" (Oliver and Shaver, 1966, p. 324). Bagaimanapun, pada [atas] paling menyatakan format assessment-student kemampuan untuk menyatakan dan mendukung suatu keputusan pada [atas] suatu isu publik di (dalam) discussions-experimental para murid student-led yang digagalkan untuk meningkatkan [atas/ketika] capaian [utama/lebih dulu]. Regu Riset menduga bahwa barangkali orang-orang"... tidak kembang;kan argumentasi membujuk oleh karena kesehatan logika, hanyalah sebab faktor temperamental lebih umum seperti kelancaran lisan atau kemampuan/ wewenang hubungan antar pribadi" (Oliver dan Alat cukur, 1966, p. 324).

Another study, the *Higher Order Thinking in the Humanities Project* (Newmann, 1991), investigated department-wide efforts to teach higher order thinking in social studies classrooms. Newmann found that considerable difficulties exist even in attempting to locate such classrooms and assessing the impact of such curricula. Following a national search, nine social studies departments were identified that were judged to have made department-wide efforts to promote higher order thinking; seven other departments that made no such efforts were used for comparison purposes. Yang lain Studi, [Order/ pesanan] Yang lebih tinggi Yang berpikir Proyek Ras manusia (Newmann, 1991), department-wide usaha yang diselidiki untuk mengajar [order/ pesanan] lebih tinggi yang berpikir kelas ilmu kemasyarakatan. Newmann menemukan berbagai kesulitan [yang] pantas dipertimbangkan itu ada bahkan di mencoba untuk menempatkan . seperti (itu) kelas dan menaksir dampak . seperti (itu) curricula. Berikut suatu pencarian nasional, sembilan departemen ilmu kemasyarakatan telah dikenali bahwa telah dihakimi untuk mempunyai department-wide usaha dibuat untuk mempromosikan [order/ pesanan] lebih tinggi [yang] berpikir; tujuh lain departemen yang tidak buat apapun . seperti (itu) usaha telah digunakan untuk tujuan perbandingan.

To determine whether higher order thinking was being taught in the identified classrooms, students were asked to write a persuasive essay using such skills and addressing whether a student's rights were violated in the case of a locker search that turned up a small amount of marijuana. Newmann (1991b) was not able to identify any substantial relationship between the presence of classroom thoughtfulness and pupil performance on the locker search essay. Generic qualities of classroom thoughtfulness were not found to be associated with persuasiveness of student writing on a constitutional issue. Given the great care that this study utilized to identify "thoughtful" classrooms, this finding must be accorded great weight. Untuk menentukan apakah pemikiran [order/ pesanan] lebih tinggi diajar kelas yang dikenali, para siswa telah diminta untuk tulis suatu esei membujuk yang menggunakan . seperti (itu) ketrampilan dan menujukan apakah suatu [hak/ kebenaran] siswa telah dilanggar kasus suatu

lemari mencari [yang] dikeraskan itu suatu jumlah kecil ganja. Newmann (1991B) tidaklah mampu mengidentifikasi manapun hubungan substansiil antar[a] kehadiran keprihatinan kelas dan capaian murid pada [atas] lemari mencari esei. Kualitas keprihatinan kelas [yang] umum tidaklah ditemukan untuk dihubungkan dengan hal membujuk (merayu) siswa yang menulis pada [atas] suatu isu konstitutional. Dengan kepedulian yang besar bahwa . ini studi menggunakan untuk mengidentifikasi " bijaksana" kelas, ini temuan harus disetujui berat/beban besar

The evaluation of the "You Decide" segments in Channel One television programming also produced no evidence that educators know how to systematically teach critical thinking about public policy issues (Johnston, Anderman, Klenk, and Harris, 1994). In the 1992-1993 broadcast season, Channel One created 14 "You Decide" segments covering selected news events that had clear public issues foci. Eight experienced teachers were trained in the "discussion of public issues" approach and, for a three-month period, they led at least two classroom discussions per week based on taped "You Decide" segments. The goal of this intervention was to teach students how to discuss controversial issues using oral strategies designed to facilitate thorough explorations of public policy issues. Evaluasi " Kamu Mutuskan" segmen di (dalam) Saluran Satu programming televisi juga tidak memproduksi apapun bukti yang pendidik mengetahui bagaimana cara secara sistematis mengajar kritis berpikir tentang isu kebijakan publik (Johnston, Anderman, Klenk, dan Harris, 1994). Di (dalam) yang 1992-1993 menyiarkan musim, Menggali Sese]Orang menciptakan 14 " Kamu Mutuskan" segmen [yang] mencakup peristiwa berita terpilih yang isu publik jelas bersih telah foci. Delapan para guru berpengalaman telah dilatih;terlatih " diskusi [dari;ttg] isu publik" pendekatan dan, untuk/karena suatu periode tiga bulan, mereka memimpin sedikitnya dua diskusi kelas saban minggu berdasar pada taped " Kamu Mutuskan" segmen. Gol [dari;ttg] intervensi ini adalah untuk mengajar para siswa bagaimana cara mendiskusikan isu gemar bertengkar [yang] menggunakan strategi lisan yang dirancang untuk memudahkan explorasi [yang] saksama [dari;ttg] isu kebijakan publik.

To assess students' competency in the use of these public issues discussion skills, students (experimental and control) in groups of five to seven participated in videotaped sessions on the topic of prayer in schools. No statistically significant difference was detected between experimental students and control students on their use of public policy issues discussion skills. Researchers discovered that students simply presented their own unsubstantiated position, made passing reference to arguments presented by experts or the facts of the case, and did not work toward a defensible group position on the issue. Untuk menilai kemampuan siswa di (dalam) penggunaan [dari;ttg] ketrampilan diskusi isu publik ini, para siswa (bersifat percobaan dan mengendalikan) di (dalam) kelompok lima [bagi/kepada] tujuh diikut sertakan sesi videotaped pada [atas] topik tekun dalam doa di (dalam) sekolah. Tidak (ada) perbedaan [yang] penting telah dideteksi antar[a] para siswa bersifat percobaan dan para siswa kendali pada [atas] penggunaan mereka [dari;ttg] kebijakan publik mengeluarkan ketrampilan diskusi. Peneliti menemukan para siswa itu [yang] hanya memperkenalkan posisi belum dibuktikan kebenarannya mereka sendiri, yang dibuat [lewat/ sampaikan] acuan ke argumentasi yang diperkenalkan oleh ahli atau fakta kasus, dan tidak bekerja ke arah suatu kelompok dapat dipertahankan memposisikan pada [atas] isu [itu].

Something disturbing is implied by the findings of these three studies. If the development of student decision making abilities to be applied to the analysis of public policy issues is at the heart of social studies, and there is no evidence that these objectives are being achieved, what are the implications? Should social studies teachers drop the current project of teaching for thoughtful citizenship, reanalyze their expectations, and downscale their goals? Or, should they redouble their efforts to teach higher order thinking? I find problematic the very notion that adolescents can systematically be taught higher order thinking about complex public policy issues that perplex their parents. Sesuatu (yang) gangguan di/tersiratkan oleh penemuan tiga studi ini . Jika pengembangan kemampuan pengambilan keputusan siswa untuk diberlakukan bagi analisa [dari;ttg] isu kebijakan publik adalah berada di pusat ilmu

kemasyarakatan, dan di sana adalah tidak (ada) bukti yang sasaran hasil ini dicapai, apakah [yang merupakan] implikasi? Perlukah para guru ilmu kemasyarakatan menetes jatuh proyek yang sekarang mengajar untuk kewarga negaraan bijaksana, meneliti kembali harapan mereka, dan downscale gol mereka? Atau, perlukah mereka menggandakan usaha mereka untuk mengajar [order/ pesanan] lebih tinggi [yang] berpikir? Aku temukan meragukan seluruh dugaan yang kaleng anak remaja [yang] secara sistematis diajar [order/ pesanan] lebih tinggi berpikir tentang isu kebijakan publik kompleks yang membingungkan orang tua mereka.

The most common explanation offered by social studies theorists for why schools haven't been successful in teaching higher order thinking focus on teacher, curricular, and institutional factors. This perspective is, to use a medical analogy, similar to affirming that "the patient failed to respond" rather than "I misdiag- nosed" or "I misprescribed." The presumption is that barriers to the teaching of higher order thinking are embedded in the organizational context of schools, not in the assumptions upon which the instructional model is based. Onosko (1991) has argued that such factors as pressure on teachers to focus on student knowledge acquisition, low expectations of students, large classes, and lack of teacher planning time stand in the way of achieving this goal. Such obstacles, though perhaps valid to some extent, do not constitute a complete picture of the difficulties encountered in teaching higher order thinking. There is a basic flaw in the underlying assumption of Controversial Public Issues (CPI) pedagogy. It is found in the assumption that, if one only engages students in thinking, they will develop higher order thinking skills. Penjelasan [yang] yang paling umum yang ditawarkan oleh ahli teori ilmu kemasyarakatan untuk mengapa sekolah belum pernah sukses mengajar [order/ pesanan] lebih tinggi yang berpikir fokus pada [atas] guru, curricular, dan faktor kelembagaan. Perspektif ini adalah, untuk menggunakan suatu analogi medis, serupa [bagi/kepada] menyatakan yang " pasien gagal;kan untuk menjawab" dibanding/bukannya " Aku misdiag- yang maju dengan hati-hati" atau " Aku misprescribed." Anggapan adalah bahwa penghalang kepada pengajaran [dari;ttg] pemikiran [order/ pesanan] lebih tinggi ditempelkan dalam kaitan dengan [yang] organisatoris sekolah, [yang] bukan di (dalam) asumsi atas mana model intervi didasarkan. Onosko (1991) telah berargumentasi bahwa seperti faktor tekanan pada [atas] para guru untuk memusatkan pada [atas] didapatnya pengetahuan siswa, harapan para siswa rendah, kelas besar, dan ketiadaan waktu perencanaan guru berdiri di jalan menuju keberhasilan gol ini. . seperti (itu) rintangan, meskipun [demikian] barangkali sah sampai taraf tertentu, jangan [mendasari/membuat] suatu gambar-an [yang] lengkap berbagai kesulitan temu mengajar [order/ pesanan] lebih tinggi [yang] berpikir. Ada suatu kekurangan dasar di (dalam) dasar pengambil-alihan Isu Publik Gemar bertengkar (CPI) ilmu mendidik. [Itu] ditemukan asumsi yang, jika satu hanya melibatkan para siswa di (dalam) berpikir, mereka akan kembang;kan [order/ pesanan] lebih tinggi yang berpikir ketrampilan.

CPI PEDAGOGY AND ADOLESCENT DEVELOPMENT

A critical weakness of CPI instruction is its fallacious assumption that school-aged students are capable of the cognitive tasks required by curricula intended to develop higher order thinking. This may help explain teachers' low expectations about students' critical thinking. Research findings on epistemological development indicate a progression in people's assumptions about sources and certainty of knowledge and how decisions are justified in light of those assumptions (King and Kitchener, 1994; Kitchener and King, 1981, 1985). Suatu kelemahan CPI instruksi [yang] kritis asumsi salah nya yang school-aged para siswa adalah sanggup melaksanakan tugas teori yang diperlukan oleh curricula yang diharapkan untuk kembang;kan [order/ pesanan] lebih tinggi [yang] berpikir. Ini boleh membantu menjelaskan harapan guru rendah tentang pemikiran siswa kritis. Temuan riset pada [atas] epistemological pengembangan menandai (adanya) suatu kemajuan di (dalam) asumsi masyarakat tentang sumber dan kepastian pengetahuan dan bagaimana keputusan dibenarkan untuk memecahkan asumsi itu (Raja Dan Tukang masak, 1994; Tukang masak Dan Raja, 1981, 1985).

The reflective judgment model of King and Kitchener depicts the development of people's assumptions about knowledge and how they radically affect the way individuals understand and solve problems. People at various developmental stages have differing assumptions about the roles of evidence, authority, and interpretation in the formation of solutions to problems and about what can be known and how certain one can be about knowing. Model Pertimbangan Tukang masak Dan Raja yang yang memantulkan cahaya melukiskan asumsi pengembangan pekerja [itu] tentang pengetahuan dan bagaimana mereka secara radikal mempengaruhi individu [jalan/cara] [itu] memahami dan memecahkan permasalahan. Orang-Orang pada berbagai langkah-langkah pengembangan mempunyai asumsi berbeda tentang peran bukti, otoritas, dan penafsiran di (dalam) pembentukan solusi ke permasalahan dan tentang apa yang bisa dikenal dan bagaimana tertentu seseorang dapat jadilah tentang pengetahuan.

Research spanning 20 years, using longitudinal data as well as cross sectional studies, offers strong support for the existence of stages of development that are identifiable, age-related, and change in predictable ways over time (King and Kitchener, 1994). Data on stages of reflective judgment are collected through the Reflective Judgment Interview (RJI). The RJI presents respondents with four problems where some of the elements of a solution are unknown or not known with a specifiable degree of certainty. One such problem is the Chemical Additives Problem: Riset [yang] memutar 20 tahun, penggunaan data membujur seperti halnya salib studi bersekat-sekat, penawaran pen;dukungan kuat untuk keberadaan langkah-langkah pengembangan yang adalah bisa diidentifikasi, terkait dengan [umur/zaman], dan ber;ubah jalan dapat diramalkan dari waktu ke waktu (Raja Dan Tukang masak, 1994). Data di atas pentas pertimbangan yang memantulkan cahaya dikumpulkan melalui/sampai Wawancara Pertimbangan Yang yang memantulkan cahaya (RJI). RJI menghadiahi responden dengan empat permasalahan [di mana/jika] sebagian dari unsur-unsur suatu solusi adalah yang tak dikenal atau tidak mengenal dengan suatu derajat tingkat kepastian specifiable. Satu . seperti (itu) masalah adalah Masalah Aditip Yang kimia:

There have been frequent reports about the relationship between chemicals that are added to foods and the safety of these foods. Some studies indicate that such chemicals can cause cancer, making these foods unsafe to eat. Other studies, however, show that chemical additives are not harmful, and actually make the foods containing them safer to eat. [Di/Ke] sana telah (menjadi) laporan sering tentang hubungan antar[a] bahan-kimia yang ditambahkan ke makanan dan keselamatan [dari;ttg] makanan ini. Beberapa studi menunjukkan bahwa . seperti (itu) bahan-kimia dapat menyebabkan kanker, pembuatan makanan ini yang tak aman untuk makan. Lain studi, bagaimanapun, menunjukkan aditip [yang] kimia itu tidaklah berbahaya, dan benar-benar membuat makanan [itu] berisi [mereka/nya] safer untuk makan.

Using a semi-structured interview format, respondents are asked a series of questions that require them to respond using their existing repertoire of cognitive skills. Typical probe questions ask respondents to present their resolution to the problem, relate how they came to that point of view, assess whether they can know for sure that their position is correct, relate their opinion on how differences of opinion would be adjudicated, and discuss how different people, especially experts, might come to hold differing opinions. Transcribed interviews are scored according to protocols (Kitchener and King, 1985). Penggunaan suatu format wawancara semi-structured, responden [diminta;tanya] satu rangkaian pertanyaan yang memerlukan [mereka/nya] untuk menjawab menggunakan daftar lagu-lagu ketrampilan teori ada mereka. Pertanyaan Pemeriksaan khas [minta;tanya] responden untuk menyajikan resolusi mereka kepada masalah, menghubungkan bagaimana mereka datang untuk segi pandangan itu , menilai apakah mereka dapat mengetahui dengan pasti bahwa posisi mereka benar, menghubungkan pendapat mereka pada [atas] bagaimana perbedaan pendapat akan ditimbang dan diputus, dan mendiskusikan bagaimana orang yang berbeda, [yang] terutama tenaga ahli,

mungkin datang untuk [memegang/menjaga] pendapat berbeda. Wawancara yang menulis penjelasan dicapai menurut protokol (Tukang masak Dan Raja, 1985).

Changes in reasoning are described by seven distinct sets of assumptions about knowledge and its acquisition. School-aged youth typically reason at either stage two or three. At stage two, there is a true reality that can be known with certainty but is not known by everyone. Beliefs are justified by direct observation and by what authorities say is true. At stage three, in areas where truth is known, one defers to known authorities. In areas where truth is not known, there is no basis for evaluation beyond one's intuitions or feelings. The solution to problems, therefore, is simply a matter of "opinion"—feelings—and one need not look beyond oneself for justification or warrant. Ubah memberi alasan diuraikan oleh tujuh [yang] beda satuan asumsi tentang pengetahuan dan didapatnya nya. [Masa/Kaum] muda School-aged [yang] secara khas memberi alasan pada baik langkah dua maupun tiga. Pada langkah dua orang, ada suatu kenyataan benar yang dapat dikenal dengan kepastian tetapi tidaklah dikenal oleh semua orang. Kepercayaan dibenarkan oleh pengamatan langsung dan dengan apa yang otoritas kata[kan benar. Pada langkah tiga, di (dalam) area [di mana/jika] kebenaran dikenal, sese]orang mengalah otoritas dikenal. Di (dalam) area [di mana/jika] kebenaran tidaklah yang dikenal, tidak ada basis untuk evaluasi di luar perasaan atau intuisi seseorang. Solusi ke permasalahan, oleh karena itu, hanya sesuatu yang " opinion"-feelings-and sese]orang tidak perlu lihat di luar dirinya untuk pertimbangan atau surat perintah.

At stage four, for the first time, ill-structured problems are afforded legitimacy; that is, problems exist that cannot be described completely and solved with certainty. At this stage, truth is impossible to attain and therefore is idiosyncratic to the individual. Research on the development of reflective judgment suggests that high school seniors are typically at stage three in epistemic development. Prior to age 24, few individuals operate at stage four or higher (King and Kitchener, 1994). Pada langkah empat, untuk pertama kali, permasalahan ill-structured diusahakan hak kekuasaan; itu adalah, permasalahan ada itu tidak bisa diuraikan dengan sepenuhnya dan memecahkan dengan kepastian. Pada langkah ini, kebenaran mustahil untuk mencapai dan oleh karena itu adalah idiosyncratic kepada individu [itu]. Riset pada [atas] pengembangan [dari;ttg] pertimbangan yang memantulkan cahaya menyatakan bahwa sekolah menengah yang senior secara khas pada langkah tiga pengembangan epistemic. Sebelum [umur/zaman] 24, sedikit individu beroperasi pada langkah empat atau lebih tinggi (Raja Dan Tukang masak, 1994).

If stage four reasoning is required for the solution of ill-structured problems, typical high school students will not accept the legitimacy of the task of searching for qualified positions on such tasks because most high school students simply cannot produce this form of reasoning. Research has shown that individuals are seldom able to produce reasoning that is more than one stage above their typical response (King and Kitchener, 1994). Jika langkah empat pemikiran diperlukan untuk solusi [dari;ttg] permasalahan ill-structured, sekolah menengah khas para siswa tidak akan menerima hak kekuasaan tugas mencari-cari posisi berkwalitas pada [atas] . seperti (itu) tugas sebab kebanyakan para siswa sekolah menengah [yang] hanya tidak bisa menghasilkan bentuk ini pemikiran. Riset telah menunjukkan individu itu jarang mampu menghasilkan pemikiran yang lebih dari satu langkah di atas tanggapan khas mereka (Raja Dan Tukang masak, 1994).

Given that a combination of stage two and stage three reasoning is typical of the majority of high school students, it should be clear that reasoning at these stages is not consistent with the conception of reflective thinking embodied in CPI curricula, namely, that a reflective thinker is someone who is aware of a problem and able to bring critical judgment to bear on it. He or she understands that there is uncertainty about how a problem may best be solved, yet is able to offer a judgment about it that brings some closure. This type of judgment is based on criteria such as evaluation of evidence, consideration of expert opinion, and adequacy of

argument. Most high school students are developmentally incapable of reasoning in this manner. Dengan yang suatu kombinasi langkah dua dan langkah tiga pemikiran adalah khas untuk mayoritas para siswa sekolah menengah, haruslah jelas bahwa memberi alasan pada langkah-langkah ini tidaklah konsisten dengan konsepsi [dari;ttg] pemikiran yang memantulkan cahaya berbadan CPI curricula, [yang] yakni, bahwa suatu pemikir yang memantulkan cahaya adalah seseorang [siapa] yang menyadari suatu masalah dan mampu membawa pertimbangan kritis menghubungkan itu. Ia atau dia memahami bahwa ada ketidak-pastian tentang bagaimana suatu masalah boleh terbaik dipecahkan, namun bisa menawarkan suatu pertimbangan tentang itu itu membawa penutup beberapa. Pertimbangan jenis ini didasarkan pada ukuran-ukuran seperti evaluasi bukti, pertimbangan [dari;ttg] pendapat ahli, dan ketercukupan argumentasi. Kebanyakan para siswa sekolah menengah secara pengembangan tidak mampu untuk memberi alasan cara ini.

What are the consequences of attempting to teach students to think in a manner that they are incapable of? In addition to teachers failing to achieve their stated goals, it may also lead to student frustration and a loss of interest and motivation (Elkind, 1974; Ginsberg and Opper, 1988; Massialias, Sprague, and Hurst, 1975; Metz, 1978). Some researchers even found an inverse relationship between open climates in social studies classrooms and students' level of political efficacy (Braughman, 1975; Ehman, 1970; Long and Long, 1975; Zevin, 1983). The implication of these findings is that requiring youth to debate and/or solve intractable social and political problems where no easy solution exists may result in their actually becoming less knowledgeable and less committed to the values and processes of American democracy. Apakah [yang merupakan] konsekwensi mencoba untuk mengajar para siswa untuk berpikir [adalah] suatu cara yang mereka adalah tidak mampu untuk? Sebagai tambahan terhadap kekurangan para guru untuk mencapai gol dinyatakan mereka, mungkin juga mendorong kearah frustrasi siswa dan hilangnya [bunga/minat] dan motivasi (Elkind, 1974; Ginsberg dan Opper, 1988; Massialias, Sprague, dan Hurst, 1975; Metz, 1978). Beberapa peneliti genap ditemukan suatu hubungan kebalikan antar[a] iklim terbuka di (dalam) kelas ilmu kemasyarakatan dan siswa tingkat kemanjuran politis (Braughman, 1975; Ehman, 1970; Rindukan dan [Panjang/Lama], 1975; Zevin, 1983). Implikasi [dari;ttg] penemuan ini adalah bahwa menuntut [masa/kaum] muda untuk berdebat dan/atau memecahkan sosial keras kepala dan permasalahan politis [di mana/jika] tidak (ada) solusi gampang ada boleh mengakibatkan mereka benar-benar menjadi lebih sedikit banyak mengetahui dan lebih sedikit merasa terikat dengan nilai-nilai [itu] dan proses [dari;ttg] Demokrasi Amerika.

Data from classroom observations and interviews suggest that practical barriers may also exist in classrooms that feature discussion of controversial issues. In such classrooms, students often sense that the teacher is trying to do something to them and react negatively to teachers' attempts to make them into a certain type of moral person or citizen (D'Emidio-Caston and Brown, 1998; Leming and Silva, 2001). It has also been noted that some students wish to reserve the right to participate or not participate in discussions (Hess and Posselt, 2002). Pressure from the teacher and/or peers to participate is often seen as coercive. Only one form of activist citizen participation is legitimated in CPI classrooms and, if coerced to participate, students may resist (Hess and Posselt, 2002).[2] Data dari pengamatan kelas dan wawancara menyatakan bahwa penghalang praktis boleh juga ada kelas yang menonjolkan diskusi [dari;ttg] isu gemar bertengkar. Dalam . yang sedemikian kelas, para siswa sering merasakan [bahwa/yang] guru sedang berusaha untuk lakukan sesuatu (yang) kepada [mereka/nya] dan bereaksi secara negatif ke usaha guru untuk membuat [mereka/nya] ke dalam suatu jenis tertentu orang moral atau warganegara (D'Emidio-Caston dan Coklat, 1998; Leming dan Silva, 2001). [Itu] telah pula dicatat bahwa beberapa para siswa ingin memesan/mencadangkan hak untuk mengambil bagian atau tidak mengambil bagian diskusi (Hess dan Posselt, 2002). Maksa dari guru dan/atau mengamati untuk mengambil bagian adalah sering dilihat [ketika;seperti] memaksa. Hanya satu format keikutsertaan warganegara aktifis

mengesyahkan CPI kelas dan, jika dipaksa untuk mengambil bagian, para siswa boleh membalas (Hess dan Posselt, 2002).2.

Discussions in CPI classrooms also may tend to be dominated by verbally facile and interpersonally aggressive individuals. This elite looks down on those who can't defend their positions well. Those in the new lower caste develop hostility to the new elite (Hess and Posselt, 2002). Finally, students find that they can never come up with an unassailable defense for a position and eventually get frustrated with the process and retreat to trusted ideas and actions with which they are comfortable (Brookfield, 1994). This phenomenon, having to respond to repeated requests to examine and defend one's own reasoning, has been referred to as "roadrunning" since, like the cartoon character Wiley Coyote, just when a student thinks that he has developed a workable position on an issue, the boulder falls again. Diskusi di (dalam) CPI kelas juga boleh [tuju/ cenderung] untuk dikuasai oleh secara lisan lancar dan secara hubungan antar pribadi individu agresif. Pilihan ini meremehkan mereka yang tidak bisa mempertahankan posisi mereka dengan baik. Mereka yang kasta/suku bangsa lebih rendah yang baru kembang;kan permusuhan kepada pilihan yang baru (Hess dan Posselt, 2002). Akhirnya, para siswa temukan bahwa mereka tidak pernah dapat sampai pada suatu pertahanan tidak dapat disangkal untuk suatu posisi dan secepatnya mendapat/kan terhalang dengan proses dan mundur untuk percaya gagasan dan tindakan dengan mana mereka adalah nyaman (Brookfield, 1994). Peristiwa ini, mempunyai;nikmati untuk bereaksi terhadap permintaan diulangi untuk menguji dan mempertahankan pemikiran diri sendiri, telah (menjadi) dikenal sebagai " roadrunning" [karena;sejak], [seperti;suka] karakter film karton [itu] Wiley Anjing hutan, [hanya;baru saja] ketika seorang siswa berpikir bahwa ia telah mengembang;kan suatu posisi dapat dikerjakan pada [atas] suatu isu, batu bundar besar jatuh lagi.

This evidence suggests that a focus on controversial issues in the social studies classroom might have undesirable consequences, subverting the very objective it is designed to achieve. Some students may actually become less committed to the discussion of public policy issues. Bukti ini menyatakan bahwa suatu fokus pada [atas] isu gemar bertengkar di (dalam) ilmu kemasyarakatan kelas mungkin mempunyai konsekwensi yang tidak diinginkan, menumbangkan [itu] seluruh sasaran [itu] dirancang untuk mencapai. Beberapa para siswa boleh benar-benar yang jadi kurang merasa terikat dengan diskusi [dari;ttg] isu kebijakan publik.

AN ALTERNATIVE PERSPECTIVE

Is teaching thoughtfulness a hopeless task with school-aged youth? I think not, but the conception of what it means to teach students to think critically needs careful reexamination. In my judgment, the use of a curriculum focused on the solution of complex public policy issues to promote critical thought is inappropriate for school-aged youth. I propose three intermediate foci for public education that do not require of students forms of thinking beyond their abilities, yet contribute to their future capacity for reflective thought. Apakah mengajar keprihatinan [adalah] suatu tugas sia-sia dengan [masa/kaum] muda school-aged? Aku tidak berpikir, hanyalah konsepsi apa maknanya untuk mengajar para siswa untuk berpikir dengan kritis memerlukan pemeriksaan kembali saksama. Di (dalam) pertimbangan ku, penggunaan suatu kurikulum memusat pada [atas] solusi [dari;ttg] kebijakan publik kompleks mengeluarkan untuk mempromosikan pikiran kritis adalah tidak sesuai untuk [masa/kaum] muda school-aged. Aku mengusulkan tiga intermediate/antara foci untuk pendidikan [yang] publik yang tidak memerlukan format para siswa berpikir di luar kemampuan mereka, namun berperan untuk kapasitas masa depan mereka untuk pikiran yang memantulkan cahaya.

First, no U.S. history course is balanced or accurate without the study of the political and policy debates that shaped our nation's history. Students find these issues interesting and enjoy finding out about the players and the positions that each held in such debates. Learning about these issues can enhance students' enjoyment of history and government classes and result in increased learning. In the study of these historical and contemporary public issues,

however, teachers should scale back their expectations and realize that what they see in their classes are not demonstrations of student irrationality or intellectual laziness, but rather expressions of a transitional rationality. Expecting students to demonstrate advanced thought patterns that adults have spent decades developing is unrealistic and counterproductive. Pertama, tidak (ada) U.S. kursus sejarah adalah akurat atau seimbang tanpa studi yang politis dan kebijakan berdebat itu shaped sejarah bangsa [kita/kami]. Para siswa temukan isu ini yang menarik dan menikmati mengenali tentang pemain dan posisi yang masing-masing [mengadakan;memegang] dalam . yang sedemikian debat. Pelajaran sekitar isu ini dapat tingkatkan kenikmatan kelas pemerintah dan sejarah siswa dan mengakibatkan pelajaran ditingkatkan. Di (dalam) studi [dari;ttg] isu publik jaman ini dan historis ini, bagaimanapun, para guru [perlu] mengelupas punggung harapan mereka dan menyadari bahwa apa [yang] mereka melihat kelas mereka bukanlah demonstrasi ketidakrasionalan siswa atau kemalasan intelektual, tetapi lebih ungkapan suatu rasionalitas transisi. Harapkan para siswa untuk mempertunjukkan pola teladan pikiran [maju/lanjut] yang orang dewasa sudah membelanjakan mengembang;kan dekade adalah tak realistis dan counterproductive.

Second, social studies instruction should develop in students a rich and accurate store of information about our nation's history and institutions. This knowledge will provide the necessary basis for emerging reflective thought. To develop in students such a rich store of information in fields such as history and civics is not antithetical to the idea of teaching for thoughtfulness. Recent scholarship in cognitive science indicates that the major difference between novice and expert problem solvers lies not in the specific skills they possess, but rather in their stores of available, relevant, previously acquired knowledge (Hirsch, 2003). Skills are important but thinking critically is based on the knowledge one possesses. Ke dua, ilmu kemasyarakatan instruksi [perlu] kembang;kan para siswa [adalah] suatu [gudang/ toko] informasi [yang] akurat dan kaya tentang institusi dan sejarah bangsa [kita/kami]. Pengetahuan ini akan menyediakan basis yang perlu untuk muncul pikiran yang memantulkan cahaya. Untuk kembang;kan para siswa [yang] [gudang/ toko] informasi [yang] kaya seperti itu di (dalam) bidang seperti sejarah dan pelajaran kewarga negaraan bukanlah antithetical kepada gagasan untuk pengajaran untuk keprihatinan. Ilmu pengetahuan terbaru di (dalam) ilmu pengetahuan teori menunjukkan bahwa perbedaan yang utama antar[a] orang baru dan masalah ahli solvers [tidak/jangan] berada di (dalam) ketrampilan yang spesifik [yang] mereka menguasai, tetapi lebih di (dalam) [gudang/ toko] mereka [dari;ttg] tersedia, relevan, pengetahuan sebelumnya diperoleh (Hirsch, 2003). Ketrampilan adalah penting tetapi pemikiran [yang] dengan kritis didasarkan pada pengetahuan [itu] sese]orang menguasai.

This store of historical and civic knowledge alone has important consequences for the development of citizenship. Delli Carpini and Keeter (1997) and Milner (2002) contend that civic literacy is at the heart of education for democracy. Galston (2001, pp. 223-224) posits seven important links between civic knowledge and democratic citizenship: [Gudang/ toko] ini [dari;ttg] historis dan pengetahuan kewarganegaraan sendiri mempunyai konsekwensi penting untuk pengembangan kewarga negaraan. Delli Carpini dan Keeter (1997) dan Milner (2002) menetapkan bahwa kewarganegaraan yang melek huruf adalah berada di pusat pendidikan untuk demokrasi. Galston (2001, pp. 223-224) mengusulkan sebagai fakta tujuh mata rantai penting antar[a] pengetahuan kewarganegaraan dan kewarga negaraan demokratis:

• Civic knowledge helps citizens understand their interests as individuals and members of groups. The more knowledge we have, the better we can understand the impact of public policies on our interests and the more effectively we can promote our interests in the political process.
• Civic knowledge increases the ideological consistency of views across issues and time.
• Unless citizens possess a basic level of civic knowledge, it is difficult for them to understand political events or integrate new information into an existing framework.
• General civic knowledge can alter our views on specific public issues.

• The more knowledge citizens have of civic affairs, the less likely they are to experience a generalized mistrust of, or alienation from, civic life.
• Civic knowledge promotes support for democratic values.
• Civic knowledge promotes political participation (pp. 223-224).

Warganegara Bantuan Pengetahuan Kewarganegaraan memahami minat mereka [sebagai/ketika] individu dan anggota menggolongkan. Semakin pengetahuan [yang] kita mempunyai, makin baik kita dapat memahami dampak [dari;ttg] kebijakan publik pada [atas] minat [kita/kami] dan semakin secara efektif kita dapat mempromosikan minat [kita/kami] di (dalam) proses politik.
o Pengetahuan Kewarganegaraan meningkat/kan konsistensi pandangan yang ideologis ke seberang isu dan waktu.
o Kecuali jika warganegara memiliki suatu tingkatan basis dasar pengetahuan kewarganegaraan, [itu] adalah sulit untuk [mereka/nya] untuk memahami peristiwa politis atau mengintegrasikan informasi baru ke dalam suatu kerangka ada.
o Kewarganegaraan umum Pengetahuan dapat mengubah pandangan [kita/kami] pada [atas] isu publik spesifik.
o Semakin pengetahuan warganegara mempunyai afair kewarganegaraan, semakin sedikit mungkin mereka adalah untuk mengalami suatu ketidak-percayaan [yang] disamaratakan, atau pengasingan dari, hidup kewarganegaraan.
o Pengetahuan Kewarganegaraan mempromosikan pen;dukungan untuk nilai-nilai demokratis.
o Pengetahuan Kewarganegaraan mempromosikan partisipasi politik (pp. 223-224).

While it may be debated whether traditional methods of teaching the subject matter of social studies will result in detectable changes in student thoughtfulness, it is clear that a rich store of information is an essential precursor to thoughtfulness and citizenship.

Third, the ability to resolve public issues is not the only aspect of critical thinking worth pursuing in schools. Beyer (1988) has conceptualized critical thinking as consisting of 10 abilities, listed here from simple to complex: [Selagi/Sedang] mungkin saja diperdebatkan apakah metoda [yang] tradisional mengajar pokok materi perihal ilmu kemasyarakatan akan mengakibatkan perubahan dapat ditemukan di (dalam) keprihatinan siswa, itu telah jelas bahwa suatu [gudang/ toko] informasi [yang] kaya adalah suatu pendahuluan, tanda penting ke keprihatinan dan kewarga negaraan.
Ketiga, kemampuan untuk memecahkan isu publik bukanlah satu-satunya aspek/pengarah [dari;ttg] pemikiran kritis berharga mengejar sekolah. Beyer (1988) mempunyai pemikiran kritis conceptualized [sebagai/ketika] terdiri dari 10 kemampuan, yang didaftarkan di sini dari sederhana ke kompleks:

• Distinguishing between verifiable facts and value statements
• Distinguishing relevant from irrelevant observations or reasons
• Determining the factual accuracy of a statement
• Determining the credibility of a source
• Identifying ambiguous statements
• Identifying unstated assumptions
• Detecting bias
• Identifying logical fallacies
• Recognizing logical inconsistencies in a line of reasoning
• Determining the overall strength of an argument or conclusion.

Membedakan fakta verifiable dan statemen nilai
o pembeda Relevan dari pertimbangan atau pengamatan tidak relevan
o Nentukan ketelitian yang berdasar fakta suatu statemen
o Nentukan kredibilitas suatu sumber
o Identifikasi statemen rancu

- o Identifikasi asumsi tidak dinyatakan
- o Deteksi penyimpangan
- o Identifikasi buah pikiran keliru logis
- o Enali logis inconsistencies di (dalam) satu baris memberi alasan
- o Nentukan [itu] keseluruhan kekuatan suatu argumentasi atau kesimpulan.

Teaching to develop these abilities in the social studies classroom does not focus students on developing and defending positions on controversial issues. It does not embroil teacher and students in the developmental and phenomenological quagmires that often occur in CPI curricula. Pengajaran untuk kembang;kan kemampuan ini di (dalam) ilmu kemasyarakatan kelas tidak memusatkan para siswa pada [atas] mengembang;kan dan mempertahankan posisi pada [atas] isu gemar bertengkar. [Itu] tidak mengacaukan guru dan para siswa di (dalam) yang pengembangan dan rawa,kesulitan pendekatan yang sering terjadi CPI curricula.

CONCLUSION

Like the toy where the child hits one peg with a hammer only to have a different peg pop up, the progressive impulse to employ social studies to instill activism in youth and promote social change is a phenomenon that continues to "pop up" throughout 20th century education history. From the creation of social studies in 1916, to the Rugg textbooks in the 1930s, to the public issues emphasis of the 1960s and 70s, to the critical theorists and postmodernists of the 1980s and 90s, the "progressive" impulse has continued to mutate. Seperti mainan [di mana/jika] anak memukul satu pancang dengan sekedar memalu untuk mempunyai suatu pancang berbeda muncul, dorongan/gerakan hati yang progresif untuk mempekerjakan ilmu kemasyarakatan ke instill activism di (dalam) [masa/kaum] muda dan mempromosikan perubahan sosial adalah suatu peristiwa yang melanjut untuk " muncul" sepanjang;seluruh sejarah pendidikan abad 20. Dari ciptaan ilmu kemasyarakatan di (dalam) 1916, kepada Rugg Buku teks di (dalam) 1930s, kepada orang banyak/masyarakat mengeluarkan penekanan 1960s dan 70s, kepada ahli teori yang kritis dan postmodernists 1980s dan 90s, " yang progresif" dorongan/gerakan hati mempunyai tetap mutate.

Over the past 20 years, postmodern thought and critical theory have supplied the framework for the work of the current generation of social studies leaders. In 1985, Nelson edited a special section on critical thinking for *Social Education*, the flagship journal of the National Council for the Social Studies (Nelson, 1985). His introduction, which has the typical critical perspective of what's wrong with America, states that: Di) atas masa lalu 20 tahun, postmodern pikir dan teori kritis sudah menyediakan kerangka [itu] untuk pekerjaan generasi para pemimpin ilmu kemasyarakatan yang sekarang. Di (dalam) 1985, Nelson menerbitkan suatu bagian khusus pada [atas] pemikiran kritis untuk Pendidikan Sosial, jurnal kapal pemimpin Dewan Yang nasional untuk Ilmu Kemasyarakatan [itu] (Nelson, 1985). Pengenalan nya, Yang mempunyai perspektif kritis yang khas [yang] dari apa [yang] salah dengan Amerika, Negara bahwa:

Critical thinking would be a primary pedagogical purpose . . . examining underlying structure and dominant cultural ideologies, would be expected. This would involve critical study of gender, race, nationalistic domination of social structures and knowledge. Thus content and method would be interrelated (p. 370).

In the critical theorists' view of social studies education, subject matter remains subordinated to the broader goal of radically transforming American politics and culture. One critical theorist (Alquist, 1990) expressed the role of teaching critical thinking thus: "This is not critical thinking for the sake of debate, argument or logical reasoning, but for constructive change, for the transformation of society" (p. 25). Pemikiran kritis akan menjadi suatu tujuan bersifat pendidikan utama... pengujian mendasari struktur dan ideologi budaya dominan, akan diharapkan. Ini akan melibatkan studi jenis kelamin kritis, [ras/lomba],

dominasi [yang] kebangsaan [dari;ttg] pengetahuan dan struktur sosial. [Dengan] begitu isi dan metoda akan bersifat saling berhubungan (p. 370).
Di (dalam) pandangan pendidikan ilmu kemasyarakatan ahli teori yang kritis, sisa pokok memperbudak kepada gol yang lebih luas secara radikal menjelmakan Kultur Dan Politik Amerika. Satu ahli teori kritis (Alquist, 1990) yang dinyatakan peran mengajar pemikiran kritis seperti itu: " Ini adalah tidak pemikiran kritis demi debat, argumentasi atau pemikiran logis, tetapi untuk perubahan bersifat membangun, untuk/karena perubahan bentuk masyarakat" (p. 25).

With the focus on societal transformation so important to educational theorists, more basic questions in social studies education have not received the attention necessary to advance teacher practice.[3] The majority of social studies researchers ignore such knowledge-focused questions as what to teach, when to teach it, and how to teach it effectively. A review of the journal of the College and Faculty Assembly of the National Council of the Social Studies (*Theory and Research in Social Education*) reveals a consistent neglect of research related to the identification of best practices. Of the 63 articles published in this journal between 1992 and 1997, none examined the influence of social studies curriculum on student acquisition of historical or civic knowledge (Leming, 1997). mempertanyakan ilmu kemasyarakatan pendidikan belum menerima perhatian [itu] diperlukan untuk membantu guru practice.3 Mayoritas peneliti ilmu kemasyarakatan mengabaikan seperti pertanyaan knowledge-focused apa yang harus mengajar, ketika untuk mengajar itu, dan bagaimana cara mengajar ia/nya secara efektif. Suatu tinjauan ulang jurnal Perguruan tinggi Dan Perakitan Fakultas/Pancaindera Dewan [yang] Yang nasional Ilmu Kemasyarakatan (Teori Dan Riset di (dalam) Pendidikan Sosial) mengungkapkan suatu pengabaian riset [yang] konsisten berhubungan dengan identifikasi [dari;ttg] praktek terbaik. Tentang yang 63 artikel menerbitkan jurnal ini antar[a] 1992 dan 1997, tidak ada menguji pengaruh kurikulum ilmu kemasyarakatan pada [atas] siswa pengadaan historis atau pengetahuan kewarganegaraan (Leming, 1997).

While social studies theorists are aware that no research exists to support the idea of focusing the curriculum on the discussion of controversial issues, the idea will not go away. Five years after Parker's (1991) pessimistic observation regarding achieving thinking and decision making objectives in social studies—"the wish has remained so fervent, yet so unrealized" (p. 354)—Hahn (1996) noted that ". . . despite numerous calls for issues-centered social studies instruction over the years, the few schools that offered such programs have not reported their effectiveness" (p.25). More recently, Hess and Posselt (2002) noted ". . . that students can be taught how to discuss better is a claim supported by little empirical evidence—and virtually none in the recent social studies literature" (p. 284). [Selagi/Sedang] ilmu kemasyarakatan ahli teori sadar bahwa tidak (ada) riset ada untuk mendukung [itu] gagasan untuk memusatkan kurikulum [itu] pada [atas] diskusi [dari;ttg] isu gemar bertengkar, gagasan tidak akan pergi menjauh. Lima tahun setelah Milik tukang parkir (1991) pengamatan pesimistis mengenai menuju keberhasilan pemikiran dan sasaran hasil pengambilan keputusan di (dalam) studies-"the sosial harapan telah tinggal maka kesungguhan, namun [yang] sangat tidak direalisir" (p. 354)-Hahn (1996) yang dicatat bahwa"... di samping banyak panggilan untuk instruksi ilmu kemasyarakatan [yang] issues-centered dari tahun ke tahun, minoritas sekolah yang menawarkan . seperti (itu) program belum melaporkan efektivitas mereka" (p.25). Lebih baru-baru ini, Hess dan Posselt (2002) yang dicatat"... para siswa itu dapat diajar bagaimana cara mendiskusikan lebih baik adalah suatu klaim yang didukung oleh evidence-and empiris [kecil/sedikit] [yang] hampir tidak ada literatur ilmu kemasyarakatan yang terbaru" (p. 284).

This persistent focus by the intellectual elite of the social studies profession on critical thinking and social change has led to the abandonment of the mission of teaching good quality content. As a result, we have a field without discernible progress in the craft and science of teaching. It has also left the field in disarray with researchers focused on issues that have little salience to students and teachers (Leming, 1989, 1992). Fokus [yang] gigih ini oleh pilihan yang intelektual profesi ilmu kemasyarakatan pada [atas] pemikiran kritis dan perubahan sosial telah

menuju/mendorong penundaan misi mengajar isi berkwalitas. Sebagai hasilnya, kita mempunyai suatu bidang tanpa kemajuan dapat dibedakan di (dalam) [seni;perahu] dan ilmu pengetahuan mengajar. [Itu] juga telah meninggalkan bidang [itu] di (dalam) kekacauan dengan peneliti memusat pada [atas] isu yang hanya mempunyai sedikit salience ke para siswa dan para guru (Leming, 1989, 1992).

As we move through the new millennium, if social studies teaching is to improve, we must forego approaches that marginalize content and lack empirical evidence. It is time to focus on research-based curriculum development that will result in improvements in student understanding and appreciation of our cultural and political traditions. It is to be hoped that leaders of the social studies profession will stop attempting to use the discipline as a political tool to achieve ideological goals and instead begin to assume a responsible role in this important undertaking. Ketika kita pindah;gerakkan melalui/sampai millennium yang baru, jika pengajaran ilmu kemasyarakatan adalah untuk meningkatkan, kita harus membatalkan pendekatan yang marginalize isi dan keterangan empires kekurangan. [Itu] adalah waktu untuk memusatkan pada [atas] pengembangan kurikulum research-based yang akan mengakibatkan peningkatan di (dalam) pemahaman siswa dan penghargaan [dari;ttg] tradisi politis dan budaya [kita/kami]. [Itu] (diharapkan) untuk berharap agar para pemimpin ilmu kemasyarakatan profesi akan stop mencoba untuk menggunakan disiplin [itu] sebagai alat politis untuk mencapai gol ideologis dan sebagai ganti(nya) mulai untuk mengasumsikan suatu peran bertanggung jawab di (dalam) [yang] penting ini melakukan.

NOTES

1. Portions of this paper appeared earlier in (J.S. Leming, 1998).

2. The Hess and Posselt (2002) research indicates that it is in fact possible to teach students some of the skills necessary to participate in CPI discussions; however, they did not include comparison group data and their conclusions were based on changes in only three students.

3. Estimates are that less than 5 percent of secondary social studies classrooms utilize CPI instruction on a regular basis (Kahne, Rodriguez, Smith, and Thiede, 2000; Massialias et al., 1975; Newmann, 1991). This perspective on the goals of social studies education has remained primarily the province of academics and other educational theorists of a left-liberal persuasion.

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SELESAI UNTUK BAGIAN I

BAGIAN II

1. Designing Effective Instruction for Secondary Social Studies. Second Edition. (ED437304) Add

Author(s): Dynneson, Thomas L.; Gross, **Pub Date:** 1999-00-00

Richard E.
Source: N/A

Pub Type(s): Books; Guides - Non-Classroom
Peer-Reviewed: N/A

Descriptors:
Curriculum Design; Educational Technology; Instruction; National Standards; Secondary Education; Social Studies

Abstract:
This text provides a solid theoretical base in social studies education at the secondary level. The text can be used as a basic methods textbook for teacher candidates or as a curriculum/instruction resource for practicing social studies teachers. The text focuses on instructional development; incorporates national standards through numerous examples; gives extensive treatment to instructional technology; recognizes the historical and ideological basis on which social studies instruction is founded; addresses the issues and problems associated with designing, developing, and executing instruction; describes the different approaches of the social studies in regard to the selection and organization of disciplinary content; and organizes the elements of subject-matter content into effective presentation patterns for students. Chapter titles include: Teks ini menyediakan suatu dasar [yang] teoritis padat di (dalam) pendidikan ilmu kemasyarakatan di tingkatan yang sekunder [itu]. Teks dapat digunakan sebagai suatu buku teks metode dasar untuk calon guru atau sebagai suatu curriculum/instruction sumber daya untuk para guru ilmu kemasyarakatan praktek. Teks memusat pada [atas] pengembangan intervi; menyertakan standard nasional melalui/sampai banyak contoh; memberi perawatan luas ke teknologi intervi; mengenali basis ideologis dan yang historis yang di atasnya instruksi ilmu kemasyarakatan ditemukan; menunjuk permasalahan dan isu [itu] berhubungan dengan perancangan, mengembang;kan, dan melaksanakan instruksi; menguraikan pendekatan yang berbeda ilmu kemasyarakatan dalam hubungan dengan pemilihan dan organisasi [dari;ttg] isi teratur; dan mengorganisir unsur-unsur isi pokok ke dalam presentasi efektif mempola untuk para siswa. Bab sebutan/judul meliputi:

(1) "Perceptions, Ideologies, and Approaches within the Social Studies"; (2) "Origins of the Social Studies"; (3) "Core Subject Fields of the Social Studies: History, Government, and Geography"; (4) "Important Subject Fields of the Social Studies: Economics, Sociology, Psychology, and Anthropology"; (5) "Meeting Needs and Providing Effective Instruction"; (6) "The Appropriate Use of Classroom Technology"; (7) "Motivating Student Learning"; (8) "The Identification and Formulation of Instructional Objectives"; (9) "Designing Courses, Units, and Lessons"; (10) "The Elements of Knowledge"; (11) "Skill Development"; (12) "Education for Values"; (13) "Instructional Strategies and Activities"; (14) "The Evaluation, Selection, and Development of Instructional Materials"; and (15) "The Formal and Informal Means of Assessing Learning Outcomes." (LB) **Note:**The following two links are not-applicable for text-based browsers or screen-reading software. ▲ (1) " Persepsi, Ideologi, dan Pendekatan di dalam Ilmu Kemasyarakatan"; (2) " Asal Ilmu Kemasyarakatan"; (3) " Bidang Pokok Inti Ilmu Kemasyarakatan: Sejarah, Pemerintah, dan Geografi"; (4) " Bidang Pokok Penting Ilmu Kemasyarakatan: Ekonomi, Sosiologi, Psikologi, dan Ilmu antropologi"; (5) " Bertemu Kebutuhan dan Instruksi Efektif Menyediakan"; (6) " Penggunaan Teknologi Kelas Yang sesuai"; (7) " Memotivasi Siswa [Yang] belajar"; (8) " Identifikasi Dan Perumusan Sasaran hasil Intervi"; (9) " Merancang Kursus, Unit, dan Pelajaran"; (10) " Unsur-Unsur Pengetahuan"; (11) " Pengembangan Ketrampilan"; (12) " Pendidikan untuk Nilai"; (13) " Strategi Intervi Dan Aktivitas"; (14) " Evaluasi, Pemilihan, dan Pengembangan Material Intervi"; Dan (15) " [Alat/ makna] [yang] Informal Dan yang formal Menaksir Belajar Hasil." (LB) Note:The [yang] mengikuti dua mata rantai adalah not-applicable untuk [yang] text-based browsers atau screen-reading perangkat lunak.

Title:
What's Right with the Social Studies Is Also What's Wrong.
:Authors:
Ylvisaker, James
Tahun 1984

Opinion Papers; Speeches/Meeting Papers
If social studies is going to contribute to the overall qualitative improvement of public schools, educators must agree on a social studies core curriculum for all students. Social studies educators can take credit for having had a role in the maintenance of one of the world's oldest constitutional democracies, and as a national assessment revealed, for the fact that 70 percent of public school students are learning what social studies intends. Jika ilmu kemasyarakatan akan berperan untuk [itu] keseluruhan peningkatan sekolah negeri kwalitatif, pendidik harus bermufakat suatu kurikulum inti ilmu kemasyarakatan untuk semua para siswa. Ilmu kemasyarakatan Pendidik dapat mendapat pujian karena setelah telah suatu peran di [dalam] pemeliharaan satu demokrasi dunia konstitutional paling tua, dan sebagai penilaian nasional mengungkapkan, untuk/karena fakta bahwa 70 persen para siswa sekolah negeri adalah belajar ilmu kemasyarakatan apa [yang] berniat.

However, a serious roadblock to dramatic improvement in social studies instruction is the current state of curriculum ambiguity. Teachers need to coalesce around a defined core, which would occupy 50-60 percent of the time allocated for a course, still leaving room for flexibility to respond to student interests, contemporary events, and special teacher strengths. Educators can begin by agreeing that a re-examination of social studies is needed, determining what is taught in classrooms or developing assessment programs, presenting the analysis to the school board, and participating in social studies assessment at the state level. Many professional organizations as well as the ERIC data base offer help in defining a social studies core curriculum. (RM) Bagaimanapun, suatu pengadang jalanan serius ke peningkatan dramatis di (dalam) instruksi ilmu kemasyarakatan adalah status kerancuan kurikulum yang sekarang. Para guru harus bersatu di sekitar suatu inti digambarkan, yang akan menduduki 50-60 persen waktunya mengalokasikan untuk suatu kursus, masih meninggalkan ruang untuk fleksibilitas untuk bereaksi terhadap minat siswa, peristiwa jaman ini, dan kekuatan guru khusus. Pendidik dapat mulai dengan bersetuju bahwa suatu re-examination ilmu kemasyarakatan diperlukan, menentukan apa [yang] diajar kelas atau mengembang;kan program penilaian, mempresentasikan analisa [itu] kepada dewan sekolah, dan mengambil bagian penilaian ilmu kemasyarakatan di status mengukur. Banyak organisasi profesional seperti halnya Data base yang ERIC menawarkan bantuan di (dalam) melukiskan suatu kurikulum inti ilmu kemasyarakatan. (RM)
N/A

BAGIAN III

12-08-03

What's Wrong with Social Studies

By Kathleen Porter

Ms. Porter, a former social studies teacher, is associate research director of the Thomas B. Fordham Foundation.

For an organization that claims to value diversity and debate as much as the National Council for the Social Studies (NCSS), precious little of either was to be found at its very own annual conference, held in Chicago in mid-November and attended by some 5,000 social studies teachers, professors, and itinerant experts. In fact, after scouring the program in search of sessions where the goals of social studies itself would be examined and, perish the thought, debated, I came up nearly empty. So I attended some other sessions. Karena suatu organisasi yang mengakui untuk menghargai keaneka ragaman dan berdebat sebanyak . seperti Dewan Yang nasional untuk Ilmu Kemasyarakatan (NCSS), [yang] [kecil/sedikit] mahal untuk yang manapun (diharapkan) untuk ditemukan pada milik berharga nya konferensi tahunan, Chicago yang [disimpan/laksanakan di] di (dalam) mid-November dan yang menghadiri oleh sekitar 5,000 para guru ilmu kemasyarakatan, profesor, dan tenaga ahli pergi keliling. Sesungguhnya, setelah menggosok program [itu] mencari-cari sesi [di mana/jika] gol ilmu kemasyarakatan [dirinya] sendiri akan diuji dan, binasa pikiran [itu], diperdebatkan, aku muncul hampir kosong. Maka saya menghadiri beberapa sesi lain .

The first was a series of presentations organized by the College and University Faculty Assembly (CUFA), an NCSS affiliate. I was interested because these papers were textbook evaluations and, since we at Fordham are nearing publication of our own review of history textbooks, I hoped these university professors' findings might be instructive. And they were, albeit not quite in the fashion intended by their authors. Yang pertama adalah satu rangkaian presentasi yang di/terorganisir oleh Perguruan tinggi Dan Perakitan Fakultas/Pancaindera Universitas (CUFA), suatu NCSS bergabung. Aku telah tertarik sebab dokumen ini adalah evaluasi buku teks dan, [karena;sejak] kita pada Fordham sedang mendekati penerbitan [dari;ttg] tinjauan ulang buku teks sejarah kita sendiri, aku mengharapkan universitas ini penemuan profesor boleh jadi mengandung pelajaran. Dan mereka adalah, sekalipun hanya bukan sungguh di (dalam) pertunjukan yang diharapkan oleh pengarang mereka.

One analyzed the portrayal of the United States in Canadian textbooks. The author traced her findings from textbooks published from the late 1800s through 1970--a peripheral topic and an analysis that stopped just when it might have gotten interesting.

The other claimed to examine "commonly used middle level social studies books" with an eye toward how they "depict American culture, society and lifestyle in comparison with the rest of the world." In reality, the analysis focused mainly on how the textbooks failed to demonstrate that wealth distribution across and within countries is a zero sum game (a theory that most economists discredit)--and that, because America consumes a

disproportionate share of resources, it contributes to poverty elsewhere on the planet.
Sese]Orang menganalisa cara membawakan Amerika Serikat di (dalam) Buku teks Kanada. Pengarang mengusut penemuan nya dari buku teks menerbitkan dari almarhum 1800s melalui/sampai 1970--a topik sekeliling dan suatu analisa yang menghentikan [hanya;baru saja] ketika itu bisa sudah mendapat menarik.
diklaim Lain untuk menguji " ilmu kemasyarakatan tingkatan pertengahan biasanya digunakan membukukan" dengan suatu mata ke arah bagaimana mereka " melukiskan Kultur Amerika, Masyarakat Dan Lifestyle jika dibandingkan dengan sisa dari dunia." Pada kenyataannya, analisa memusat sebagian besar pada [atas] bagaimana buku teks yang digagalkan untuk mempertunjukkan distribusi kekayaan itu ke seberang dan di dalam negara-negara adalah suatu nol game pen;jumlahan (suatu teori yang kebanyakan ahli ekonomi discredit)--and yang, sebab Amerika mengkonsumsi suatu [bagian;saham] sumber daya tidak sebanding, [itu] berperan untuk kemiskinan di tempat lain pada [atas] planet.

This presenter also focused on how "the colonial history of exploitation" was not discussed as a source of contemporary third-world poverty, and implied that this failure to produce a more "balanced" view of economic history is due to the fact that textbook publishers are owned by multi-national corporations, who apparently have an interest in glossing over such facts. To correct for this textbook failing, she urged her listeners to check out some nonprofit organizations for supplemental materials. Her preferred on-line source is "Rethinking Schools," which presents perhaps the most horrendously biased curriculum supplements I've encountered. (See for yourself at http://www.rethinkingschools.org.) Menyajikan ini juga memusat pada [atas] bagaimana " sejarah kolonial penghisapan" tidaklah dibahas sebagai sumber [dari;ttg] kemiskinan dunia ketiga jaman ini, dan menyiratkan bahwa . ini kegagalan untuk menghasilkan suatu lebih [] " [yang] seimbang" pandangan [dari;ttg] sejarah ekonomi adalah dalam kaitan dengan fakta bahwa penerbit buku teks dimiliki oleh multi-national korporasi, [siapa] yang kelihatannya berminat pada menutup kesalahan . seperti (itu) fakta. Untuk mengoreksi untuk buku teks ini [yang] tidak berhasil, dia menghimbau pendengar nya untuk check-out beberapa organisasi tidak mencari keuntungan untuk material bersifat tambahan. Nya lebih menyukai sumber on-line adalah " Mikirkan kembali Sekolah," Yang menghadiahi barangkali paling secara menghebohkan kurikulum yang dibiaskan lampiran Aku telah temu. (Lihat untuk diri anda pada http://www.rethinkingschools.org.)

At CUFA's closing session, keynote speaker Linda McNeil (Rice University) wowed the crowd with a passionate denunciation of No Child Left Behind's accountability provisions as "demons of the law." McNeil has long opposed standards and testing because, she believes, they cause the disappearance from classrooms of "rich and wonderful and complicated teaching and learning." Her chief example in this particular speech: a student who had come to her to complain that he wasn't going to see much artwork in his art class this year because the art teacher was busy helping students prepare for the upcoming math proficiency test. Of course, the students would be able to do basic math because of the extra attention they were getting, but this didn't make it into her analysis of the "tragedy." Pada Sidang penutup CUFA's, menyampaikan pokok pikiran pembicara Linda Mcneil (Universitas Beras) wowed kerumunan dengan suatu pengumuman [yang] [penuh kasih/bernafsu] Tidak (ada) Anak Meninggalkan [Ketentuan/Perbekalan] Tanggung-Jawab di belakang [sebagai/ketika] " setan hukum [itu]." Mcneil mempunyai merindukan menentang;kan standard dan pengujian sebab, dia percaya, mereka menyebabkan penghilangan [itu] dari kelas " pelajaran dan pengajaran diper;rumit dan sangat bagus dan kaya." Contoh Pemimpin nya di (dalam) pidato/suara tertentu ini: seorang siswa [siapa] yang telah datang kepada nya untuk mengeluh bahwa ia tidak akan (ke) lihat banyak artwork di (dalam) kelas seni nya tahun ini sebab seni guru sibuk membantu para siswa bersiap-siap menghadapi math perjanjian kecakapan yang akan datang Tentu saja, para siswa akan mampu lakukan math sebab dasar perhatian yang ekstra [yang] mereka sedang menjadi, tetapi ini tidak membuat ia/nya ke dalam analisa nya " tragedi."

McNeil went on to allege that some principals are pushing out the lowest performing kids so that their school's test scores don't suffer because of them. Rather than voicing outrage at principals who cheat both kids and accountability in this way, however, she and her audience vented their spleens at the accountability system itself. Their call to action for teachers and ed school professors: encourage parents to revolt against NCLB and craft more studies that would "prove" that standards and tests don't improve student achievement. Mcneil meneruskan perjalanan ke menuduh bahwa beberapa utama sedang mendorong ke luar yang paling rendah melakukan/menyelenggarakan anak kambing sedemikian sehingga test sekolah mereka score tidak menderita oleh karena [mereka/nya]. Dibanding/Bukannya menyuarakan menyakitkan hati pada utama [siapa] yang menipu anak kambing kedua-duanya dan tanggung-jawab dengan cara ini, bagaimanapun, dia dan pendengar nya yang vented limpa mereka di sistem tanggung-jawab [dirinya] sendiri. Panggilan mereka ke tindakan untuk para guru dan ed profesor sekolah: mendorong orang tua untuk jijik akan; mendurhaka NCLB dan [seni;perahu] lebih [] studi yang akan " membuktikan" dan standard itu test tidak meningkatkan prestasi siswa.

CUFA's sessions turned out to be a pallid preview of what I would face at the bona fide NCSS sessions. One of my favorites was entitled "they call it the social studies." Its purpose was to help attendees understand that the field is not called history, civics, geography, and economics but social studies, and that this means students ought to study "social things with the goal of creating good citizens." During this session we were asked to write down what we thought the five goals of social studies education should be, and to share our thoughts with our neighbors. My list included such heresies as "explain the foundations of our democracy" and "explain how the framers' vision of liberty and equality paved the way for the eventual end of slavery, the Civil Rights movement, and the feminist movement." Sesi CUFA's ternyata adalah suatu pra pertunjukan pucat dari apa [yang] aku akan menghadapi di bona fide NCSS sesi. Salah satu dari favorit ku telah diberi hak/judul " mereka [sebut/panggil/hubungi] ia/nya ilmu kemasyarakatan." Tujuan nya adalah untuk membantu peserta memahami [bahwa/yang] bidang tidak dipanggil sejarah, pelajaran kewarga negaraan, geografi, dan ekonomi tetapi ilmu kemasyarakatan, dan bahwa . ini [alat/ makna] para siswa hendaknya belajar " berbagai hal sosial dengan gol menciptakan warganegara baik." Selama sesi ini [yang] kita telah diminta untuk penurunan nilai [yang] apa yang [kita kami] pikir yang lima gol pendidikan ilmu kemasyarakatan seharusnya, dan untuk berbagi pemikiran [kita/kami] dengan tetangga [kita/kami]. Daftar ku mencakup seperti bidaah " menjelaskan dasar [dari;ttg] demokrasi [kita/kami]" dan " menjelaskan bagaimana visi persamaan dan kebebasan pembuat menyiapkan jalan bagi akhir perbudakan yang akhirnya, Pergerakan [Hak/ kebenaran] Yang sipil, dan pergerakan pejuang hak wanita."

When I turned to share these goals with my neighbor--naïvely supposing that we'd be able to come to find some middle ground--I soon realized that we weren't even playing the same game, let alone in the same ballpark. His goals were the ever popular "encourage critical thinking and community and civic engagement." Nary a word about what students will think critically about or whether they'll know enough to engage in a thoughtful debate in the first place.

As the group reassembled and people shared their goals more widely, I realized that mine were shared by nobody while my neighbor's were shared by all. They spoke of empowering students to participate in the community, teaching them to make informed decisions, and teaching them integrity, conflict resolution and communications skills. Yet the teachers never mentioned how they would achieve these noble goals without providing historical context within which students can understand past, present and future events. Indeed, not one soul suggested that youngsters should learn about the origins of democracy, the founding of America, the conflict and change that has occurred throughout our history, or people who have played key roles in shaping that history. [Seperti;Sebagai;Ketika] kelompok mengumpulkan kembali dan orang-orang membagi bersama gol mereka lebih secara luas, aku

menyadari bahwa tambang/ranjau/aku telah bersama oleh tidak ada orang [selagi/sedang] tetangga ku telah bersama secara keseluruhan. Mereka menyatakan menguasakan para siswa untuk mengambil bagian masyarakat, mengajar [mereka/nya] untuk membuat keputusan diberitahukan, dan mengajar [mereka/nya] integritas, resolusi konflik dan ketrampilan komunikasi. Namun para guru tidak pernah menyebutkan bagaimana mereka akan mencapai gol [yang] mulia ini tanpa menyediakan konteks historis di dalam mana para siswa dapat memahami masa lampau, [kini/hadir] dan peristiwa masa depan. Tentu saja, bukan satu jiwa mengusulkan bahwa anak muda [perlu] belajar tentang asal demokrasi, pendirian Amerika, konflik dan perubahan yang telah terjadi sepanjang;seluruh sejarah [kita/kami], atau orang-orang [siapa] yang sudah main peran kunci di (dalam) membentuk yang sejarah.

I got the sense that either the teachers take for granted that their students already know a lot about American history--heaven knows where they would have learned it if not in social studies class--or that they believed it doesn't matter so long as they know "where to find the information." The teachers also agreed that their job was to make social studies relevant and interesting, apparently by any means other than teaching actual historical content. Aku mendapat [perasaan/pengertian] [itu] yang yang manapun para guru membenarkan bahwa para siswa mereka telah mengetahui banyak sekitar History--Heaven Amerika mengetahui [di mana/jika] mereka tidak pasti telah mempelajari ia/nya jika di (dalam) ilmu kemasyarakatan class--or yang mereka percaya tidak jadi soal asalkan mereka mengetahui " [di mana/jika] untuk temukan informasi [itu]." Para guru juga menyetujui bahwa pekerjaan mereka adalah untuk membuat ilmu kemasyarakatan relevan dan menarik, kelihatannya dengan cara apapun selain dari pengajaran isi historis nyata.

Throughout the conference, in plenary and small-group sessions alike, conspiracy theories abounded. To NCSS members, at least, the vast right-wing conspiracy is alive and thriving. Apparently their definition of "radical right wing" now includes anyone who advocates school choice, standards and accountability, alternative teacher certification, or other such reforms. Moreover, such "reformers" and policy makers are all part of a political conspiracy to undermine public education. I encountered precisely one person who could actually articulate what he thought the conspiracy was; everyone else settled for the simplistic assertion that "politics" is driving these unwelcome reforms. Sepanjang;Seluruh konferensi, di (dalam) paripurna dan small-group sesi mirip, teori komplotan abounded. Ke NCSS anggota, sedikitnya, komplotan fraksi kanan yang luas hidup dan tumbuh subur. Kelihatannya definisi mereka " fraksi kanan radikal" sekarang meliputi seseorang [siapa] yang mendukung pilihan sekolah, standard dan tanggung-jawab, sertifikasi guru alternatif, atau lain . seperti (itu) perubahan. Lebih dari itu, . seperti (itu) " pembaharu" dan pembuat kebijaksanaan adalah semua bagian dari suatu komplotan politis untuk mengikis pendidikan publik. Aku temu dengan tepat seseorang [siapa] yang bisa benar-benar mengartikulasikan apa yang ia pikir komplotan [itu] adalah; semua orang selain itu bersedia menerima pernyataan yang sederhana yang " politik" sedang mengemudi perubahan tidak disukai ini.

The conspiracy, insisted one NCSS member whose name I didn't catch, is driven by right-wing ideologues who use testing, standards, and accountability to set public schools up for failure. Then they'll be able to divert public funding to private schools. The notion that these "ideologues" might just want what's best for kids was rejected on its face as preposterous. Komplotan, meminta dengan tegas satu NCSS anggota nama siapa [yang] aku tidak tangkapan, dikemudikan oleh fraksi kanan ideologues [siapa] yang menggunakan pengujian, standard, dan tanggung-jawab untuk menyediakan sekolah negeri untuk kegagalan. Kemudian mereka akan bisa mengalihkan publik [yang] membiayai ke sekolah swasta. Dugaan yang ini " ideologues" mungkin [hanya;baru saja] ingin apa (yang) [yang] terbaik untuk anak kambing telah ditolak pada [atas] wajah nya [sebagai/ketika] tidak masuk akal.

Were I a conspiracy theorist, however, I now have enough information to conclude the opposite: that the education establishment in general, and the NCSS in particular, are working energetically to shut down the kind of dissent and debate that makes effective reforms possible. Consider, for example, that while NCSS leaders discussed and denounced Fordham's recent publication Where Did Social Studies Go Wrong? at more than one session, they didn't invite a single author, editor, Fordham staffer, or really anyone who disagrees with the status quo to engage in debate. Bukan suatu ahli teori komplotan, bagaimanapun, aku sekarang mempunyai cukup informasi untuk menyimpulkan kebalikan [itu]: [bahwa/yang] penetapan pendidikan secara umum, dan NCSS khususnya, sedang bekerja dengan enerjik untuk menutup [itu] macam berselisih paham dan berdebat buatan itu perubahan efektif mungkin. Pertimbangkan, sebagai contoh, bahwa [selagi/sedang] NCSS para pemimpin membahas dan menuduh Penerbitan [yang] terbaru Fordham's Di mana Ilmu Kemasyarakatan Eleweng? pada sesi lebih dari satu, mereka tidak mengundang pengarang tunggal, editor, Fordham Mengorganisir, atau benar-benar seseorang [siapa] yang tidak setuju dengan keadaan tetap pada suatu saattertentu [itu] untuk terlibat dalam debat.

But it gets worse. The self-styled "Contrarians," a tiny band of teachers and ed school professors within NCSS who believe that social studies urgently needs an overhaul, have tried for two years to get a session at the NCSS annual wingding. In 2002, though ostensibly granted a session, it was conveniently left off the program and thus couldn't meet. This year, though their session was listed on the program, NCSS conveniently double-booked the room. So the Contrarians scrambled to find an empty room with no help from NCSS (and minimal help from the hotel). After two tries, they finally found a spot and were able to proceed on their own, no thanks to the NCSS. Tetapi [itu] menjadi . buruk. Yang self-styled " Contrarians," suatu rombongan para guru [yang] kecil dan ed profesor sekolah di dalam NCSS [siapa] yang percaya bahwa ilmu kemasyarakatan [yang] sangat memerlukan suatu memeriksa secara seksama, sudah mencoba untuk dua tahun untuk mendapat/kan suatu sesi di NCSS pesta ramai tahunan. Di (dalam) 2002, meskipun [demikian] pura-pura [mewariskan/mengabulkan] suatu sesi, [itu] dengan senang hati berhenti program [itu] dan [dengan] begitu tidak bisa temu. Tahun ini, meskipun [demikian] sesi mereka telah didaftarkan pada [atas] program, NCSS dengan senang hati double-booked ruang [itu]. Sehingga Contrarians aduk untuk temukan suatu ruang kosong dengan tidak ada bantuan dari NCSS (dan bantuan minimal dari hotel). Setelah dua usaha, mereka akhirnya menemukan suatu noda dan bisa berproses pada [atas] milik mereka sendiri, tidak (ada) terima kasih kepada [itu] NCSS.

A small group attended, including a hostile NCSS past president and a current board member. A few of the authors of Where Did Social Studies Go Wrong? presented their arguments, then opened the floor for discussion--a real one that included debate of hotly contested issues, something that I had not seen in any other NCSS session. During this debate, however, I was amazed by the mean, ad hominem, and insulting nature of the comments from the social studies establishment. Though the NCSS board member said that a more "productive" way to air these matters would be for the Contrarians to hold a general session where they presented their ideas and brought in opponents who could debate the pros and cons, in fact NCSS for years now has refused to give the Contrarians any room at their conference, let alone a large room to hold a general session and debate. Suatu kelompok kecil menghadiri, mencakup suatu bermusuhan NCSS presiden yang lampau dan suatu anggota [papan/meja] sekarang. Beberapa pengarang Di mana Ilmu Kemasyarakatan Eleweng? yang diperkenalkan argumentasi mereka, kemudian membuka lantai [itu] untuk discussion--a riil yang mencakup debat [dari;ttg] isu dengan semangat mengadakan perlombaan, sesuatu yang [yang] aku tidak [pernah] melihat di lain NCSS sesi. Selama debat ini, bagaimanapun, aku telah dibuat kagum oleh rata-rata, iklan hominem, dan alam[i] [yang] menghina komentar dari penetapan ilmu kemasyarakatan. Meskipun [demikian] NCSS menumpang anggota berkata bahwa suatu lebih [] " produktif" [jalan/cara] ke udara berbagai hal ini akan untuk Contrarians untuk [memegang/menjaga] suatu sidang umum [di mana/jika] mereka memperkenalkan gagasan mereka dan membawa masuk lawan [siapa]

yang bisa berdebat yang pro dan contra, sesungguhnya NCSS bertahun-tahun sekarang telah menolak untuk memberi [itu] Contrarians manapun ruang pada konferensi mereka, biarkan sendiri suatu ruang besar untuk [memegang/menjaga] suatu sidang umum dan debat.

The theme of this year's conference was: "The power of one: How to make a difference in a changing world." Based on the efforts of the NCSS elite to promote a one-sided look at social studies education while stifling all attempts to question the status quo, I can only conclude that they truly believe in the power of one--and fear that permitting even a single voice of dissent might put at risk the enormous influence they have over the field of social studies. Tema [dari;ttg] konferensi tahun ini adalah: " [Kuasa/ tenaga] satu: Bagaimana cara membedakan [adalah] suatu mengubah dunia." yang didasarkan pada Usaha NCSS pilihan untuk mempromosikan suatu nampak/wajah berat sebelah pada pendidikan ilmu kemasyarakatan [selagi/sedang] stifling semua usaha untuk mempertanyakan keadaan tetap pada suatu saattertentu [itu], aku hanya dapat menyimpulkan bahwa mereka sungguh-sungguh percaya akan [kuasa/ tenaga] one--and ketakutan yang mengijinkan bahkan suatu suara [yang] tunggal berselisih paham kekuatan menaruh berhadapan dengan resiko pengaruh yang mahabesar [yang] mereka mempunyai (di) atas bidang ilmu kemasyarakatan.

BAGIAN IV

What's Wrong With Social Studies of Science?

Jesper Jerkert

Abstract

This paper discusses two features within influential branches of social studies of science, the adoption of the symmetry principle (first presented by Bloor 1976) and the existence of the experimenter's regress (as put forth mainly by Collins & Pinch 1994). Both are based on the following line of reasoning: in a scientific controversy no-one can decide who is right and who is wrong by referring to rational arguments and factual evidence, because if someone could, there would be no controversy in the first place. Tulisan ini mendiskusikan dua corak di dalam cabang studi sosia tentang/sebagai ilmu pengetahuan, adopsi prinsip simetri (pertama yang diperkenalkan oleh Bloor 1976) dan keberadaan kemunduran experimenter's ([seperti diusahakan sebagian besar oleh Collins& Pinch 1994). Kedua-duanya didasarkan pada garis berikut yang memberi alasan: dalam suatu kajian ilmiah kontroversi yang tak seorangpun dapat memutuskan yang benar dan siapa yang bersalah dengan mengacu pada argumentasi masuk akal dan bukti berdasar fakta, sebab jika seseorang bisa, ke sana akan menjadi tidak ada kontroversi dalam tempat perama.

It is argued that this description of scientific controversies does not demonstrate the absense of rationality, it simply presupposes it. There may well be rational arguments at work in a scientific controversy, but if a sociologist of science does not look for them, they will not be found. The advocates of the symmetry principle and the experimenter's regress havenot presented any arguments in support of their assumption that rational arguments and evidence play no role in the settlement of scientific controversies. So far, then, there is no reason to adopt the symmetry principle in social studies of

science, and there is no reason to believe in the experimenter's regress. [Itu] berargumentasi bahwa uraian ini [dari;ttg] kontroversi ilmiah tidak mempertunjukkan absense rasionalitas, [itu] hanya mensyaratkan itu. Mungkin ada argumentasi masuk akal di tempat kerja di (dalam) suatu kontroversi ilmiah, hanyalah jika suatu sarjana sosiologi ilmu pengetahuan tidak men/cari [mereka/nya], mereka tidak akan ditemukan. Advokat prinsip simetri dan experimenter's mundur havenot memperkenalkan manapun argumentasi di (dalam) pen;dukungan [dari;ttg] asumsi mereka yang masuk akal argumentasi dan bukti tidak main apapun peran di (dalam) penyelesaian [dari;ttg] kontroversi ilmiah. Maka
jauh, kemudian, tidak ada alasan untuk mengadopsi prinsip simetri [itu] di (dalam) ilmu kemasyarakatan ilmu pengetahuan, dan di sana adalah tidak (ada) alasan untuk percaya akan experimenter's [itu] mundur.

Introduction

The title of this paper is a question: What's wrong with social studies of science? A short answer would be: nothing! Social studies of science are of course a legitimate field of inquiry, and it would be difficult indeed to claim that the field is all "wrong." Nonetheless, I will argue that some things are wrong within social studies of science, as pursued by some influential researchers. In particular, I will argue that at least one of the most generally endorsed tenets of social studies—the principle of symmetry—is untenable. I will also argue that this principle has had a negative influence on sociologists' discussions of the purported "experimenter's regress." Sebutan catatan/kertas ini adalah suatu pertanyaan: Apa (yang) salah dengan studi social tenang ilmu pengetahuan? Suatu jawaban singkat akan: tidak ada apapun! Ilmu kemasyarakatan ilmu pengetahuan [menjadi/dari] kursus [adalah] suatu bidang pemeriksaan sah, dan [itu] akan bersifat sulit tentu saja untuk mengakui [bahwa/yang] bidang adalah semua " salah." Meskipun begitu, akan membantah bahwa beberapa berbagai hal adalah salah di dalam ilmu kemasyarakatan ilmu pengetahuan, [seperti/ketika] dikejar oleh beberapa peneliti berpengaruh. Khususnya, aku akan membantah bahwa sedikitnya salah satu [dari] paling biasanya menguasakan ajaran [dari;ttg] studies-the prinsip sosial symmetry-is tak dapat dipertahankan. Aku akan juga membantah bahwa . ini prinsip pasti mempunyai suatu pengaruh hal negatif pada [atas] diskusi sarjana sosiologi yang diakui " experimenter's mundur."

Empat Prinsip SSK

The Edinburgh School within the sociology of science has been very influential. It originated around David Bloor and colleagues at the University of Edinburgh and later gave rise to bifurcations like the Bath School (directed by Harry Collins) and Actor Network Theory (Bruno Latour inter alia). A seminal text is Knowledge and Social Imagery (Bloor 1976). Here Bloor suggests that the *sociology of scientific knowledge* (SSK)—or the strong programme, as he called it—should adhere to four tenets (quotes are from Bloor 1976): Sekolah Edinburgh dalam sosiologi ilmu pengetahuan telah (menjadi) sangat berpengaruh. Memulai di sekitar David Bloor dan para rekan kerja di Universitas Edinburgh dan belakangan memberi kenaikan ke pencabangan dua seperti Sekolah Mandi (yang diarahkan oleh Harry Collins) dan Teori Jaringan Aktor (Bruno Latour inter alia). Suatu teks mungkin berkembang adalah Pengetahuan dan Perumpamaan Sosial (Bloor 1976). Di sini Bloor menyatakan bahwa sosiologi pengetahuan ilmiah (SSK)-atau program acara yang kuat, seperti ia [menyebutnya hal itu-----harus/perlu bertahan pada empat prinsip (petikan dari Bloor 1976):

1. Causality. The sociology of science would be "concerned with the conditions which bring about belief or states of knowledge. Naturally there will be other types of causes apart from social ones which will cooperate in bringing about belief." Hubungan sebab akibat. Sosiologi ilmu pengetahuan akan " yang terkait dengan yang kondisi-kondisi membawa

sekitar kepercayaan atau negara pengetahuan. [Yang] secara alami akan ada lain jenis penyebab terlepas dari sosial [yang] yang akan bekerja sama menyempurnakan kepercayaan."

2. Impartiality. The sociology would be "impartial with respect to truth and falsity, rationality or irrationality, success or failure. Both sides of these dichotomies will require explanation." Kenetralan. Sosiologi akan " tak berat sebelah berkenaan dengan kebenaran dan kepalsuan, rasionalitas atau ketidakrasionalan, sukses atau kegagalan. Kedua sisi [dari;ttg] dikotomi ini akan memerlukan penjelasan." Kenetralan. Sosiologi akan " tak berat sebelah berkenaan dengan kebenaran dan kepalsuan, rasionalitas atau ketidakrasionalan, sukses atau kegagalan. Kedua sisi [dari;ttg] dikotomi ini akan memerlukan penjelasan."

3. Symmetry. The sociology would be "symmetrical in its style of explanation. The same types of cause would explain, say, true and false beliefs." Simetri. Sosiologi akan " simetris dalam gaya nya .

4. Reflexivity. "In principle its patterns of explanation would have to be applicable to sociology itself." Reflexivitas. " Pada prinsipnya pola-pola penjelasan nya ingin mempunyai untuk;menjadi dapat digunakan untuk
sosiologi [dirinya] sendiri."

These principles have been heavily referred to by sociologists and critics alike for the last decades. Not all principles are controversial but the third, symmetry, certainly is. When philosopher Philip Kitcher (1998) listed and criticized "dogmas" of science studies, the symmetry principle was one of them. Here I will concentrate on that principle.
Canadian philosopher James R. Brown argues that the problem with the symmetry principle, as it has been invoked, is not so much its explanatory symmetry with respect to true and false beliefs as its symmetry with respect to rational and irrational beliefs.1 Prinsip ini telah dengan berat menunjuk dengan sarjana sosiologi dan kritikus mirip untuk yang ter]akhir
dekade. Tidak semua prinsip adalah gemar bertengkar tetapi yang ketiga, simetri, [yang] pasti adalah. Kapan
ahli filsafat Philip Kitcher (1998) [yang] dikritik dan yang didaftarkan " dogma" tentang ilmu pengetahuan belajar,
prinsip simetri adalah salah satu dari [mereka/nya]. Di sini aku akan berkonsentrasi pada prinsip itu .
Yakobus Ahli filsafat Kanada R. Warna coklat membantah [bahwa/yang] masalah dengan prinsip simetri,
[seperti/ketika] [itu] telah dilibatkan, tidak demikian banyak simetri [yang] bersifat menjelaskan nya berkenaan dengan benar
dan kepercayaan sumbang/palsu [sebagai/ketika] simetri nya berkenaan dengan beliefs.1 tidak logis dan masuk akal

For example, it would not be blatantly wrong to explain Ptolemy's (false but arguably rational) belief that the earth is at the center of the universe with approximately the same tools as we would use to explain today's (true and rational) belief that the earth is not at the center of the universe (Brown 2001, p. 129). But it would be strange, says Brown, to explain rational and irrational beliefs in the same way, for example the belief that my friend has the flu and the belief that my friend once was abducted by aliens. Sebagai contoh, [itu] tidak akan secara ribut salah untuk menjelaskan Ptolemy'S ([yang] sumbang/palsu tetapi yang dapat dibantah masuk akal) kepercayaan [bahwa/yang] bumi adalah di pusat alam semesta dengan kira-kira perkakas yang sama [yang] ketika kita akan menggunakan untuk menjelaskan masa kini ([yang] masuk akal dan benar) kepercayaan [bahwa/yang] bumi bukanlah di pusat alam semesta (coklat 2001, p. 129). Tetapi [itu] akan bersifat asing/aneh, kata[kan Coklat, untuk menjelaskan

kepercayaan tidak logis dan masuk akal dengan cara yang sama, sebagai contoh kepercayaan yang teman ku mempunyai influensa dan kepercayaan yang teman ku sekali ketika telah diculik oleh mahluk asing.

Brown is right when he draws attention to the distinction between rational and irrational beliefs. In many cases, however, his basic point can be made simpler, by saying that it is strange not to take natural facts (evidence) into account when they can influence beliefs. I shall try to explain this as clearly as possible. A historian usually does not view history as a march towards a predetermined goal (unless he is a marxist or hegelian, or is put under political pressure). While it is possible to trace evolutionary lines over long periods of time—e.g. the evolution of democracy in the Western world—historians try to explain them with a multitude of tools, drawing attention to various social, economic, religious, cultural, climatological, technical, personal factors, and more. Warna coklat benar ketika ia menarik perhatian kepada pembedaan antar[a] [yang] tidak logis dan masuk akal
kepercayaan. Dalam banyak kesempatan, bagaimanapun, titik dasar nya dapat dibuat lebih sederhana, dengan mengatakan bahwa
asing/aneh bukan untuk mengambil fakta alami (bukti) ke dalam rekening/tg-jawab ketika mereka dapat mempengaruhi kepercayaan. I
akan mencoba untuk menjelaskan ini [seperti/ketika] dengan jelas [sebagai/ketika] mungkin. Suatu sejarawan [yang] pada umumnya tidak memandang sejarah sebagai gerakan ke arah suatu gol ditentukan (kecuali jika ia adalah suatu penganut pahammarksisme atau hegelian, atau ditaruh di bawah tekanan politis). Walaupun mungkin untuk melacak bentuk evolusiner (di) atas periode lame time-e.g. evolusi demokrasi di (dalam) Yang barat world-historians mencoba untuk menjelaskan [mereka/nya] dengan banyak perkakas, menarik perhatian [bagi/kepada] berbagai sosial, ekonomi, religius, budaya, secara ilmu cuaca, faktor pribadi teknis, dan lebih [].

Rarely do historians say: There is nothing to explain, because history has simply unfolded the way it was bound to unfold. In contrast, science has a predetermined goal, namely the unveiling of true knowledge about the natural world. Historians and sociologists of science therefore should not act like "ordinary" historians and sociologists in assuming that anything could have happened in science. Anything clearly could not happen in the scientists' experiments. This is so because nature is an important part of the action, and nature does not behave arbitrarily but obeys certain laws, for example Newtonian mechanics for macro-systems with non-relativistic velocities. Physicist Steven Weinberg has described this difference succinctly: Jarang lakukan sejarawan katakan: "Tidak ada apapun untuk dijelaskan, sebab sejarah hanya membentangkan sederhana cara itu] tidak dilipat harus membentang. Di dalam kontras, ilmu pengetahuan mempunyai suatu tujuan yang ditentukan, yakni tidak terselubung tentang pengetahuan yang benar tentang dunia yang alami. Sejarawan dan ahli sosiologi ilmu pengetahuan oleh karena itu mestinya tidak bertindak seperti " biasa" sejarawan dan sarjana sosiologi di (dalam) mengira bahwa apapun bisa sudah terjadi ilmu pengetahuan. Apapun dengan jelas tidak bisa terjadi eksperimen ilmuwan. Ini adalah sangat sebab alam[i] adalah suatu penting bagian dari tindakan, dan alam[i] tidak bertindak arbitrarily tetapi mematuhi hukum tertentu, sebagai contoh Mekanika Newtonan untuk macro-systems dengan percepatan non-relativistic. Ahli ilmu fisika Steven Weinberg telah uraikan perbedaan ini dengan ringkas tapi jelas:

"[I]t is true that natural selection was working during the time of Lamarck, and the atom did exist in the days of Mach, and fast electrons behaved according to the laws of relativity even before Einstein. Present scientific knowledge has the potentiality of being relevant in the history of science in a way that present moral and political judgments may not be relevant in political or social history" (Weinberg 2001, p. 120). "[I]T adalah benar yang alami pemilihan sedang bekerja sepanjang waktunya Lamarck, dan atom

ada hari Mach, dan puasa elktron berkelakuan berdasarkan undang-undang relatifitas genap
[sebelum/di depan] Einstein. Sajikan pengetahuan ilmiah mempunyai kemampuan yang sedang relevan di (dalam)
sejarah ilmu pengetahuan dengan cara yang menyajikan moral dan pertimbangan politis tidak mungkin relevan di (dalam)
sejarah sosial atau politis" (Weinberg 2001, p. 120).

Weinberg gives the following example: J. J. Thomson, a physicist known for his discovery of the electron, measured the ratio of the electron's mass to charge. He found a range of values. He favoured the values at the high end of the range. Why did he do that? Maybe Thomson knew that they had been produced in the most carefully performed measurements. Or maybe his first values were at the high end of the range, and he wanted to stick to these values in order to demonstrate that he had been right at the beginning. Which one of these hypotheses is correct cannot be settled by a careful study of all preserved historical records. But the question can be settled by the fact that today's actual value of the ratio of the electron's mass to charge is at the low end of Thomson's range of values. This strongly
Weinberg memberi contoh yang berikut: J. J. Thomson, suatu ahli ilmu fisika mengenal untuk penemuan nya
tentang elktron, mengukur perbandingan massa elektron untuk [menuntut/tugaskan]. Ia menemukan suatu cakupan
berharga. Ia menyokong nilai-nilai [itu] di mutakhir cakupan [itu]. Mengapa ia lakukan bahwa? Barangkali
Thomson mengetahui bahwa mereka telah diproduksi paling secara hati-hati melakukan pengukuran.
Atau barangkali nilai-nilai [yang] pertama nya adalah di mutakhir cakupan, dan ia ingin mecucuk/lekat/julurkan
ke ini menilai dalam rangka mempertunjukkan bahwa ia tadinya [hak/ kebenaran] di [itu] permulaan. Yang mana satu
tentang hipotesis ini benar tidak bisa dimantapkan oleh suatu studi hati-hati dari semua memelihara historis
arsip. Tetapi pertanyaan dapat dimantapkan oleh fakta bahwa nilai [yang] nyata masa kini perbandingan
massa elektron ke [beban/ tugas] adalah di akhir yang rendah [dari;ttg] Cakupan Thomson's berharga. Ini betul-betul

1 Larry Laudan, too, emphasizes the need to distinguish between symmetry related to truth/falsity and symmetry related to rationality/irrationality (Laudan 1996, pp. 192ff).

favours the second hypothesis: Thomson wanted to stick to his first values (Weinberg 2001, p. 121). Thomson's rationale for favouring the higher values may not be the most important question in the history of science, but I believe this example shows clerarly that the sociologists' refusal to take evidence into account is nothing but throwing away potentially useful information. I would like to take this opportunity to give another example in the same vein. Astronomy is the scientific study of cosmos. It is based on observations and rational arguments; or so the astronomers claim. Astrology, though sharing a distant origin with astronomy, is not considered scientific. Generally astrologers do not even claim to work rationally and scientifically. menyokong yang kedua : Yang kedua : Thomson ingin salah berpegang kepada; berpantang dengan nilai-nilai pertama nya (Weinberg
2001, p. 121). Dasar pemikiran Thomson's untuk menyokong nilai-nilai yang lebih tinggi tidak mungkin pertanyaan yang paling utama di (dalam) sejarah ilmu pengetahuan, tetapi aku percaya pertunjukan contoh ini [yang] clerarly [bahwa/yang] penolakan sarjana sosiologi untuk

mempertimbangkan bukti adalah tak lain hanya membuang-buang informasi berpotensi bermanfaat. Aku bermaksud mengambil kesempatan ini untuk memberi contoh lain di (dalam) pembuluh darah yang sama [itu]. Ilmu perbintangan adalah studi alam semesta yang ilmiah. [Itu] didasarkan pada pengamatan dan argumentasi masuk akal; atau kira-kira segitu klaim ahli falak. Astrologi, meskipun [demikian] berbagi suatu asal jauh dengan ilmu perbintangan, tidaklah dipertimbangkan ilmiah. Biasanya astrolog tidak genap mengakui untuk bekerja secara rasional dan secara ilmiah.

But since astronomers do, it seems appropriate to try to explain astronomers' beliefs at least partly by referring to rationality and evidence. Please note that the incorporation of factual evidence in an explanation of astronomical beliefs does not mean that factual evidence should be completely absent in an explanation of astrological beliefs. There is compelling evidence, for example, that planetary motions are governed by laws. These laws are part of astronomical and astrological beliefs, and so could enter explanations of both. But a difference between astronomy and astrology is that the latter is much less backed by evidence than the former. Tetapi [karena;sejak] ahli falak lakukan, [itu] nampak sesuai untuk mencoba untuk menjelaskan kepercayaan ahli falak sedikitnya sebagian dengan mengacu pada rasionalitas dan bukti. Tolong catat bahwa persatuan/perseroan [dari;ttg] bukti berdasar fakta di (dalam) suatu penjelasan [dari;ttg] kepercayaan astronomi tidak berarti bahwa bukti berdasar fakta harus dengan sepenuhnya absen [adalah] suatu penjelasan [dari;ttg] kepercayaan astrologi. Ada memaksa bukti, sebagai contoh, gerakan [yang] perplanetan itu diatur di depan hukum. Hukum ini menjadi bagian dari kepercayaan astrologi dan astronomi, dan demikian bisa masuk penjelasan kedua-duanya. Tetapi suatu perbedaan antar[a] ilmu perbintangan dan astrologi adalah bahwa yang belakangan sangat sedikit didukung oleh bukti dibanding yang terdahulu.

For example, the central astrological claim that planetary motions and/or positions direct (or reflect) human lives is totally unsubstantiated. Hence this astrological belief cannot be explained by reference to evidence, because there is no evidence.[2] Many astronomical beliefs, on the other hand, are supported by evidence. This evidence arguably should be taken into account in explanations of why the astronomical beliefs are held. Philosophically, there is more to this story than simply the rejection of evidence as contributing factors of explanations. It seems to me that the only way of justifying such a waste of potentially useful information is to claim that our knowledge is not growing and that science is not making any progress. Although this notion has been put forth by some philosophers of science, it is so manifestly wrong that it hardly needs a rejoinder. Progress is evident in all fields of science. Fields that are not characterized by growth of knowledge are soon abandoned. A quote from the British philosopher of science Ian Hacking is appropriate: Sebagai contoh, klaim astrologi yang pusat yang perplanetan gerakan dan/atau posisi mengarahkan (atau mencerminkan) kehidupan manusia secara total belum dibuktikan kebenarannya. Karenanya kepercayaan [yang] astrologi ini tidak bisa diterangkan oleh acuan ke bukti, sebab tidak ada evidence.2 Banyak kepercayaan astronomi, pada sisi lain, didukung oleh bukti. Bukti ini [yang] yang dapat dibantah harus diperhitungkan penjelasan tentang mengapa kepercayaan yang astronomi dipegang. Secara filsafat, ada lebih pada cerita ini dibanding hanya penolakan bukti [sebagai/ketika] menyokong faktor penjelasan. Nampak aku [bahwa/yang] satu-satunya cara membenarkan barang sisa seperti itu [dari;ttg] informasi berpotensi bermanfaat adalah untuk mengakui bahwa pengetahuan [kita/kami] tidaklah bertumbuh dan ilmu pengetahuan itu tidaklah membuat manapun kemajuan. Walaupun dugaan ini telah diusahakan oleh beberapa ahli filsafat ilmu pengetahuan, [itu] menjadi sangat secara nyata bersalah [kepada] bahwa itu dengan susah memerlukan suatu jawaban. Kemajuan adalah jelas dalam semua bidang ilmu pengetahuan. Bidang yang tidaklah ditandai oleh pertumbuhan pengetahuan segera dikalahkan. Suatu tanda kutip dari Ahli filsafat ilmu pengetahuan yang Britania Ian Mencincang adalah sesuai:

"Perhaps there are fools who think that the discovery of isotopes is no growth in real knowledge. (...) [T]hey are likely idle and have never read the texts or engaged in the experimental results of such growth. We should not argue with such ignoramuses. When they have learned how to use isotopes or simply read the texts, they will find out that knowledge does grow" (Hacking 1983, p. 120).3 Barangkali ada orang bodoh [siapa] yang berpikir [bahwa/yang] penemuan isotop adalah tidak (ada) pertumbuhan di (dalam) pengetahuan riil. (...) [T]Hey mungkin kosong dan belum pernah membaca teks [itu] atau terlibat dalam yang bersifat percobaan hasil . seperti (itu) pertumbuhan. Kita mestinya tidak membantah dengan . seperti (itu) orang bodoh. Ketika mereka sudah mempelajari bagaimana cara menggunakan isotop atau hanya membaca teks [itu], mereka akan menemukan pengetahuan itu tumbuh" (Mencincang 1983, p. 120).3

The Experimenter's Regress

Harry Collins has authored several papers on the experiments and discussions among physicists about detection of gravitational radiation.4 There is no doubt that Collins is very knowledgable in the field. His descriptions of the experiments have met with satisfaction from physicists. Not all of his conclusions, however, have been accepted.

One of Collins's conclusions about the search for gravity waves, presented in various papers and books (e.g. Collins 1985), sometimes in collaboration with Trevor Pinch (Collins & Pinch 1994, pp. 91-107), is that there is something murky about calibration. A good well-calibrated experimental apparatus (measurement device) is one that gives correct re- Mengganggu Collins mempunyai authored beberapa dokumen pada [atas] eksperimen dan diskusi antar ahli ilmu fisika tentang pendeteksian [dari;ttg] radiation.4 gravitasi Tidak ada keraguan bahwa Collins adalah seluruh knowledgable bidang [itu]. Uraian nya eksperimen sudah berjumpa dengan kepuasan dari ahli ilmu fisika. Tidak semua kesimpulan nya, bagaimanapun, telah diterima. Salah satu dari Kesimpulan Collins's tentang pencarian untuk ombak gaya berat, memperkenalkan dalam berbagai dokumen dan buku (e.g. Collins 1985), kadang-kadang bekerjasama dengan Trevor Cubitan/ jepitan (Collins & Cubit/ menjepit 1994, pp. 91-107), adalah bahwa ada sesuatu (yang) suram sekitar kalibrasi. Suatu [yang] baik piranti bersifat percobaan yang dengan baik dikalibrasi (alat pengukuran) adalah apa yang itu memberi benar perihal-

2 Possibly, the belief could be explained by lack of evidence, but that's another story.
3 Hacking attributes this attitude to Lakatos, though I suspect it is shared by Hacking himself.
4 I will use the terms "gravitational radiation" and "gravity waves" interchangeably.

sults. Correct results, on the other hand, are those that are given by a good well-calibrated apparatus. There seems to be a circle here, called the experimenter's regress. According to Collins, the regress is broken by negotiation within the scientific community.

On the face of it, this state of affairs may not be a widespread problem, since examples where measurement devices are calibrated without the presence of the experimenter's regress are easy to find. Let's say we would like to calibrate a stick used for length measurements. It can be calibrated by comparison with another stick of known length. Hasil benar, pada sisi lain, . yang diberi oleh suatu [yang] dengan baik dikalibrasi baik piranti. [Di/Ke] sana sepertinya suatu lingkaran di sini, [memanggil/hubungi] experimenter's [itu] mundur. Menurut Collins, mundur [patah/dirusakkan] oleh negosiasi di dalam masyarakat yang ilmiah.

Sepintas lalu, kondisi ini tidak mungkin suatu masalah tersebar luas, [karena;sejak] contoh [di mana/jika] alat pengukuran dikalibrasi tanpa kehadiran experimenter's mundur mudah untuk temukan. Kira-Kira/Anggaplah kita bermaksud menentukan skala termometer suatu tongkat yang digunakan untuk pengukuran panjangnya. [Itu] dapat dikalibrasi menurut perbandingan tongkat [yang] lain [dari;ttg] panjangnya dikenal.

That stick, in turn, is calibrated in the same way. In the end, this calibration regress is broken by a comparison with a stick the length of which is defined. In a similar manner, devices for measuring mass (weight) are ultimately calibrated by comparison with prototypes defined to have a specified mass. The same goes for measurements of time. Length, mass and time are easy examples, but I see no principal reason why a similar argument could not be made for more complex quantities, like energy.[5] Calibration of energy-recording apparatus is, incidentally, important in Collins's discussions of the purported experimenter's regress in the search for gravity waves. So there is a regress in experimental situations, but it is obviously not the same as the regress claimed by Collins to be present. The true regress is trivial and is broken by appeal to definitions. In contrast, Collins's regress is broken mainly by appeal to authority and is therefore much more controversial (to those who believe that the role of personal authority should be downplayed in science). itu Cucuk/Lekat/Julurkan, pada gilirannya, dikalibrasi dengan cara yang sama. Pada akhirnya, kalibrasi ini mundur [patah/dirusakkan] oleh suatu perbandingan dengan suatu tongkat panjang yang mana [adalah] digambarkan. Di (dalam) suatu cara serupa, alat untuk mengukur massa (berat/beban) akhirnya dikalibrasi menurut perbandingan prototipe yang yang dikenalkan ke mempunyai suatu massa ditetapkan. Yang sama pergi untuk pengukuran waktu. Panjangnya, Massa Dan Waktu adalah contoh gampang, tetapi aku tidak lihat apapun alasan prinsip mengapa suatu argumentasi serupa tidak bisa dibuat untuk jumlah lebih rumit, seperti energy.5 Kalibrasi energy-recording piranti adalah, kebetulan, penting Diskusi Collins's yang diakui experimenter's mundur pencarian untuk ombak gaya berat. Maka ada suatu mundur situasi bersifat percobaan, tetapi [itu] sungguh-sungguh tidak sama halnya mundur yang diklaim oleh Collins untuk;menjadi menyajikan. benar Mundur adalah sepele dan [patah/dirusakkan] oleh mohon ke definisi. Di (dalam) kontras, Collins's Mundur [patah/dirusakkan] sebagian besar oleh mohon ke otoritas dan kemudian jauh lebih gemar bertengkar (ke mereka yang percaya bahwa peran kewenangan pribadi harus ilmu pengetahuan downplayed).

Collins would not deny the existence of the trivial regress. Quite the opposite, he would probably say that most regresses are broken in that way.[6] But he would insist that this was not the case with gravity waves since at the time of controversy it was not known whether gravity waves existed or not. The correct behaviour of the apparatuses could therefore not be predicted. Had this been known, there would not have been a controversy in the first place. In other words, this is what Collins says: There is a controversy among scientists. If there is a controversy, you cannot decide who is right and who is wrong. And if you cannot decide this, you cannot tell whether an apparatus is functioning properly or not; you cannot calibrate it. Collins tidak akan menyangkal keberadaan yang sepele mundur. Sunggung kebalikan, ia akan mungkin kata[kan bahwa paling mundur dimasuki secara paksa way.6 itu Tetapi ia akan meminta dengan tegas bahwa . ini adalah bukan kasus dengan ombak gaya berat [karena;sejak] pada ketika kontroversi [itu] tidaklah dikenal apakah ombak gaya berat hidup atau bukan. Perilaku yang benar piranti bisa oleh karena itu bukan jadilah diramalkan. yang telah Ini yang yang dikenal, [di/ke] sana tidak akan jadi suatu kontroversi di (dalam) yang dulu menempatkan. Dengan kata lain, ini adalah Apa [yang] Collins kata[kan: Ada suatu kontroversi antar ilmuwan. Jika

ada suatu kontroversi, kamu tidak bisa memutuskan [siapa] yang benar dan siapa yang adalah salah. Dan jika kamu tidak bisa
memutuskan ini, kamu tidak bisa ceritakan [kepada] apakah suatu piranti sedang berfungsi dengan baik atau bukan; kamu tidak bisa
menentukan skala termometer itu.

That is the origin of the experimenter's regress. In the case of gravitational radiation, Joseph Weber, professor of physics at the University of Maryland, was pursuing a programme of research in the 1970's based on his conviction that he had detected such cosmic gravitational radiation. Several other groups of researchers within the same field were sceptical. According to Collins, it was the intervention of a very influential physicist, Richard Garwin, that brought the controversy to an end. Through his personal authority and rhetorical skill he convinced a majority of physicists that Weber was wrong (Collins & Pinch 1994, pp. 104ff). Itu adalah asal experimenter's [itu] mundur. Di (dalam) kasus sinaran gravitasi, Joseph Weber, Profesor ilmu fisika di Universitas Maryland, sedang mengejar suatu program acara riset di (dalam) 1970's didasarkan pada hukuman nya yang ia telah mendeteksi . seperti (itu) sinaran gravitasi kosmis. Beberapa lain kelompok peneliti di dalam bidang yang sama adalah ragu-ragu. Menurut Collins, [itu] adalah intervensi suatu ahli ilmu fisika [yang] sangat berpengaruh, Richard Garwin, yang [itu] membawa kontroversi [itu] [bagi/kepada] suatu akhir. Melalui/Sampai kewenangan pribadi nya dan ketrampilan retoris [yang] ia meyakinkan sebahagian terbesar dari ahli ilmu fisika yang Weber adalah salah (Collins& Cubit/ menjepit 1994, pp. 104ff).

This description of the course of events has been challenged—successfully, in my opinion—by the physicist and philosopher of science Allan Franklin (1998). In essence, Franklin maintains that the critics' results were not only more numerous but had been carefully cross-checked in a way that Weber's had not. Moreover, the critics had investigated whether Weber's choice of a special computational algorithm could explain the other groups' failure to replicate his results. The critics used Weber's preferred procedure but still found no effect. They calibrated their own experimental apparatuses by inserting acoustic energy of known energy, finding that the signal could be detected. There were other arguments Uraian ini keadaan peristiwa telah (menjadi) challenged-successfully, di (dalam) opinion-by ku ahli ilmu fisika dan ahli filsafat ilmu pengetahuan Allan Franklin (1998). Pada pokoknya, Franklin memelihara [bahwa/yang] hasil kritikus tidaklah hanya lebih banyak tetapi tadinya secara hati-hati cross-checked dengan cara yang weber Tidak [pernah]. Lebih dari itu, kritikus yang yang telah menyelidiki apakah Pilihan weber suatu computational khusus algoritma bisa menjelaskan kegagalan kelompok lain ke replicate hasil nya. Kritikus menggunakan Prosedur weber lebih disukai tetapi masih tidak menemukan apapun efek. Mereka mengkalibrasi piranti [yang] bersifat percobaan mereka sendiri dengan memasukkan/menyisipkan energi [yang] akustik [dari;ttg] energi dikenal, menemukan [bahwa/yang] isyarat bisa dideteksi. Ada lain argumentasi

5 As it happens, energy (E) can be derived from the quantities of mass (M), length (L) and time (T): $E = ML^2T^{-2}$.

6 "In most science the circle is broken because the appropriate range of outcomes is known at the outset. This provides a universally agreed criterion of experimental quality" (Collins & Pinch 1994, p. 98).

favouring the sceptical stance as well. All in all, Weber's critics had better arguments than Weber, arguments connected to factual evidence. They were publicly debated in print and in conferences and so were available for a perceptive sociologist like Collins had he looked for them. Collins and the "Methodological Imperative" In an article named "What is TRASP?: The Radical Programme as a Methodological Imperative", Collins discusses his

methodology (Collins 1981). He states that Bloor's tenets of impartiality and symmetry constitutes the "Radical Programme" in the sociology of knowledge.

"The tenet of symmetry tells us something about the content of our explanations. The same types of explanation will be applied to all 'qualities' of scientific endeavour. Explanations of the true will be like explanations of the false, and similarly for the rational and irrational, and the successful and unsuccessful and, we may suppose, for the apparently progressive and the degenerative.
(…) [I]t follows that there are things that cannot form part of an explanation belonging to the radical programme. Knowledge cannot be explained by reference to what is true, rational, successful or progressive (hereafter 'TRASP'). If such categories were allowed into explanations then the explanation of, say true, knowledge would not be of the same type as the explanation of false knowledge" (Collins 1981, p. 217). menyokong cara berpendirian yang ragu-ragu juga. Setelah dipertimbangkan semuanya, Kritikus weber sebaiknya argumentasi dibanding
Weber, Argumentasi yang dihubungkan ke bukti berdasar fakta. Mereka di depan umum diperdebatkan sedang dicetak dan
di (dalam) konferensi dan demikian ada tersedia untuk suatu sarjana sosiologi [yang] lekas mengerti seperti Collins telah ia melihat
untuk/karena [mereka/nya]. Collins dan " [yang] Sangat mendesak Yang metodologis" Di (dalam) suatu artikel nama " Apa yang adalah TRASP?: Program acara Yang radikal sebagai [yang] Sangat mendesak Metodologis", Collins mendiskusikan metodologi nya (Collins 1981). Ia negara bahwa Ajaran simetri dan kenetralan bongkah besi [mendasari/membuat] " Program acara Yang radikal" di (dalam) sosiologi pengetahuan.

Collins is correct: If the principle of symmetry is taken as a postulate, one is not allowed to make reference to what is TRASP in an explanation of scientific beliefs. But this argument does not in itself contain any justification for the symmetry principle. Does Collins give any reason for his embracing the Radical Programme? Yes, he asserts that the alternative is inferior. Any research strategy not committed to the impartiality and symmetry tenets is part of the "Normal Programme", according to Collins.[7] An investigator who wishes to give an explanation involving rationality must collect data about which scientists' acts are TRASP and which are not. But that is impossible, says Collins: Collins benar: Jika prinsip simetri diambil sebagai dalil, satu tidaklah diijinkan untuk
merujuk ke APA [YANG] ADALAH TRASP di (dalam) suatu penjelasan [dari;ttg] kepercayaan ilmiah. Tetapi argumentasi ini
tidak dengan sendirinya berisi manapun pertimbangan untuk prinsip simetri. Apakah Collins memberi manapun alasan untuk nya memeluk Program acara Yang radikal? Ya, ia menyatakan [bahwa/yang] alternatif adalah lebih rendah. Manapun strategi riset tidak merasa terikat dengan ajaran simetri dan kenetralan [itu] menjadi bagian dari " Program acara Yang normal", menurut Collins.7 [Adalah] suatu penyelidik [siapa] yang mengharapkan untuk memberi suatu penjelasan yang menyertakan rasionalitas harus mengumpulkan data tentang tindakan ilmuwan YANG (MANA) ADALAH TRASP dan yang bukanlah. Tetapi itu mustahil, kata[kan Collins:

> *"It goes almost without saying that the investigator should not make his own judgements about which of a set of competing scientists' accounts were the correct ones. To do this would be to introduce personal bias into the data collection process. Furthermore, such a judgement would rest on the implication that the investigator—not the experimenter, theorist or professional expert in the area in question—was in a position to make scientific judgements that the scientists themselves could not make" (Collins 1981, p. 220).* "Hal itu pergi hampir tanpa mengatakan bahwa penyelidik mestinya tidak membuat judgment miliknya sendiri yang disusun satu set bersaing ilmuwan adalah orang-orang yang benar. Untuk melakukan ini akan jadi memperkenalkan penyimpangan (bias) pribadi ke dalam proses pengumpulan

> data. Lagipula, judgment seperti itu akan mempercayai pada; bersandarkan implikasi bahwa investigator tidak mengadakan percobaan, ahli teori atau professional ahli bidang di dalam question-telah sanggup untuk membuat judgment ilmiah bahwa ilmuwan mereka sendiri tidak bisa membuatnya" (Collins 1981:220).

Though skillfully worded, this argument is insufficient. It does not show that scientific controversies are not resolved by way of rationality, it merely presupposes it. If scientists do not resolve scientific conflicts by invoking rational arguments and evidence, of course an investigator will not be able to invoke them either. If, on the other hand, rationality and evidence contribute to scientists' judgements, the investigator should try to incorporate this in his explanation of the conflict resolution. Certainly, it may be difficult for an investigating sociologist to comprehend the exact nature of the rational arguments involved, but it ought not be impossible. In his TRASP paper (Collins 1981), Collins's only example of a scientific controversy where the correct position was not available at the time of controversy (and the investigator therefore should not make any judgements) is the gravity wave episode discussed above. As already mentioned, many arguments based on rationality and factual evidence were available during that controversy. As should be evident, Collins's argument for stopping TRASP factors from entering sociological explanations of scientific beliefs (and hence his argument for using the Meskipun [demikian] dengan mahirnya worded, argumentasi ini adalah tidak cukup. [Itu] tidak menunjukkan kontroversi [yang] ilmiah itu tidaklah dipecahkan melalui rasionalitas, [itu] melulu mensyaratkan itu. Jika ilmuwan tidak memecahkan konflik ilmiah dengan permohonan bukti dan argumentasi masuk akal, tentu saja suatu penyelidik tidak akan mampu memohon [mereka/nya] juga. Jika, pada sisi lain, rasionalitas dan bukti berperan untuk penghakiman ilmuwan, penyelidik [perlu] mencoba untuk menyertakan penjelasan nya di (dalam) ini resolusi konflik. [Yang] pasti, mungkin saja sulit untuk suatu menyelidiki sarjana sosiologi untuk memahami alam[i] yang tepat argumentasi yang masuk akal melibatkan, tetapi [itu] sebaiknya tidak mustahil. Di (dalam) TRASP catatan/kertas nya (Collins 1981), Collins's Hanya contoh suatu kontroversi ilmiah [di mana/jika] posisi yang benar tidaklah [yang] tersedia pada ketika kontroversi (dan penyelidik oleh karena itu mestinya tidak membuat manapun penghakiman) adalah gaya berat melambaikan peristiwa membahas di atas. [Seperti] yang telah menyebutkan, banyak argumentasi berdasar pada rasionalitas dan bukti berdasar fakta ada tersedia selama yang kontroversi. [Seperti/Ketika] harus jelas, Argumentasi Collins's untuk menghentikan TRASP faktor dari memasuki penjelasan [yang] kemasyarakatan [dari;ttg] kepercayaan ilmiah (dan karenanya argumentasi nya untuk . yang menggunakan

7 One could question the appropriateness of this definition, making Normal Programmes out of every strategy that is not explicitly Radical, but let us not pursue the matter here.

symmetry principle) is identical to his argument for the emergence of the experimenter's regress. That is why it is appropriate to treat them in conjunction. In both cases, the crucial point is that since there is a controversy, no-one (and particularly not a sociologist) can tell who is right and who is wrong. Collins's methodological imperative urges the sociologist to offer explanations of scientific endeavours in which any references to what is TRASP have been bracketed out. As far as I can see, this must mean that prinsip simetri) adalah serupa kepada argumentasi nya untuk kemunculan experimenter's [itu] mundur. Itu adalah kenapa sesuai untuk perlakukan [mereka/nya] di (dalam) kata penghubung. Di (dalam) kasus kedua-duanya, yang rumit
titik adalah bahwa [karena;sejak] ada suatu kontroversi, tak seorangpun (dan terutama sekali tak satu sarjana sosiologi pun) dapat ceritakan [kepada]
[siapa] yang benar dan siapa yang adalah salah. Himbauan [yang] sangat mendesak metodologis Collins's sarjana sosiologi untuk menawarkan penjelasan [dari;ttg] usaha ilmiah di mana manapun acuan [bagi/kepada] APA [YANG] ADALAH TRASP telah dikurung

(1) in reality, and contrary to scientists' beliefs, TRASP factors play no role in science, or that (2) TRASP factors do play a role in science, but they are so insignificant that it makes no big difference to leave them out in sociological explanations, or that (3) TRASP factors play a significant role in science. If (1) is true, then science does not make any progress. This notion is absurd and is hardly worth
discussing. If (3) is true, there is no point in pursuing the Radical Programme. This leaves (2). Could (2) be true? Maybe, but I don't think so and I have seen no arguments supporting it.

Conclusion

In summary, the principle of symmetry forces the sociologist to leave out factors of possible major influence. I believe that the advocates of this principle repeatedly have shown that if you apply it you will end up with explanations devoid of rationality and factual evidence. But that is trivial and supplies no reason for accepting the symmetry as a postulate in the first place. No-one has, as far as I know, offered good reasons for accepting the symmetry principle. Its proponents seem simply to have accepted it at face value, perhaps because of its simplistic elegance. The same goes for the purported experimenter's regress, because according to Collins the regress will not appear unless the symmetry principle is justified. The criticisms displayed here do not automatically lend support to a total rejection valuable insights in the case studies produced by Collins and his peers, but they should be read with caution since they are biased. The real impact of rational arguments and evidence cannot be extracted f

Secara ringkas, prinsip simetri memaksa para ahli sosiologi untuk meninggalkan faktor-faktor yang mungkin berpengaruh pokok. Aku percaya bahwa para penyokong dari prinsip ini berulang-kali sudah menunjukkan bahwa jika kamu menerapkannya kamu akan berakhir dengan penjelasan tanpa rasionalitas dan bukti berdasar fakta. Tetapi itu adalah sepele dan persediaan tidak ada alasan untuk menerima simetri sebagai dalil dalam tempat pertama. Tak seorangpun seperti sejauh saya memahami mempunyai, sejauh aku mengetahui, menawarkan pertimbangan baik untuk menerima prinsip simetri. Penganjurnya nampak hanya untuk mempunyai diterima pada nilai nominal, barangkali oleh karena kerapian sederhana nya. Yang sama pergi untuk yang diakui experimenter's mundur, sebab menurut Collins mundur tidak akan nampak kecuali jika prinsip simetri dibenarkan. Kritik mempertunjukkan di sini tidak secara otomatis meminjam[kan pendukungan bagi suatu total penolakan pengertian yang mendalam berharga dalam studi kasus yang diproduksi oleh Collins dan panutannya, tetapi mereka harus dibaca dengan perhatian [karena;sejak] mereka dibiaskan. Dampak yang riil [dari;ttg] dan argumentasi masuk akal bukti tidak bisa disadap dari studi itu, sebab . seperti (itu) faktor secara siksa diri dikeluarkan dari analisa.

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BAGIAN V

Social Studies for the Twenty-First Century: Methods and Materials for ...

By Jack Zevin

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In

Social Studies for the Twenty-First Century, Third Edition "weaves theory, curriculum, methods, and assessment into a comprehensive model to guide middle and secondary teachers in setting objectives; planning lessons, units, and courses; choosing classroom strategies; and constructing tests for some of the field's most popular and enduring programs. It offers practical, interesting, exciting ways to teach social studies and a multitude of instructional and professional resources for teachers. The text includes separate chapters on teaching each of the major areas of the social studies curriculum. Its reflective and integrative framework emphasizes building imagination, insight, and critical thinking into everyday classrooms; encourages problem-solving attitudes and behavior; and provokes analysis, reflection, and debate. New in the Third Edition: *summaries of recent research, particularly in history education, that have been published since the last edition; *increased attention to social studies standards, as well as those for civics, economics, and history; *an enriched view of teaching history and social studies with a wide array of sources ranging from material objects through primary sources on to art, music, and literature; *tightening of the text to make it shorter and more pointed, including a few provocative new ideas; *more and better-organized ideas for classroom group and individual activities and cooperative learning; *expanded appendices on instructional resources include the rapidly growing use of Web sites; *new visuals that are better integrated into the text and which teachers can use in their classrooms as lessons in visual literacy; and*continued efforts to inject a bit of humor and self-criticism into a field of education most students view as a sizeable trunk of dead and deadly facts." "" Social Studies for the Twenty-First Century, Third Edition" is a primary text for secondary and middle social studies methods courses.

VI

Social Studies

Overview

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Why Study Social Studies?

In social studies classes students confront questions about the wonder and excitement of humankind in the world. How have humans defined themselves and made meaning of the world? How are we connected to and different from those who have come before us? What does all of humankind have in common? Who are we as a nation and what are our values and traditions? How did we get to be the way we are? How have we found unity in the midst of our diversity? Which individuals and groups contributed to our development? What are our great achievements as a nation? Where have we failed and what do we need to change? What are our responsibilities to ourselves and to society at large? What will we be like in the future? What is our place in the world? In short, social studies classes help students understand their roots, see their connections to the past, comprehend their context, recognize the commonality of people across time, appreciate the delicate balance of rights and responsibilities in an open society, and develop the habits of thoughtful analysis and reflective thinking.

In helping students answer these questions, social studies courses engage students in the study of history, geography, economics, government, and civics. Instruction draws on other disciplines such as anthropology, sociology, political science, psychology, religion, law, archaeology, philosophy, art, literature, other humanities subjects and the sciences.

Courses of study should give students the knowledge, intellectual skills, civic understandings, and dispositions toward democratic values that are necessary to function effectively in American society. Ultimately, social studies instruction should help students assume their role as responsible citizens in America's constitutional democracy and as active contributors to a society that is increasingly diverse and interdependent with other nations of the world. For example, students should be able to use the knowledge and skills acquired through social studies courses to solve problems and make reasoned decisions in their daily lives. Social studies courses should provide students with the background to conduct research in order to cast informed votes, with the skills to place conflicting ideas in context, and with the wisdom to make good judgments in dealing with the tensions inherent in society such as the enduring struggle to find the proper balance between protecting the rights of the individual and promoting the common good.

Dimensions of Teaching and Learning

As a prelude to stating the standards which define the overriding goals of social studies, it is important to define critical dimensions of teaching and learning that should be used to develop curriculum and instruction based on the standards. These dimensions can be used to establish criteria for selecting the historic, social, cultural, geographic, economic, and political understandings that students might investigate. The first two dimensions are the most critical because they define, more explicitly than the standards, the intellectual skills that students must develop. The dimensions challenge what we teach, how we teach, and how we assess student learning. To ensure rich, engaging, and meaningful social studies programs, they should be an integral

part of all social studies curriculum and instruction. The eight dimensions are:

- *intellectual skills*
- *multidisciplinary approaches*
- *depth and breadth*
- *unity and diversity*
- *multiculturalism and multiple perspectives*
- *patterns to organize data*
- *multiple learning environments and resources*
- *student-centered teaching, learning, and assessment*

1. Intellectual Skills

The development of students' intellectual skills and their ability to think reasonably, rationally, logically, and reflectively is central to each of the standards for social studies in the State of New York. Giving students a sound knowledge base goes hand in hand with expanding their intellectual skills and their ability to engage in analytical thinking. Instruction based on these standards should require social studies students at all levels to use a variety of intellectual skills to master content, probe ideas and assumptions, ask and answer analytical questions, take a skeptical attitude toward questionable arguments, acquire and organize information, evaluate data, draw conclusions, and view the human condition from a variety of perspectives.

In developing thinking skills in social studies, students should combine the disciplinary methods and processes of history, geography, economics, government, and civics with interd i s c i p l i n a r y a p p roaches as they examine the past, study the present, and speculate about the future. They should learn to consult and interpret databases and a wide variety of primary sources, such as original documents, speeches, cartoons, artifacts, photos, art, music, arc h i t e c t u re, literature, drama, dance, popular culture, biographies, journals, folklore, historic places, and oral histories.

Drawing on a variety of sources, students should take and defend positions on past and contemporary issues and controversial events by evaluating evidence and formulating rational conclusions. Furthermore, social studies classes should offer many opportunities for re s e a rch activities. Students should conduct re s e a rch by posing questions, identifying problems, collecting evidence, developing generalizations, presenting interpretations, and defending conclusions.

2. Multidisciplinary Approaches

Social studies courses must help students understand both the specialized processes and approaches of certain academic disciplines and the connection of ideas, information, issues, and perspectives across the disciplines. In drawing on history, the social sciences—particularly geography,

economics, government, and civics—the humanities, and, to a lesser degree, the sciences, social studies provides a perfect opportunity for curriculum integration. But too often instruction presents people and events in isolation, without context.

The standards in this framework have a discipline focus combining content and process, but in each standard and its performance indicators there is provision for synthesis and connecting ideas and knowledge from one discipline to another. These synthesis statements should lead to instruction that provides a rich context of the subject and increasing intellectual proficiency.

3. Depth and Breadth

The broad scope of subject matter and the amount of material that could be included in social studies is a serious concern for social studies educators. All agree that selection of what to study is a major issue in planning instruction. The challenge for social studies curriculum developers and teachers is to design instruction that "emphasizes depth of development of important ideas within appropriate breadth of topic coverage." (Taken from "AVision of Powerful Teaching and Learning in the Social Studies: Building Social Understanding and Civic Efficacy,"

Social Education, September 1993, p. 216). The content selected should represent worthwhile, "important ideas for understanding, appreciation, and life application." (ibid, p. 216). Finding a
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justifiable balance of depth and breadth is a great challenge. The standards and sample performance indicators establish broad goals. However, the K-12 scope and sequence that follows specifies concepts and content in more detail. This scope and sequence will be used to develop State social studies examinations. Curriculum needs to reflect the reality that some events are more important than others, that some have had more influence than others, that some beliefs and practices, are more defensible than others, and that knowledge and scholarship need to be reflected in the curriculum.

4. Unity and Diversity

Social studies classes that focus on local, state, and national subject matter should examine the concepts of unity and diversity in American society. Students should see how most inhabitants of the United States are united by certain shared values, practices, traditions, needs, and interests, some of which have evolved over centuries. They should understand how the nation's political institutions developed and created many of these traditions. Students should examine democratic ideals such as the dignity of humanity, the value of diversity, limited government, equity, freedom of speech, freedom of religion, freedom to pursue economic opportunity, government by consent of the governed, rule of law, and popular sovereignty. They should also understand America's political institutions including the independent judicial system, political parties, and governmental mechanisms by which to redress grievances. The changing nature of these institutions should be studied and analyzed by focusing on the interactions among individuals, groups, and society at large.

Students should also understand diversity and the multicultural context of American society. This includes the study of the various immigrations which have created the diverse nature of American people from the earliest Native American groups to the landing of the first European settlers to the forced migration of enslaved Africans to the waves of immigrants from all regions of the world, many of whom came seeking the "American Dream" of economic opportunity, political freedom, and religious toleration. Migrants from Asia, Europe, Africa, and the Americas brought with them rich strands of racial, religious, ethnic, and linguistic traditions that created and continue to influence American society. These people have made the United States one of the most diverse nations on Earth.

Study of the interactions of these diverse peoples over time provides students with a context for understanding how such diverse peoples have been able to create a strong and united nation. The development of common democratic values, institutions, and traditions, evolving through struggle, has created a people committed to a united, national identity while preserving many of their individual cultural traditions.

5. Multiculturalism and Multiple Perspectives

Contemporary multicultural issues, while linked to earlier movements for ethnic studies (1970s) and improving intergroup relations (1950s), differ from them in important ways. With respect to social studies, the primary issue is the nature and extent of inclusion of the histories and cultures, experiences, and perspectives of the diverse groups that constitute what is now the United States. "Multicultural education needs to be more broadly defined and understood so that teachers from a wide range of disciplines can respond to it in appropriate ways." (James Banks, "The Dimensions of Multicultural Education," *Multicultural Leader*, Vol. 3, 1990, p. 1). Implementation of the standards should go beyond the addition of long lists of ethnic groups, heroes, and contributions to the infusion of various perspectives, frames of reference, and content from various groups. As a result, students better understand the nature, complexity, and development of United States society as well as societies in other nations throughout the world. E ffective multicultural approaches look beyond ethnic particularism, examine diff e rences in light of universal human characteristics, focus on multiple perspectives, and attend to the mutual influences among groups within and across national boundaries. (Adapted from: James Banks,

" A p p roaches to Multicultural Curriculum Reform," *Multicultural Leader*, Vol. 1, 1988, p. 2).
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In examining different perspectives about events and issues and how ethnic, racial, gender, religious, and socio-economic background can influence opinion, students should understand that all members of a given group will not necessarily share the same view. Recognizing diversity within groups and multiple group memberships is necessary to avoid stereotyping.
Social studies classes should also help students acquire knowledge that will lead to greater tolerance and empathy for people who hold varying viewpoints on social, political, or economic issues. Students "will respect and practice basic civic values," including respect for self and others (Regents Goal 5). But accomplishing this goal is not simple. Throughout history there have been events inconsistent with basic American values. Tolerance for practices such as the Nazi Holocaust, totalitarianism, chattel slavery, the subjugation of peoples, and the infringement of human rights are not acceptable. They must be studied in historical context, but evaluated within a values perspective.

6. Patterns to Organize Information

Social studies courses should help students identify patterns for organizing data. One a p p roach is to look for systems. Asystem describes how any group of facts, ideas, principles, or concepts are arranged or classified to explain the functioning of a logical or constructed whole. For example, political systems can be defined and classified as totalitarian, democratic, authoritarian, p a r l i a m e n t a r y, and so forth. Economic systems can be traditional, command, market, or combinations
of these types. Social systems describe what is meant by human society, explaining the ro l e s of men and women across time and place, the status and characteristics of various groups and classes, and "how economic, religious, cultural, and political changes have affected social life." (Taken from: *Lessons From History, The National Center for History in the Schools*, 1992, p. 25).
Another approach to patterning is to use a few broad concepts such as continuity and change, cause and effect, and interdependence, to help students make meaning out of unfamiliar people, events, and cultures. Using such concepts gives students a frame of reference for analyzing the human condition past and present.
For example, the concepts of continuity and change and interdependence can provide an interesting context for studying the impact, costs, and benefits of scientific and technological developments over eras or time periods. Focusing on interdependence can illuminate and give new meaning to breakthroughs in transportation and communication that have brought communities and nations closer together. Understanding interdependence helps students have a broader context for dealing with the phenomenon that what happens today in one part of our world can have important implications for others in distant places.

7. Multiple Learning Environments and Resources

Using local resources and different learning sites can be an effective way to let students experience firsthand how scholars conduct their work and how communities function and use the intellectual skills learned in social studies. Classes might be held, for example, in conjunction with a higher education (college/university) class, in the community at social service, government, and health agencies; at community-based organizations; in libraries and other cultural institutions; and in factories, business, or other work sites. By working and studying at these alternative learning sites, students gather information from a wide range of resources, learn how scholars contribute to their fields and how various organizations provide services.
With increased access to more advanced technologies, schools now can expand their learning environments to include databases, information-retrieval systems, and other library and museum resources throughout the world. Through Internet, electronic study groups, and international education networks, teachers can plan class-to-class long-distance learning activities. Students retrieve, process, and organize information gathered from libraries, cultural institutions, museums, archives, and government document repositories. They can share this
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information using computer links with other students studying similar topics, issues, and problems. The challenge is twofold: 1) to learn how to use these resources, and 2) to encourage schools and communities to expand instruction beyond the walls of the schools.

8. Student-Centered Teaching, Learning, and Assessment

In an effort to engage students more effectively in the learning process and to provide real opportunities for the application of intellectual skills, many educators have called for linking teaching, learning, and assessment to the world of the student. For this to happen, students need to participate in many different kinds of activities to gain a broad knowledge base, develop thinking skills, and take responsibility for their own learning. In addition to the more traditional learning tasks, activities should include independent reading on and investigation of topics identified by the teacher and by the student, performances that require in-depth understanding, complex questioning and thinking, and opportunities to present conclusions in new ways. Many assessment tasks should be embedded in learning activities to mesh instruction and monitoring students' progress toward the attainment of learning goals. (Grant Wiggins, "Assessment to Improve Performance, Not Just Monitor It: Assessment Reform in the Social Sciences," *Social Science Record*, Vol. 30, No. 2, Fall 1993, p. 10.) Using this approach at all levels is supported by recent studies showing that students can conceptualize and employ complex thinking skills at a very young age.

8

Concepts and Themes for Social Studies

Concepts and themes serve as content organizers for the vast amounts of information people encounter every day. Concepts represent mental images, constructs, or word pictures that help people to arrange and classify fragmented and isolated facts and information. Aconcept is usually abstract, as opposed to concrete a product of the analysis and synthesis of facts and experiences rather than a definition to be learned constantly subject to change and expansion of meaning and delineation of detail, as different experiences provide settings and different relationships in new contexts. Students construct concepts and themes as they interact with their environments. This process of concept formation is ongoing, stimulated by active, meaningful involvement, and developmental in nature. To demonstrate the developmental nature of concept learning, the concepts and themes of the K-12 social studies program are listed on each page of the scope and sequence. Illustrated graphically, students grow to incorporate new experiences into their existing conceptual frameworks and at the same time modify that mental framework, constantly changing and expanding it.

The key concepts of the K-12 social studies program are:

History

Belief Systems means an established orderly way that groups or individuals look at religious faith or philosophical tenets.
Change involves the basic alterations in things, events, and ideas.
Conflict is a clash of ideas, interests, or wills that result from incompatable opposing forces.
Choice means the right or power to select from a range of alternatives.
Culture means the patterns of human behavior that includes ideas, beliefs, values, artifacts, and ways of making a living which any society transmits to succeeding generations to meet

its fundamental needs.
Diversity means understanding and respecting others and oneself including similarities and differences in language, gender, socioeconomic class, religion, and other human characteristics and traits.
Empathy means the ability to understand others through being able to identify in one's self responses similar to the experiences, behaviors, and responses of others.
Identity means awareness of one's own values, attitudes, and capabilities as an individual and as a member of different groups.
Interdependence means reliance upon others in mutually beneficial interactions and exchanges.
Imperialism means the domination by one country of the political and/or economic life of another country or region.
Movement of People and Goods refers to the constant exchange of people, ideas, products, technologies, and institutions from one region or civilization to another that has existed throughout history.
Nationalism means the feeling of pride in and devotion to one's country or the desire of a people to control their own government, free from foreign interference or rule.
Urbanization means movement of people from rural to urban areas.

Geography

The six essential elements of geography:*
The World in Spatial Terms—Geography studies the relationships between people, places, and environments by mapping information about them into a spatial context.
Places and Regions—The identities and lives of individuals and peoples are rooted in particular places and in those human constructs called regions.
Physical Systems—Physical processes shape Earth's surface and interact with plant and animal life to create, sustain, and modify ecosystems.
Human Systems—People are central to geography in that human activities help shape Earth's surface, human settlements and structures are part of Earth's surface, and humans compete for control of Earth's surface.
Environment and Society—The physical environment is modified by human activities, largely as a consequence of the ways in which human societies value and use Earth' s natural resources, and human activities are also influenced by Earth's physical features and processes.
The Uses of Geography—Knowledge of geography enables people to develop an understanding of the relationships between people, places, and environments over time—that is, of Earth as it was, is, and might be.
(*Taken from: *Geography for Life: National Geography Standards, 1994*, pp. 34-35. Permission applied for.)
Environment means the surroundings, including natural elements and elements created by humans.

Economics

Needs and Wants refer to those goods and services that are essential such as food, clothing, and shelter (needs), and those good and services that people would like to have to improve the quality of their lives, (i.e., wants—education, security, health care, entertainment).
Economic Systems include traditional, command, market, and mixed systems. Each must answer the three basic economic questions: What goods and services shall be produced and in what quantities? How shall these goods and services be produced? For whom shall goods and services be produced?
Factors of Production are human, natural, and capital resources which when combined become various goods and services (e.g., How land, labor, and capital inputs are used to produce food.).
Scarcity means the conflict between unlimited needs and wants and limited natural and human resources.
Science and technology means the tools and methods used by people to get what they need and

want.

Civics, Citizenship, and Government

Justice means the fair, equal, proportional, or appropriate treatment rendered to individuals in interpersonal, societal, or government interactions.
Nation-state means a geographic/political organization uniting people by a common government.
Citizenship means membership in a community (neighborhood, school, region, state, nation, world) with its accompanying rights, responsibilities, and dispositions.
Political Systems such as monarchies, dictatorships, and democracies address certain basic questions of government such as: What should a government have the power to do? What should a government not have the power to do? Apolitical system also provides for ways that parts of that system interrelate and combine to perform specific functions of government.
Power refers to the ability of people to compel or influence the actions of others. "Legitimate power is called authority."
Government means the *"formal institutions and processes of a politically organized society with authority to make, enforce, and interpret laws and other binding rules about matters of common interest and concern. Government also refers to the group of people, acting in formal political institutions at national, state, and local levels, who exercise decision making power or enforce laws and regulations."*
(Taken from: *Civics Framework for the 1998 National Assessment of Educational Progress*, NAEP Civics Consensus Project, The National Assessment Governing Board, United States Department of Education, p. 19).
Decision Making means the processes used to
"monitor and influence public and civic life by working with others, clearly articulating ideals and interests, building coalitions, seeking consensus, negotiating compromise, and managing conflict."
(Taken from: *Civics Framework*, p. 18).
Civic Values refer to those important principles that serve as the foundation for our democratic form of government. These values include justice, honesty, self-discipline, due process, equality, majority rule with respect for minority rights, and respect for self, others, and property.
Human Rights are those basic political, economic, and social rights that all human beings are entitled to, such as *the right to life, liberty, and the security of person*, and *a standard of living adequate for the health and well-being of himself and of his family*. Human rights are inalienable and expressed by various United Nations Documents including the *United Nations Charter* and *Universal Declaration of Human Rights.*

Social Studies Skills

Content, concepts, and skills form the basis for the learning standards and goals for the State social studies curriculum. Social studies skills are not learned in isolation but rather in context as students gather, organize, use, and present information. These skills are introduced, applied, reinforced, and remediated within the framework of the K-12 social studies program. Students understand the importance of social studies skills as they use them to interpret, analyze, and evaluate social science concepts and understandings. Students aim for mastery of skill objectives at the same time that they pursue the other cognitive and affective objectives of the social studies program.
Learning, practicing, applying, extending, and remediating social studies skills is a developmental process. Just as students who lack social studies facts and generalizations have difficulty in applying information to new situations and analyzing new issues and historical problems,

students with limited understanding of social studies skills have great difficulty in processing information, reaching higher cognitive levels, and learning independently. The teaching of social studies skills needs to be built into every classroom activity so that students engage in a systematic and developmental approach to learning how to process information.
Social studies skills can be classified into thinking skills and thinking strategies. (See: Barry K. Beyer, *Developing A Thinking Skills Program*, Boston: Allyn and Bacon, 1988). Thinking skills include the ability to gather, interpret, organize, analyze, evaluate, and synthesize information. Thinking strategies involve processing information as students engage in problem-solving, decision-making, inquiry, and conceptualizing. The following skills charts provide examples of how thinking skills and strategies can be organized throughout the social studies curriculum, K-12. The social studies standards, performance indicators, and core curriculum provide additional examples of skill development strategies.
Source: *Incorporating Skills Into Social Studies Programs K-12*. The New York State Education Department, Albany, NY.
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Students shall be able to:
identify a variety of sources of information:
• multiple sources of the same types of information
• varying approaches, viewpoints, interpretations
• reference works, newspapers, magazines, primary and secondary sources
• tables, graphs, charts, diagrams
• maps, globes, atlases, vocabulary
• visuals, field trips, artifacts
• listening
• observing
recognize advantages and limitations of various sources
locate sources of print and nonprint information:
• libraries (card catalogs, indices, library guides such *as Readers'Guide to Periodical Literature*)
• tables of contents, appendices, glossaries, bibliographies, and indices
• museums, galleries, public and private collections, motion pictures, television, radio, recordings, conversations, interviews
identify the types and kinds of information needed:
• recognition of information that is relevant as differentiated from information that is irrelevant
• use of subquestions and/or predicted consequences
• understanding of purposes for which information is to be used
locate information in print and nonprint sources:
• main elements
• main ideas
• supportive elements
organize collected information:
• orderly, precise, summarized notes
• cited sources

Students shall be able to:
classify and/or categorize data by:
• selecting appropriate headings for data

• distinguishing between relevant and irrelevant information and events placing ideas in order, chronological and other
• developing tables, charts, maps, and graphs to clarify data and ideas
• identifying differences and similarities in data
evaluate data by:
• differentiating fact from opinion
• identifying frames of reference
• identifying value-laden words
• detecting evidence of propaganda
• evaluating author's or person's qualifications
draw inferences from data by:
• identifying relationships among the parts
• detecting inconsistencies
• weighing conflicting facts and statements
check on completeness of data and question hypotheses based on sufficiency of evidence by:
• using simple mathematical and statistical devices to analyze data
• testing, refining, and eliminating hypotheses and working out new ones where necessary
• drawing conclusions
generalize from data by:
• applying previously learned concepts and generalizations to the data or situation
• checking reasoning against basic principles of logic and looking for inconsistencies, limitations of data, and irrelevancies
• creating a broad statement which encompasses findings
scrutinize possible consequences of alternative courses of action by evaluating them in light of basic values, listing arguments for and against such proposals, and selecting courses of action most likely to achieve goals
revise generalizations in the light of new data

Chart A: Social Studies Skills

Students shall be able to:
speak in an effective way by:
• spending sufficient time in planning and preparing, whether it be for an individual oral report or as a member of a panel, debate, forum, etc.
• talking in complete sentences
• keeping to the topic
• using appropriate visuals
• learning and developing the skills of being a discussion leader or participant
use media and various visuals for communicating ideas by:
• previewing such media and visuals
• preparing appropriate commentary

• using a variety of media forms: films, filmstrips, photographic essays, etc.
• constructing and using appropriate tables, charts, graphs, cartoons, etc.
write in an expository way by:
• thinking logically
• communicating ideas coherently
• forming generalizations based on appropriate data
• supporting such generalizations through the use of relevant factual information
• using different forms of written exposition: investigative, informative, interpretive, argumentative
• following an acceptable format that includes an introductory element, a body containing the basis of the exposition, a conclusion
recognize and use nonverbal means of communication by:
• understanding the variety of kinds of nonverbal communication: gestures, touching, eye language, etc.
• appreciating that the amount and kind of nonverbal communication varies from culture to culture

Students shall be able to:
incorporate a set of positive learning attitudes by:
• recognizing that others may have a different point of view
• observing the action of others
• being attentive to situational as well as personal causes of conflict
• listening to reason
• recognizing and avoiding stereotypes
• withholding judgment until the facts are known
• objectively assessing the reactions of other people to one's own behavior
participate in group planning and discussion by:
• following democratic procedures in helping to make group decisions
• initiating ideas
• giving constructive criticism
• suggesting means of group evaluation
• suggesting ways of resolving group differences
• anticipating consequences of group action
assume responsibility for carrying out tasks:
• individual
• group
be alert to incongruities and recognize problems
define basic issues by:
• defining terms
• identifying basic assumption
• identifying value conflicts

set up hypotheses and/or alternative courses of
action

Chart A: Social Studies Skills

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• raise questions related to a problem
- question beyond the who,
what, when, where and
include the how and why
- generate ideas and questions
which show originality, flexibility,
and inventiveness
• recognize that a problem exists
- identify several aspects of a
problem area identify gaps or
missing links in the events
and ideas
- recognize conflicts in data
- point out relationships
between conceptual areas not
usually related
• use higher level thinking skills
of comprehension, analysis, synthesis,
and evaluation
- establish a network of related
facts and concepts
- organize and bring structure
to ideas, events, and things
- reach some tentative conclusions
or hypotheses
- define basic issues, terms,
assumptions, value conflicts

Chart B: Problem-Finding/Solving Skills

Developing skills in dealing with conflicts, incongruities, and problems facing individuals and societies has been recognized for a number of years as a major skills area. By learning to resolve problems in a classroom or a school setting, students are given practice in approaching problem tasks in a rational manner. It is hoped that by making this practice a continuing one, K-12, the process can be transferred by the students to their outside encounters. Pupils need practice in rational approaches to working out conflicts and problems. The steps in this process generally consist of having students:

1. define or identify a problem
2. hypothesize and investigate data
3. make a decision based upon step #2
4. recognize value conflicts
5. redefine the decision in attempting to accommodate any conflicts in values.

Students should be helped to realize that while one problem may be resolved by taking one action or another, the solution may well raise new problems. This realization should encourage students to weigh alternative solutions carefully.

Each person or group determines which solution to apply by a combination of rational thinking and subjective judgments which may be intuitive, value-laden, or emotional. The process of problem-solving is developmental in nature; the solution of a problem or the changing of the decision gives the student the skills needed to approach another problem. If we conceptualize the basic steps in problem-solving, we can see how attempting to solve one problem will provide the student with the experiences and skills needed to solve another problem.

Chart B applies the skills found in Chart Ain an attempt to specifically apply that material

to social studies content: problem-solving, conflict resolving, and decision-making. The format is that of objectives which when followed would enable students to proceed through the process. People do not necessarily proceed step-by-step through the process, but may omit steps because of previous knowledge or intuitive reaction. Students without these advantages for whatever the reason should be given many opportunities for application and practice.
Each of the steps in this process, as in the continuum, can be assessed, taught/learned, practiced, and used outside the problem context. But the student learns best when the skill is learned and practiced in the context of real or vicarious experiences requiring resolution of some kind.

The student will be able to find problems.

The student will:
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The student will be able to solve problems which are either presented by the teacher or which are identified by the student.

The student will:
• write a sentence or paragraph which states the problem include a clear identification of the problem
• write a series of questions using stems which indicate increasing levels of complexity, for use as a guide for problem-solving
• develop a plan for problemsolving include use of time, location, and date of completion - include appropriate age level, the objective, and available resources
- include alternative courses of action
- assume responsibility for carrying out individual and group tasks
• obtain information from a variety of sources by
- using libraries (card catalogs, indices, library guides such as *Reader's Guide to Periodical Literature*)
- using reference works, newspapers, magazines, primary and secondary sources
- using tables of contents, appendices, glossaries, bibliographies, and indices
- identifying main ideas and supportive elements
- using maps, globes, atlases, visuals, field trips, artifacts, tables, graphs, charts, diagrams, people, museums, galleries, public and private collections, motion pictures, television, radio, recordings, conversations, and interviews
• evaluate the sources of information by
- using multiple sources of the same types of information
- varying approaches, viewpoints, interpretations

- checking on completeness of
data
- recognizing advantages and
limitations of various sources
- testing, refining, and eliminating
questions and working
out new ones where necessary
- understanding purposes for
which information was provided
- d i ff e rentiating fact from opini
o n
- identifying frames of reference
and value-laden words
- detecting evidence of propaganda
- evaluating author's or person's
qualifications
- recognizing information
likely to be relevant as differentiated
from information
likely to be irrelevant
• organize and use data by
- categorizing data
- selecting appropriate headings
for data
- distinguishing between relevant
and irrelevant information
and events
- placing ideas in order,
chronological and other
- developing tables, charts,
maps, and graphs to clarify
data and ideas
- identifying differences and
similarities in data
- drawing inferences from data
- seeing relationships among
the parts
- recognizing inconsistencies
- identifying conflicting views
and statements
- checking on completeness of
data and questioning
hypotheses based on sufficiency
of evidence
- using simple mathematical
and statistical devices to analyze
data
- drawing conclusions
- generalizing from data
- drawing on previously
learned concepts and generalizations
- checking reasoning against
basic principles of logic and
looking for inconsistencies,
limitations of data, and irrelevancies
- scrutinizing possible consequences

of alternative
courses of action, by evaluating
them in light of basic values,
listing arguments for and
against such proposals, and
selecting courses of action
most likely to achieve goals
• when necessary, redefine the
original problem or identify
"new" problems by
- arranging and recombining
data to create new structures
for looking at the problem
- thinking of new ways to use
old or standard ideas and
things
- thinking of novel, unique, or
unusual possibilities
- thinking of different kinds of
possibilities by manipulating,
adapting, and modifying
ideas
- embellishing the possibilities
• develop a product or conclusion
which summarizes the information
and can be shared
- orally: mini-lecture or debate
tapes of interviews or discussions,
records
- visually:
chalkboard
maps, diagrams, charts
photographs, collages
models
- by demonstration
- in writing
report letter
article poem
mock diary story
drama
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• participate in group planning
and discussion by
- following democratic procedures
in helping to make
group decisions
- initiating ideas
- giving constructive criticism
- suggesting means of group
evaluation
- suggesting ways of resolving
group differences
• incorporate a set of positive
learning attitudes by
- recognizing that others may
have a different point of view

- observing the actions of others
- being attentive to situational as well as personal causes of conflict
- listening to reason
- recognizing and avoiding stereotypes
- withholding judgment until the facts are known
- assessing the reactions of other people to one's own behavior

• recognize and use nonverbal means of communication by
- understanding the various kinds of nonverbal communication: gestures, touching, eye language, etc.
- appreciating that the amount and kind of nonverbal communications varies from culture to culture.

• speak in an effective way by
- spending sufficient time in planning and preparing whether it be for an individual oral report or as a member of a panel, debate, forum, etc.
- talking in complete sentences
- keeping to the topic
- using appropriate visuals/gestures, etc.
- learning and developing the skills of being a discussion leader or participant

• use media and various visuals for communicating ideas by previewing such media and visuals
- preparing appropriate commentary
- using a variety of media forms: films, filmstrips, photographic essays, etc.
- constructing and using appropriate tables, charts, graphs, cartoons, etc.

• use different forms of written expression: investigative/informative, interpretive, argumentative, narrative, and descriptive by
- following an acceptable format that includes an introductory element, a body containing the basis of the work, and a conclusion
- thinking creatively
- thinking logically
- communicating ideas coherently
- forming generalizations based on appropriate data

- supporting such generalizations
through the use of relevant
factual information

The student will be able to work with others engaged in problem-finding/solving skills.
The student will:

**The student will be able to communicate orally, visually, and/or in writing the results of the problemfinding/
solving effort.**
The student will:

Chart B: Problem-Finding/Solving Skills

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SKILL DEVELOPMENT PROCEDURES

The following diagram suggests a systematic procedure for skill development in the social studies. Teachers should determine at the beginning of each year the proficiency level of students in the various skill areas.

Source: *Social Studies 11: United States History and Government*. The New York State Education Department, Albany, NY.

ELEMENTARY
Assess/Diagnose
Introduce Skill
(Initial teaching using
familiar content and media appropriate
for grade)
Practice
Remediate
Assess/Diagnose
Extend and Refine
(More difficult content,
different media, more
demanding standards, etc.)
Practice
Assess Remediate
Apply
Recycle
State Education Department
Student Evaluation at Grade 5
INTERMEDIATE
Assess/Diagnose
Reinforce/Remediate
Apply
Extend and Refine
Practice
Assess Remediate
Apply
Recycle
State Education Department

Student Evaluation at Grade 8
COMMENCEMENT
Assess/Diagnose
Continuing Reinforcement, Practice, Assessment and Remediation as needed
Refinement and Extension
Application
State Education Department Assessment through Regents examinations in *Global History and Geography* and *United States History and Government*

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STRATEGIES TO TEACH SOCIAL STUDIES

This document is designed to provide you with a brief description of a few key strategies. It is
not an exhaustive list. Your task as a trainer of teachers (and as a teacher) will be to match the
appropriate strategy with the content and skills students are to master.

Table of Contents

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1) Introduction

There are many ways to teach social studies. Open any issue of the *Texan, Social Education,* or the *Journal of Geography* to find descriptions of an array of teaching-learning strategies. Peruse the teacher's edition of any social studies textbook for a variety of suggestions regarding how to teach students specific content. Many resources are available to help teachers hone their ability to teach in interesting and engaging ways.

This document is designed to provide you with a brief description of a few key strategies. It is not an exhaustive list. Your task as a trainer of teachers (and as a teacher) will be to match the appropriate strategy with the content and skills students are to master.

---

2) A Note on Cognitive Strategies

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What does it mean to learn? Have you ever reflected on the mental processes you use to learn something? Ask your students the strategies they use when they "study." Unfortunately, students today have relatively poor cognitive strategies or known ways people learn. It is up to teachers to teach students how to learn.

Metacognition means "thinking about thinking." It refers to the awareness and control students have of their cognitive processes. Good learners have an array of learning strategies they can use. They know how to solve problems, how to set goals, evaluate their own progress, monitor their achievement, and assess whether they understand material. They can use graphic organizers to study, read and review material with a purpose, rehearse skills until they master them and so on. Poor students need explicit instructions and guidance concerning how to do these things. It is simply not enough for teachers to say, "Learn this." We need to show students how to learn. Keep this in mind as you think about each of these teaching strategies. They should help students to learn material and skills as well as learn to be better learners. What can teachers do to develop metacognition?

- Share and model self-monitoring processes.

Show your students how you proofread and evaluate work, check to see how lessons are going, and so on. Take, for example, a piece of work and show students how you would analyze it to make it better. Ask them to track their thinking processes by asking themselves, "What could I do to improve?" "What help do I need?"

- Explain strategies that students can use.

Think outloud how you would go about solving a problem, making a decision, studying for a particular test, or understanding a challenging piece of reading material.

- Clarify why particular strategies are helpful and useful.

There are three types of knowledge: declarative knowledge (knowing what), procedural knowledge (knowing how), and conditional knowledge (knowing when, what, and how). Help students to develop their conditional knowledge by letting them in on what works, when, and why.

- Clarify and model when particular strategies are appropriate.

Modeling is key. You teach the way you were taught; you learn the way you learned. Your methods might not suit all of your students' thinking styles, but it is a start. Show kids how you learn. Learn together. Model in your lessons good ways to manage the complex learning process. Make predictions or show students how to develop hypotheses. Describe visual images that help you to remember. Share an analogy, which links prior information with new information. Verbalize confusing points.

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3) Activating Prior Knowledge

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Learning is a process of adding new ideas to old ideas. Teachers need to recognize the importance of prior knowledge on learning and give students opportunities to remember what they already know.

What are some ways to activate prior knowledge?
• Brainstorming
This is a familiar technique. Students are given a topic and invited to call out their ideas. Everything is accepted and the teacher writes down the words, ideas, key phrases etc. Time is needed for students to think, process, and recall but the session should end when the responses slow down or get silly.
• Cognitive Mapping
See section 15 entitled "Using Graphic Organizers to Enhance Student Thinking."
• KWL
Divide a piece of paper into three parts. Title one section "KNOW." Give students time to write what they already know about that topic you are introducing. Title the middle column "WANT to learn." Again, give students time to write a few ideas about what they wish to learn about this topic. You may wish to provoke responses by asking questions like, "How will knowing this help you as an adult? As a citizen? As a political, economic, and social decision maker?" Finally, title the third column "LEARN." At the end of the lesson, ask students to reflect on what they did gain in terms of knowledge and skills.
These are three ways students can be helped to recognize knowledge they already have which relates to new concepts or skills they are learning.

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4) Collaborative Processes

Collaboration means working together. This is an important work place skill identified by the U.S. Department of Labor as one of the keys to successful adult employment. It is also an essential skill for citizens in a democracy. Two heads are better than one, especially in the classroom. Students enjoy working in groups on shared goals. They learn to depend upon and use each others' strengths to solve problems and complete tasks. Research shows that collaborative work supports greater retention of subject matter, improved attitudes toward learning, and teaches kids how to get along with each other.
There are many different types of collaborative work. The graphic "Collaborative Learning Techniques" summarizes a number of different uses of this technique.
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Collaborative Learning Techniques

Name Description

Roundrobin Each student in turn shares something with his or her teammates, this works well for expressing ideas and opinions, e.g., developing consensus on the civic responsibilities of Texas citizens.

Corners Each student moves to a corner of the room representing a teacher-determined alternative. Students discuss within corners, then listen to and Paraphrase ideas from other corners, e.g., to evaluate and debate

Numbered Heads Together

The teacher asks a question, students consult to make sure everyone knows the answer, then one student is called upon to answer, e.g., a group of students discuss how scientific discoveries and technological innovations benefit U.S. citizens, making sure everyone knows

a variety of reasons. Then, the teacher calls upon individual group members to assess progress.

Pairs Check Students work in pairs within groups of four. Within pairs, students alternate. One answers a question/completes a task while the other coaches. After every two questions, the pair checks to see if they have the same answers as the other pair.

Three Step
Interview

Students interview each other in pairs, first one way, then the other. Students each share with the group information they learned in the interview, e.g., at the conclusion of a unit on why people have adapted to and modified the Texas environment, students interview each other to discover how they use natural resources to meet basic needs.

Think Pair
Share

Students think to themselves on a topic provided by the teacher; they pair up with another student to discuss it; then they share their thoughts with the class, e.g., students are asked to give examples of the processes used by individuals, political parties, interest groups or the media to affect public policy. After quiet thought, they share with a neighbor, then the entire class.

Team Word
Webbing

Students write simultaneously on a piece of butcher paper, drawing main concepts, supporting elements, and bridges representing the relation of concepts in a generalization. This helps students to analyze and to see relationships in complex systems, e.g., to compare the historical origins, central ideas, and the spread of major religious and hilosophical traditions.

Inside Outside
Circle

Students stand in pairs in two concentric circles. The inside circle faces out, the outside circle in. Students use flash cards or respond to teacher questions as they rotate to each new partner. This can help to check for understanding, review and process information.

Co-op Students work in groups to produce a particular group product to share with the whole class; each student makes a particular contribution to the group.

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Many of the other strategies listed in this site use some aspect of collaboration. Here are two additional types.

- **Peer of Cross Age or Cross Ability Tutoring**

In this technique students provide "tutoring" to peers or younger students. The best way to learn it to teach. Make pairs of students experts in different topics and have them teach each other their expertise. The Jigsaw Method is an elaboration of this. "Home groups" are established, then one member from each "home" joins a new, "expert group." They develop expertise, then return to the home to teach other group members and to learn their expertise.

- **Reciprocal Teaching**

Reciprocal teaching, developed by Palincsar and Brown, is like an interactive dialogue between teacher and students. It helps students to become involved in the content they are discussing by helping them to read and better understand. There are four steps.

Step 1: Summarizing. Students restate what they have read in their own words. They work

to find the most significant information in the text. Begin with summaries of sentences or paragraphs; later, stretch students to large units of text.
Step 2: Generating Questions. Students ask questions about the material. In order to do this, they must identify significant information, pose questions related to this information and check to make sure they can answer their own questions.
Step 3: Clarifying. Students focus on reasons why the text is difficult to understand. For example, the vocabulary may be challenging or they may not have the prerequisite knowledge required to make sense of what they have read. Students may answer each other's questions or the teacher may fill in the gaps required to make sense of the text.
Step 4: Predicting. Students speculate on what will be discussed next in the text. To be successful, students must recall relevant background knowledge so they can connect what they are reading and thinking about with what they already know.

Jigsaw: An Example.
Goal: to learn more about the political, economic, social, and personal background of framers of the US Constitution.
Method: Form home groups. Assign each member of the home groups a framer to research, e.g., James Madison, Alexander Hamilton, James Mason. The framer expert groups meet, research, teach each other, rehearse how they will share their expertise with the home group, then return to "home" to teach about their framer.
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5) Inquiry Teaching

Inquiry teaching is a process of asking and answering key social studies questions. Students develop questions, collect and organize data related to the questions, analyze the data, and draw
inferences or conclusions about the data to answer their questions. This is "the scientific method" applied to social studies and, in many cases, mirrors the ways real social scientists (economists, historians, geographers, political scientists etc.) conduct research.
A hallmark of inquiry teaching is student activity. Teachers facilitate student learning. Among
the advantages of inquiry teaching are:

- Students generate their own knowledge;
- Answers are discovered by students and are, therefore, more memorable;
- Divergent, creative thinking is encouraged;
- Higher order thinking skills (analysis, synthesis, evaluation) are emphasized;
- Skills integrate with knowledge as students organize and analyze their data in a variety of ways (maps, graphs, charts, etc.)

Although there are a number of variations, inquiry teaching basically involves five steps.
Step 1: Identifying and clarifying questions, issues, problems. This can be student generated (within limitations) or teacher-created.
Step 2: Propose a hypothesis. Suggest possible solutions or explanations to the problem/question. Developing a hypothesis will help to guide student research.
Step 3: Gathering and organizing evidence. Locating and collecting data is key. This stage allows students to develop key social studies skills identified in the TEKS, e.g., selecting relevant versus irrelevant data, evaluating the value of primary versus secondary data, organize and interpret information, classifying and categorizing, presenting the

information etc.
Step 4: Evaluating, analyzing, and interpreting the data. Based on the evidence and data available, what possible solutions or explanations are feasible?
Step 5: Concluding, inferring, and making generalizations. Is the hypothesis proven or disproved? What is the answer to the question? What inferences can be made from this? What additional questions are raised by the information and analysis?
This type of teaching and learning is often best if students work collaboratively. *The History Alive!* project uses a form of inquiry teaching but calls it "problem solving group work." It suggests students address issues such as:

- Creating mini dramas on life during the Great Depression;

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- Organizing a press conference on the eve of the Civil War;
- Envisioning Native American cultures;
- Creating monuments to daily life in Constantinople;
- Structuring a "Meet the Press" to discuss the question, "Can common people be trusted to govern themselves?

In each case, a topic (the Civil War, the Great Depression, Native American cultures) was framed as an inquiry question. Inquiry questions hook student interest and provide a structure on
which to develop engaging instruction and assessment. Students are actively engaged in research
to answer questions and learn oral, visual, and written presentation skills.

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6) Problem Solving

Problem solving is one of the most important skills students learn in school. Problem solving has a special role in the social studies. It is featured prominently in the TEKS skills and is the focus of many instructional strategies.
Students use facts, concepts, and generalizations in the process of finding solutions to problems
and reaching decisions about issues. Note that both problem-solving and decision-making are termed a process. These two processes involve a series of steps a student follows to some conclusion. Problem-solving and decision-making processes generally require students to use facts, concepts, and generalizations they already know to arrive at a solution or decision.
This chart illustrates the thinking skills necessary to effectively implement the decision-making
skills.

Decision-making Skills	Thinking Skills
Recognizing and clearly stating issues to be decided.	Introducing facts, analyzing and raising questions.
Suggesting alternatives.	Analyzing to identify key generalizations, issues and conflicts, synthesis to propose courses of action.
Tracing the probable consequences of each alternative.	Interpreting and analyzing data; developing

concepts;
projecting consequences.
Recognizing what is required for a decision.
Evaluating each set of consequences, prioritizing and qualifying reasons for action.
Deciding. Judging. Nickerson (1994) summarizes three approaches to problem solving:
Polya's Four Steps
- Understand the problem

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- Devise a plan
- Carry out the plan
- Look back

Hayes Six Steps
- Find the problem
- Represent the problem
- Plan the solution
- Carry out the plan
- Evaluate the solution
- Consolidate gains

Bransford and Stein IDEAL
I=Identify the problem
D=Define and represent the problem
E=Explore possible strategies
A=Act on the strategies
L=Look back and evaluate the effects of your activities
Among the strategies suggested to solve problems are:
Problem Decomposition
Break a complex problem into smaller "sub" problems, and solve each subproblem to solve the big problem.
Working Backwards
Start from a final goal state and move backwards. If you can't get from A to B, try going from B back to A.
Means-End Analysis
Begin by describing the final solution. Analyze how that goal state is different from the current situation, then take action to minimize the difference between the two.
Forward Chaining
Begin with what is given. Describe it, then move to the goal state. This is the strategy used by experts in a field.
Considering Analogous Problems
Try solving a problem by finding a solution to an analogous but easier problem.
Encourage students to use these alone or in combinations when approaching difficult issues.
The diagram on the following page outlines a systematic approach to problem-solving and decision-making. You can follow this strategy to develop activities related to a number of problems and issues.
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Identify & State Problem
What evidence is there that there is a

problem?
What events have occurred? When?
Where?
Is it a single problem or part of a
larger issue?

Knowledge Investigation

Collect and analyze data/information
related to the problem.
Verify accuracy and completeness.
Identify people involved.
Collect and analyze data on their
actions and statements.

Making a Decision

Identify people or groups who could act.
Name alternative actions they could take.
Predict likely consequences of each
action.
Order alternatives for most to least
feasible. From most to least desirable.

Character Clarification

Determine what is important
to you in the situation.

Background Analysis

Infer reasons for action.
Identify reasons people's
opinions differ and cause
conflicts.
Hypothesize sources of conflict,
e.g., values, social/cultural
differences.

Action

Decide the best action for groups in question, for yourselves, or encourage actions by others who have appropriate jobs and responsibilities.

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A General Approach to Problem-Solving and Decision-Making. After Maye.

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7) Direct Instruction

Lectures are not all bad, but they are not all good either. Sometimes it is necessary to present some baseline information, explain a new skill, model a thinking process, or provide direct instruction to students before they proceed to grapple with learning on their own.

The typical direct instruction teaching strategy includes six steps:

- Step 1: Daily review.
- Step 2: Presentation of new material.
- Step 3: Guided practice.
- Step 4: Provision of feedback.
- Step 5: Independent practice.

- Step 6: Periodic reviews.

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8) Visual Strategies

Variety is the spice of life, so teachers will not want to follow the path of direct instruction every
day. The presentation of new material can take many interesting and amusing turns. An interactive lecture, well illustrated with slides or images from authentic sources, is a good teaching strategy. It takes time to develop a richly visual presentation but teaches students content as well as visual analysis skills. The key is to build in student involvement and interactivity as the images are displayed and analyzed. Students will need you to model image
analysis at first, then need a little encouragement to interpret what they see independently. A more powerful learning tool is student construction and preparation of their own visual presentations. Multimedia, Hyperstudio, and World Wide Web pages offer many venues. Students choose the images and develop the story and narration based on interpretation of events,
data, and information. Too conclude, they make a presentation or produce a visual product.

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9) Teaching Facts, Concepts, and Generalizations

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You have to teach it all: facts, concepts, generalizations, hypotheses and all other forms of social
studies knowledge. And you have to teach it all at once in some artful blend because none of it
can exist in isolation. Concepts rely on facts, but facts are not meaningful except as they relate
to concepts and generalizations. It is all a complex, interdependent structure, each layer relying
on the layer above and below for support and cohesion. Pull one component out, and the structure collapses.
Existing methods of teaching do not provide much help in deciding how each of these elements
can be taught together or even sequentially for optimal student learning. Learning is a construction process. Students build understanding, piece by piece and often in highly individualistic ways. Not all students learn the same way. It is up to us to help them in the endeavor.
In the face of this ambiguity, starting with some definitions may help teachers see ways to accomplish this goal.
Generalizations
Generalizations are statements about relationships between and among concepts. Generalizations are true and verifiable for all cases on the basis of the best evidence available. For example, if you were once bitten by a German Shepherd (a fact), you cannot generalize that all German Shepherds bite. If, however, you had evidence that all German Shepherds bite, you could make the generalization, "German Shepherds bite." Generalizations organize and summarize information obtained from the analysis of facts. A generalization is usually a broad assertion. In contrast, a fact is a truth only about a

particular incident or case. Compare these generalizations and related facts to see the difference between the two.

Generalization Related Fact

Families vary in size and structure. The average family in the United States has 1.9 children.

The nature of democracy in the United States continually evolves as society grows and changes.

Women received the right to vote in 1924.

People in communities are interdependent. In Texas, many small communities must buy landfill space from nearby cities.

The climate, topography, and natural resources of a community affect the lifestyle of its people and may determine the types of goods and services the community produces.

The economy of the Lower Rio Grande Valley depends upon the presence of a large number of older residents from the snowy North who winter in the mild regions of Texas.

Geographic factors determine the types of plants and animals that live in region and influence population distribution.

Two-thirds of the population of Texas lives in the wetter eastern portion of the state.

Every nation has a unique history that exerts an The creation of the Constitution and the Bill of

influence on the events of the present. Rights gave the United States a unique form of government and way of life.

Throughout history, cultures have borrowed from each other.

Many of the terms used in cattle ranching in Texas today come from Spanish.

Technology exerts a profound influence on cultures.

The invention of air conditioning transformed the population and commerce of Texas.

Economic well-being is a goal of all nations. Franklin Roosevelt initiated deficit spending to combat the ill-effects of the Depression.

You can see that generalizations are “big ideas” while facts are specific and limited.

Generalizations come from an analysis of many sets of facts. Before a generalization is proven, however, it is a hypothesis. Hypotheses are potential generalizations.

There are two ways to organize activities which help students to develop generalizations or prove hypotheses (potential generalizations), the inductive (discovery) approach or the deductive (expository) approach. Both methods require students to understand the relationships among items and to be actively involved in learning. TAAS includes both kinds of experiences. The

steps are summarized here:
Inductive/Discovery Method
1) Students examine sets of data and materials.
Increasing Generality

Generalizations
Concepts
Facts Specificity
The Structure of Knowledge
From Armstrong 1989

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10) How to Teach Generalizations

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2) With teacher, they identify and explain key points through questions and discussion, observing similarities and differences, patterns, and trends in the data and materials.
3) Finally, students draw conclusions from the data, summarize their findings, and discover or infer the generalization.
Deductive/Expository Method
1) Students are presented with a hypothesis- a potential generalization. Or students are given a generalization and asked to find evidence to support it.
2) The key concepts that are components of the generalization are clarified.
3) The teacher provides instructions, questions, materials, and assistance for students to verify the generalization.
4) Students identify, find, or create new cases of the generalization.
Whatever approach you take, you are asking students to embark on a process of inquiry. As explained under "Inquiry Teaching" this process includes:
• collecting social studies information (for example, from textbook, primary sources, secondary sources, pictures, interviews and questionnaires).
• organizing social studies information (for example, in a data retrieval chart, T-diagram, map, or graph).
• analyzing social studies information (see cause-and-effect relationships, summarize patterns and trends, similarities, and differences).
• developing summary statements, generalizations, and inferences based on the information and materials.
Students should connect facts to concepts and ideas to produce more general ideas.
Three Things You Can Do to Improve Your Students' Ability to Make Generalizations
1. Organize your own teaching and lesson planning around generalizations.
Before you start, list the concepts, generalizations, and central understandings you are planning for. This is difficult. It requires going beyond saying, "Events that led up to the Civil War." That list of facts may be expressed as one (or more) generalization. For example, one generalization related to events leading to the Civil War might be: Multiple influences including political conflict over territorial expansion, states' rights, and tariffs as well as economy contributed to the Civil War.
2. Always make students draw conclusions and make generalizations.
Too often we plan great activities for students but never follow through on those

activities to make students state conclusions. We may see this as restating the obviousbut they may not! And remember, arriving at a "right answer" does not guarantee that a student has applied or understands a particular generalization.

3. Design assessments to reflect your learning activity.

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If your teaching is focused on generalizations and not periods of history or regions of the world per se, then make sure your assessments give students practice in TAAS-like questions which require them to discover or apply generalizations. This is not teaching to the test; it is teaching and assessing for higher-level thinking. If your goal is for students to be able to make and use generalizations, your tests must reflect that.

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11) Concepts

Concepts are the categories we use to cluster information. Concepts organize specific information under one label. They are building blocks and links between facts and generalizations. The accomplishments of Davy Crockett, Sam Houston, and Jane Long are facts.

Together, these people may be categorized as heroes, a concept. To understand a generalization

students first must understand its component concepts. Consider the generalization: People in communities are interdependent. The student who does not know the meaning of two concepts,

community and interdependence, can not understand the generalization.

This leads to a general rule: Students must be given lots of opportunities to move through the structure of knowledge, that is, to move from facts to concepts to generalizations.

Teaching Concepts

Research in teaching concepts has identified these general instructional strategies to be effective:

• Step 1: Identify a set of examples and place them in a logical order. Include at least one example that is a "best" example.

• Step 2: Devise materials or oral instructions with a set of cues, directions, questions, differences in the examples and nonexamples used.

• Step 3: Have students compare all the examples with the best example; provide feedback to students on their comparisons.

• Step 4: Focus student attention on the best, strongest, most clear example. What are its attributes and characteristics?

• Step 5: Ask students to develop a definition of the concept or state it for them.

• Step 6: Place the concept in relation to other student knowledge; try to attach this new information to existing student knowledge structures.

• Step 7: Give students examples and nonexamples to assess whether students understand the concept. Ask students to generate additional examples or apply the concept to new situations.

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12) Community Based Instruction

Community based instruction is an old idea with a new name. Teachers have always used real

life situations and settings to enrich their classroom and curriculum. Think of the traditional social studies examples of community based instruction: community volunteer work, switching
positions with town officials for a day, observing court cases, and doing field work. Today's version may be slightly different but it is not new.
Community based instruction gives students authentic experience in applying what they learn in
school to real world tasks. It offers students who enjoy working with people an opportunity to develop those skills. Community based instruction can be short or long term; it should have clear educational goals, high expectations for student performance, and be well integrated with
school curriculum to be successful.
Types of Community Based Instruction
• Field Studies
A field study is a planned learning experience which involves an educational trip to places where students can observe first hand and study directly in a real life setting (Deutschman 1992). It is the new and improved version of the old "field trip." It mirrors the kind of field work conducted by anthropologists, sociologists, geographers, and historians. A research question (or questions) is (are) identified. Students go to the site, collect data, take careful notes of their observations, systematically record information,
Concept: Refugees
Concept Definition: victims of political violence who see refuge outside their country
Critical Attributes: victim, political violence, seeking refuge, outside, country
Noncritical Attributes: country of origin, age, gender, educational level, socioeconomic status, race,
religion
Best Example: In 1995, Hutus and Tutsis fled Rwanda for Zaire to escape ethnic strife after the
president was thought to have been assassinated by members of the other ethnic group.
Other Examples: Palestinian refugees who fled Israel in 1948-1949; Guatemalans who have fled to
Mexico to escape political oppression in their own nation; exodus of large numbers of Vietnamese
who fled Vietnam following the fall of Saigon, 1975.
Nonexamples: criminals who escape their punishment by fleeing to another country; individuals
unhappy with their government who travel abroad.

take pictures, sample in a scientific way to gather evidence and so on. Field studies offer a perfect opportunity to hone graphic and sketching skills, to stimulate discussion, and for critical thinking.
• Mentoring/Apprenticeship
Mentoring matches students with a person in the community who can offer them advice and serve as a role model. An apprenticeship matches students with community people who offer professional skill and knowledge to students through collaborative work projects.
• Service Learning
Service can mean different things to different people. As a strategy for social studies

teaching, it should mean an opportunity to learn through reflection on the experience of serving the community. Students are involved in short or long term projects which provide many situations in which to learn and apply skills.

13) Role Play and Simulations

Students love playing roles. They enjoy taking on the identity of others. In the process they learn valuable social studies skills such as developing empathy and seeing situations from multiple perspectives. Simulations are also effective at helping students engage in problem solving in real world contexts. Games, computer software, and reenactments of situations, for example, a simulation of a Congressional hearing are examples of simulations. Simulations and
role plays are wonderful ways to make events from the past or present come alive. But they are
difficult to do well.
Role playing takes place in five stages:
Stage 1: Initiation and Direction
At this stage the teacher identifies a topic which requires students to look at many sides of a difficult issue, requires the development of an opinion, or includes key players with interesting personalities. A role play is not the way to teach a procedure or process; it is an excellent way to explore an event, situation, or narrative with a crucial, decision making component.
Stage 2: Describing the Context
The teacher sets the context and makes sure students do not fall into the trap of presentism-role playing with hindsight. The situation must be set up and all perspectives explained clearly.
Step 3: Roles
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In a successful role playing activity everyone must have a role. There may only be five or six key roles, but the entire class should be engaged in the role playing in some way, albeit as jurors, or interested citizens, or newspaper reporters. Everyone has an assignment, something they do in the role play. Once everyone is assigned a role, time is needed for students to understand their role, to practice, to "try on" their new identity. They must try to think like Thomas Jefferson or a land developer or whomever they have been assigned to become.
Stage 4: Enactment
Make sure students stay in role, and proceed.
Stage 5: Debriefing
Depending upon the structure of the role playing activity, students complete the action with a written reflection followed by an oral debriefing. The debriefing is the most important part of a role play; it is the teacher's chance to ask students to discuss, to reason, to draw conclusions, and to pull everything together.
Simulations run in a very similar fashion, After the simulation problem or issue is carefully explained, the rules for the simulation or simulation "game" are carefully discussed. Roles must
be specified and the resources or constraints of the simulation outlined. Again, the debriefing is
important. Students tend to focus on "who won," not what the process or procedure was.

14) Discussion Formats

Every social studies teacher includes discussion in his or her teaching repertoire. But too often
discussion degenerates into unreasoned debate, where opinions are more important than viewpoints based on thought and research. There are several discussion models which can help
make this strategy more effective, especially as a way to model thinking and critical problem solving.

- Educators for Social Responsibility (ESR) Model

This describes a process for dialogue. The steps are:
Step 1: Present positions.
Step 2: Each group asks questions, then restates the other group's position as accurately as possible.
Step 3: Each group presents a list of the agreements between the two positions.
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Step 4: Each group presents the questions that both can explore to resolve some of their differences.

- Socratic Discussion Model

This is also called "the seminar." It is a discussion in which students dissect a text, problem, or event in order to better understand it. Students ask questions and probe each other's answers from different perspectives. This method works well to understand complex issues, e.g., Supreme Court decisions.
Students are given roles to help them be productive in the seminar. Some students are speakers, some are listeners. This device allows teachers to give a voice to all students and to let talkative students develop their listening skills. Roles can rotate within a seminar or from seminar to seminar. The goal is for students to become proficient in a variety of roles.

Speaker Listener

Explorer: Let's try a new path or perspective…
Journalist: Summarizes the important points briefly.
Gadfly: Everyone seems to be too easily content with saying…
Map-maker: Makes a visual chart of paths and terrain covered in the conversation,, noting major "landmarks" and "twists and turns."
Sherlock Holmes: I think we have overlooked an important…
Shadow: Listens to and observes one person for a fixed period of time, noting their comments and behavior (effective in large classes and for listening skill practice)
Librarian: Here's a passage in the text that supports your point…
Referee: Judges which "moves" in the

discussion seem warranted or unwarranted (in terms of content) and exemplary or outside the "rules" of good seminar behavior (in terms of process).
Matchmaker: What you are saying is a lot like what Sue said earlier…
Coach: Diagnoses the overall "play" and proposes some new ones, improvements in performance, strategies, etc.
Judge: Let's see what the argument is between you two and try to settle it…
Will Rogers: Let's find a way to make this seemingly odd/unpleasant/incorrect comment more plausible or helpful…

Harvard Social Studies Project Model

This is a complex model but helpful in that it suggests a way to assess a student discussion of public issues using these performance criteria:

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Substantive Criteria

- Stating and identifying issues
- Using foundational knowledge
- Elaborating statements with explanations, reasons, or evidence
- Stipulating claims or definitions
- Recognizing values or value conflict
- Arguing by analogy

Procedural Criteria

Positive (+)

- Inviting contributions from others
- Acknowledging the statements of others
- Challenging the accuracy, logic, relevance, or clarity of statements
- Summarizing points of agreement and disagreement

Negative (-)

- Irrelevant distracting statements
- Obstructive interruption
- Monopolizing

Personal attack

Adapted from Harris 1997

Students are rated on each of these criteria on a scale from 1 (unsatisfactory) to 5 (exemplary).

The goals are for students to:

- present accurate knowledge related to the issue;
- use skills for stating and pursuing related issues; and

• engage others in meaningful dialogue.

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15) Using Graphic Organizers

You can lead a horse to water, but you can't make it drink. You can also set up wonderful learning activities, but you can't make students think. This frustrating fact perplexes teachers. It
sometimes leads us to think that some students are uncaring because they don't participate in classroom experiences in the ways we want them to.
This may be because these students have poor thinking skills. They simply do not have the strategies to help them process information and construct knowledge that we take for granted. It
is up to us to provide students with these strategies.
One very fruitful strategy is the use of graphic organizers. Known by a variety of names (concept maps, webs, thinking maps, mind maps), these are simply tools to help students organize their thinking. Here are a few generic examples with some suggestions concerning how
you can use them with students. The goal is for teachers to use these tools frequently enough so

that students use them automatically. The use of graphic organizers is a helpful addition to any
student's repertoire of thinking/learning strategies.
Decision-Making
The two diagrams, Figures 1 and 2, are examples of decision making graphic organizers. Four
steps are used in the first organizer, Figure 1.
Step 1: State the need for a decision at the bottom of the organizer.
Step 2: Select four possible alternatives in the next step up the organizer.
Step 3: Next, consider and jot down the positive and negative consequences of each alternative
on the next organizer level. You may wish to share your organizer with others to add or delete
items.
Step 4: Given the possible consequences, develop a decision. This can be a personal decision or
a decision developed through group consensus. Write the decision at the top of the organizer.
Near the roots of the Decision Tree (Figure 2), students write the occasion for the decision, such
as resolving a conflict. On the main trunk and branches of the tree, students identify one or more
alternative decisions. In the leaves and stems above, they list the positive and negative consequences of each alternative. Finally, after weighing the consequences, they write the decision in the box of the tree. This diagram models and reinforces a thoughtful process of decision making.
Figure 1. Decision-making Model (next page)

-+
Decision-Making Model
Decision
+
-
+
-
+
-
+
-
Consequences
Alternatives

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Figure 2. Decision Tree (previous page)
Step 9: Students come to a final solution.
Step 10: Students outline the action that needs to be taken to solve the problem.
Figure 3. Problem Solving
1. Statement of problem. 4. What are the facts?
5. Why is this a problem?
6. What other information could be used to solve this problem? How could it be used?
2. Restate problem.
3. Restate problem.
7. What methods seem appropriate to find a solution?
8. How can this problem be solved? Sketch a plan.
9. Suggest a tentative solution. Is it feasible? Why? Why Not?
10. Final solution.
11. Acceptance plan.

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VIII

Social Studies: Wrong, Right, or Left? A Critical Response to the Fordham Institute's

Where Did Social Studies Go Wrong? (Part II)

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The purpose of social education is for citizens to learn how to judge for themselves what will secure or endanger their freedom.
—Thomas Jefferson

Social studies education is a field defined by fractious ideological divisions, but establishing a singular vision to be pursued in social studies is not something that can (or should) be done once and for all. As we argued in the introduction to the first installment of articles responding to *Where Did Social Studies Go Wrong?* (*WDSSGW*), deliberation—rather than coercion, appeals to emotion, or authority—offers a means for resolving differences of opinion and a foundation for curriculum and pedagogy that is attuned to the knowledge, skills, and values that citizens need in a society pursuing a democratic ideal. As the work of John Dewey illustrates, deliberation is the heart of what constitutes democracy and should be the hallmark of social studies education. From Dewey's work, we can distill three criteria for determining the degree to which a society (that is, individuals in association) is moving in the direction of the democratic ideal, and these same criteria, which follow, can be used to judge our efforts as social studies educators:

- participation in formulating policy is widespread;
- groups that make up society encourage and actively elicit the development of the powers and talents in their members; and
- relations among social groups are multiple and supple (Boisvert 1998).

The more porous the boundaries of social groups, the more they welcome participation from all individuals, and as the varied groupings enjoy multiple and flexible relations, society moves closer to fulfilling the democratic ideal. In other words, the curriculum and instructional goals of democratic social studies must embrace pluralism in its many forms. How does contemporary society (as well as the social studies education community) measure up to the guiding ideals of the above criteria? Achieving perfection in democracy and social studies education will, of course, remain elusive, but without examining our circumstances in light of guiding ideals we could never engage in the work to eliminate the elements that prevent the growth of democratic life. In this light, the authors of these special issues of *The Social Studies* argue that it is nearly impossible to think about or teach social studies without placing the pursuit of social justice and a critical examination of existing social, economic, and political inequalities at the center of the endeavor. This point of view, however, stands in stark contrast to the vision of social studies presented in *WDSSGW*. Contributors to Part I of "Social Studies: Wrong, Right, or Left?" (published in the August/September issue of *The Social Studies*) situated the arguments of *WDSSGW* within the rhetoric of the neoconservative right (Nicholas J. Shudak and Robert J. Helfenbein) and examined the ideological roots of that discourse (Stephen C. Fleury) and how it works to frame the conversation about the aims of social studies education (John Kornfeld). In their article, Kenneth Waltzer and Elizabeth Heilman argued that social studies should aim for "critical democratic patriotism." In his article for this issue, titled "The Social Studies of Domination: Cultural Hegemony and Ignorant Activism," Luis Urrieta Jr. argues that *WDSSGW* is an activist project based on irrational and shortsighted, but deeply ingrained, ideologies of cultural domination that attempt to maintain and reinvigorate a system of cultural hegemony, in this case through social studies curricula. In her article, "In Defense of Nation," Brenda Trofenenko critically examines the long-held curricular determinant that places the nation—and the history that forms that nation—at the center of efforts to understand ourselves and the

world around us, which is the most basic aim of social studies education. In "Strange Bedfellows: The Contradictory Goals of the Coalition Making War on the Social Studies," Alan J. Singer analyzes the networked interests served by the scholars, politicians, and foundations making war on social studies education and deconstructs contradictory goals of their campaign. And finally, Christopher R. Leahey describes how democratic debate has been restricted in post-9/11 social studies through a critical analysis of another of the Fordham Institute's ublications, *Terrorists, Despots, and Democracy: What Our Children Need to Know* (2003). Social studies education has always been a key battleground in the so-called cultural wars and remains so today (see Evans 2004; Thornton 2005). The ideological differences in the field are real and important, but we should not covet an end to the wars (perhaps an unfortunate metaphor), because social studies aims and practices defined once and for all cannot be in the service of democracy. All social studies educators, regardless of their ideologies, stand on the common ground of encouraging citizens to participate in their democracy. Social studies educators are obliged to seek that end, and citizenship education must address it.

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VII
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What's Wrong with Social Studies

By Kathleen Porter

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For an organization that claims to value diversity and debate as much as the National Council for the **Social Studies** (NCSS), precious little of either was to be found at its very own annual conference, held in Chicago in mid-November and attended by some 5,000 **social studies** teachers, professors, and itinerant experts. In fact, after scouring the program in search of sessions where the goals of **social studies** itself would be examined and, perish the thought, debated, I came up nearly empty. So I attended some other sessions.

The first was a series of presentations organized by the College and University Faculty Assembly (CUFA), an NCSS affiliate. I was interested because these papers were textbook evaluations and, since we at Fordham are nearing publication of our own review of history textbooks, I hoped these university professors' findings might be instructive. And they were, albeit not quite in the fashion intended by their authors.

One analyzed the portrayal of the United States in Canadian textbooks. The author traced her findings from textbooks published from the late 1800s through 1970--a peripheral topic and an analysis that stopped just when it might have gotten interesting.

The other claimed to examine "commonly used middle level **social studies** books" with an eye toward how they "depict American culture, society and lifestyle in comparison with the rest of the world." In reality, the analysis focused mainly on how the textbooks failed to demonstrate that wealth distribution across and within countries is a zero sum game (a theory that most economists discredit)--and that, because America consumes a disproportionate share of resources, it contributes to poverty elsewhere on the planet.

This presenter also focused on how "the colonial history of exploitation" was not discussed as a source of contemporary third-world poverty, and implied that this failure to produce a more "balanced" view of economic history is due to the fact that textbook publishers are owned by multi-national corporations, who apparently have an interest in glossing over such facts. To correct for this textbook failing, she urged her listeners to check out some nonprofit organizations for supplemental materials. Her preferred on-line source is "Rethinking Schools," which presents perhaps the most horrendously biased curriculum supplements I've encountered. (See for yourself at http://www.rethinkingschools.org.)

At CUFA's closing session, keynote speaker Linda McNeil (Rice University) wowed the crowd with a passionate denunciation of No Child Left Behind's accountability provisions as "demons of the law." McNeil has long opposed standards and testing because, she believes, they cause the disappearance from classrooms of "rich and wonderful and complicated teaching and learning." Her chief example in this particular speech: a student who had come to her to complain that he wasn't going to see much artwork in his art class this year because the art teacher was busy helping students prepare for the upcoming math proficiency test. Of course, the students would be able to do basic math because of the extra attention they were getting, but this didn't make it into her analysis of the "tragedy."

McNeil went on to allege that some principals are pushing out the lowest performing kids so that their school's test scores don't suffer because of them. Rather than voicing outrage at principals who cheat both kids and accountability in this way, however, she and her audience vented their spleens at the accountability system itself. Their call to action for teachers and ed school professors: encourage parents to revolt against NCLB and craft more **studies** that would "prove" that standards and tests don't improve student achievement.

CUFA's sessions turned out to be a pallid preview of what I would face at the bona fide NCSS sessions. One of my favorites was entitled "they call it the **social studies**." Its purpose was to help attendees understand that the field is not called history, civics, geography, and economics but **social studies**, and that this means students ought to study "**social** things with the goal of creating good citizens." During this session we were asked to write down what we thought the five goals of **social studies** education should be, and to share our thoughts with our neighbors. My list included such heresies as "explain the foundations of our democracy" and "explain how the framers' vision of liberty and equality paved the way for the eventual end of slavery, the Civil Rights movement, and the feminist movement." When I turned to share these goals with my neighbor--naïvely supposing that we'd be able to come to find some middle ground--I soon realized that we weren't even playing the same game, let alone in the same ballpark. His goals were the ever popular "encourage critical thinking and

community and civic engagement." Nary a word about what students will think critically about or whether they'll know enough to engage in a thoughtful debate in the first place.

As the group reassembled and people shared their goals more widely, I realized that mine were shared by nobody while my neighbor's were shared by all. They spoke of empowering students to participate in the community, teaching them to make informed decisions, and teaching them integrity, conflict resolution and communications skills. Yet the teachers never mentioned how they would achieve these noble goals without providing historical context within which students can understand past, present and future events. Indeed, not one soul suggested that youngsters should learn about the origins of democracy, the founding of America, the conflict and change that has occurred throughout our history, or people who have played key roles in shaping that history. I got the sense that either the teachers take for granted that their students already know a lot about American history--heaven knows where they would have learned it if not in **social** **studies** class--or that they believed it doesn't matter so long as they know "where to find the information." The teachers also agreed that their job was to make **social** **studies** relevant and interesting, apparently by any means other than teaching actual historical content.

Throughout the conference, in plenary and small-group sessions alike, conspiracy theories abounded. To NCSS members, at least, the vast right-wing conspiracy is alive and thriving. Apparently their definition of "radical right wing" now includes anyone who advocates school choice, standards and accountability, alternative teacher certification, or other such reforms. Moreover, such "reformers" and policy makers are all part of a political conspiracy to undermine public education. I encountered precisely one person who could actually articulate what he thought the conspiracy was; everyone else settled for the simplistic assertion that "politics" is driving these unwelcome reforms.

The conspiracy, insisted one NCSS member whose name I didn't catch, is driven by right-wing ideologues who use testing, standards, and accountability to set public schools up for failure. Then they'll be able to divert public funding to private schools. The notion that these "ideologues" might just want what's best for kids was rejected on its face as preposterous.

Were I a conspiracy theorist, however, I now have enough information to conclude the opposite: that the education establishment in general, and the NCSS in particular, are working energetically to shut down the kind of dissent and debate that makes effective reforms possible. Consider, for example, that while NCSS leaders discussed and denounced Fordham's recent publication Where Did **Social** **Studies** Go **Wrong**? at more than one session, they didn't invite a single author, editor, Fordham staffer, or really anyone who disagrees with the status quo to engage in debate.

But it gets worse. The self-styled "Contrarians," a tiny band of teachers and ed school professors within NCSS who believe that **social** **studies** urgently needs an overhaul, have tried for two years to get a session at the NCSS annual wingding. In 2002, though ostensibly granted a session, it was conveniently left off the program and thus couldn't meet. This year, though their session was listed on the program, NCSS conveniently double-booked the room. So the Contrarians scrambled to find an empty room with no help from NCSS (and minimal help from the hotel). After two tries, they finally found a spot and were able to proceed on their own, no thanks to the NCSS.

A small group attended, including a hostile NCSS past president and a current board member. A few of the authors of Where Did **Social** **Studies** Go **Wrong**? presented their arguments, then opened the floor for discussion--a real one that included debate of hotly contested issues, something that I had not seen in any other NCSS session. During this debate, however, I was amazed by the mean, ad hominem, and insulting nature of the comments from the **social** **studies** establishment. Though the NCSS board member said that a more "productive" way to

air these matters would be for the Contrarians to hold a general session where they presented their ideas and brought in opponents who could debate the pros and cons, in fact NCSS for years now has refused to give the Contrarians any room at their conference, let alone a large room to hold a general session and debate.

The theme of this year's conference was: "The power of one: How to make a difference in a changing world." Based on the efforts of the NCSS elite to promote a one-sided look at **social studies** education while stifling all attempts to question the status quo, I can only conclude that they truly believe in the power of one--and fear that permitting even a single voice of dissent might put at risk the enormous influence they have over the field of **social studies**.

VIII

What's **wrong** with economics?

Samuel Brittan: Chapter 21 of Economic Consequences of Democracy, Gower, 1977, 1988

Referred to in *Some useful economic ideas* a speech to the British Association on September 11 2000

The market for economic witchdoctors

Theologians, philosophers, art critics, meteorologists, cosmologists and geneticists often disagree ferociously among themselves. Yet few would want to dispute their credentials for that reason. Why then do disagreements among economists give rise to so much public indignation? One reason is perhaps unduly flattering to economists. It is the widespread wishful belief that there exists, away from the clamour of party politics, an impartial expert answer to difficult problems of public policy - a belief that is often held by party politicians themselves. Patients have a similar attitude to doctors, who often disagree as much as economists. But medical practitioners keep their divergencies out of the newspapers, especially where individual patients are concerned.

Professional economists often play up to the "impartial expert' view of their role by a clamorous insistence that their subject is, or should be, a science - an insistence that in no way prevents them from engaging in gladiatorial combat in front of the public with a ferocity that makes ordinary party politics seem like a children's game.

The formal way of proceeding would be to discuss whether there is or can be such a thing as positive economics - concerned only with what does happen or could happen in specified circumstances. The next stage would be to examine the value judgements that have to be introduced before policy conclusions can be drawn. An examination of economic controversies in the media or before parliamentary committees suggests, however, that this demarcation is far from easy to make. An alternative starting point is to apply elementary economic analysis to the problem, in other words to examine the market for economic controversies.

The first clue to understanding is that economists do not exist mainly to promote enlightenment, to discover how the economy works or for other such vague and worthy purposes. Like other producers, economists survive and prosper by studying the market and supplying what it appears to want.

At the academic level the main market is, of course, for learned papers. The contribution of such papers to economic understanding is one criterion by which they are judged. But it is not the only one, and it is a very elusive and intangible quality to assess. More important in practice tends to be "professional competence'. This is something rather different, involving

the sophistication of the statistical and mathematical methods used, knowledge of, and references to, the previous literature, internal consistency and so on. It is much more important for a paper to be "competent' than for it to be right or enlightening.

Things could hardly be any different. When economists consisted of a small band of gentlemen scholars, as they did in the great age of David Hume, Adam Smith and Ricardo (and to a lesser extent up to the eve of the Second World War), it was possible to put great weight on general insight, and to allow room for a great variety of methods and approaches. With the explosive growth of the profession since the end of the Second World War and the need to fill hundreds of new teaching posts, an emphasis on technical competence in the narrow sense was probably the only way of keeping any sort of watch on standards; indeed, British economists have still to work out of their system a partially justified inferiority complex in relation to American professional techniques.

There is, however, one aspect of the market that is relevant both to the really ambitious academic aspirant and to the top-level economist pontificating before a parliamentary committee or a television screen. This is the well-known process of "product differentiation'. At the academic level prizes are to be gained by slightly differentiating one's theories and methods from those of other economists, while staying within the professional canons mentioned above. At the level of public debate the effects are more serious. For there is no doubt that leading economists can make a great, if superficial, impact by differentiating their advice as much as possible from that of their colleagues, and putting the emphasis on those points that they believe to be original rather than on the common elements on which most economists agree. This was symbolised by a cocktail party in Washington where one economist present remarked: "I have got some really smashing evidence to present to Congress tomorrow', but refused to discuss its nature in case he was pre-empted by someone else. It is easy enough to state the ideal qualities that should be exhibited in public pronouncements by an economist. He should first emphasise the areas and topics on which there is some consensus, then go on to the areas of disagreement, explaining as far as possible how far these are about cause-and-effect relationships and how far they involve differing judgements about political goals. At the end of such an exposition he might then tentatively offer his own contribution to the unresolved issues. Yet there is extremely little chance of this ideal being realised. (Nor can one claim that economic commentators have followed it any more than academics have.) Apart from anything else, it is simply not what the market wants. Three distinguished economists, Friedman, Samuelson and Krause, gave evidence on the same day in September 1971 to a US congressional committee on foreign trade and currency issues. There was an overlap of about 75-90 per cent both in their analyses and in their policy recommendations; and the three economists concerned did not particularly try to emphasise their differences. Yet the inevitably brief public reports concentrated almost entirely on the minor issue of whether or not a small "cosmetic' increase in the dollar price of gold would be a good thing. After all, it was this that constituted the news value of the hearings. (At that time the dollar was no longer convertible into gold; nor was any other major currency. But there was still an official gold price for the dollar, which was way below the market price and subsequently abandoned.) There is a deep seated ambivalence in public attitudes towards economists. While people delight in ridiculing them for their disagreements, they are also entertained by "original', "provocative' and controversial viewpoints; and a high price and some prestige can be gained by meeting this public demand. The key to understanding many economic pronouncements is that they belong at least as much to the entertainment as the information industry.

The original name of the subject "political economy' throws doubt on whether it can ever be entirely neutral politically in the sense demanded by some critics. But there is one kind of bias that is clearly undesirable. This is where economists make partisan points designed to provide ammunition not for their political beliefs but for the political party they favour - sometimes in

opposition to their own more basic beliefs. This was particularly noticeable in the United States in 1971, for instance, when some pro-Republican economists defended the Nixon wage and price controls, while Democrat economists searched around for tiny niggling points of criticism - despite the fact that President Nixon moved much further in their direction than a Democrat president would have dared at the time. Bias of this kind is easy to dress up in respectable statistical form. But, again, simple condemnation is of little help. The market demand, when politicians consult economists, is partly for debating ammunition or for loaded prognoses of the movement of the economy.

Some economists steer admirably clear of anything resembling partisan debating points but succumb to temptation of a different sort. They are tempted to fall in with the latest fashion and to advocate, for instance, incomes policies or the replacement of reserve currencies by paper units. But there is also a sophisticated market for those who are prepared deliberately to go against fashion and deride what they believe to be conventional wisdom.

Unfortunately, economists of this latter brand are apt to change their opinions with such rapidity that any layman who tries to base himself on their pronouncements would soon feel bewildered and shellshocked. Indeed, one is often struck by the way in which the severest academic critics of the journalistic approach outdo all the journalists. Again, however, they are providing a service for which there is a definite demand.

Of course, not all the difficulties of economics can be attributed to the characteristics of the market or to confusions of presentation. There are major differences on some of the most basic questions of how the economy works. Would a much higher level of demand (with or without an incomes policy) lead to a virtuous circle of growth and lower prices, to growth alone or simply to an explosive and unsustainable situation culminating in "go-stop' and less growth rather than more? You can find learned pieces of econometrics to justify all these incompatible positions.

Technical economics has indeed remarkably little to say about the causes of the "wealth of nations' - and therefore about major questions such as Britain's decision to join the EEC. At the anniversary dinner of the Political Economy Club in 1973, Lord Robbins demonstrated that many contemporary arguments were already current in the early nineteenth century, and it is a myth to assume that they will be quickly resolved - any more by the importation of sociology today than by the importation of techniques from the physical sciences, from which so much was hoped, in the 1930s.

Back to political economy

A sense of perspective and of humour should enable us to cope with most of the anxieties about the status of economic arguments and those who take part in them. There are, however, two nagging doubts about professional economics as a discipline applied to policy into which it is necessary to go a little further.

It was one of the strong points of eighteenth-century political economy, as developed by David Hume and Adam Smith, that it started with human beings as they were rather than as some moralists thought they ought to be. The two thinkers were themselves moralists; but they accepted the legitimacy of self-interest, and they believed that the way to reconcile this with the general good was to devise a suitable framework of rules in which selfinterest was allowed to operate. A twentieth-century representative of this tradition - and hardly a rightwing Conservative - was Bertrand Russell, who declared: "If men were actuated by self-interest, which they are not except in the case of a few saints - the whole human race would co-operate. There would be no more wars, no more armies, no more navies, no more atom bombs . . . .' "Self-interest', even of the enlightened variety, is not perhaps the most felicitous term. The main assertion of the classical liberal is that the pursuit of self-chosen goals within

an appropriate framework of rules is compatible with public harmony. These goals can be altruistic, aesthetic, religious or of any other variety. In the economic sphere it is rational for an altruistic businessman to work for high profits, along with his competitors - and perhaps to put even more effort into the process. His altruism will show itself in what he does with his gains rather than in his refraining from making them.

Nevertheless, the basic inclination of the early political economists to take human beings as they found them, and to seek rules that did not depend on a fundamental "change of heart', was very much their strong point. One may wonder how this approach developed into modern economics. This is a subject widely regarded as doubly unreal in assuming the possibility of a model world, yet one populated by unattractively consistent and cold-blooded people, always reacting in a predictable way to any given stimulus.

The transformation just caricatured was the natural result of the search for rigour and the growing professional isation of the subject at the academic level. Effort was devoted to asking what were the conditions under which the market process achieved not merely a rough harmony, but an optimum allocation of resources. Not surprisingly, these were found most unlikely to occur. One need only mention the existence of large spillover effects from many activities (such as private motoring) or unregulated urban development - in other words, costs and benefits imposed on others, which are not taken into account in an unregulated market. Nor is there anything in the least bit optimal about the distribution of income and capital brought about by the combination of market forces and people's differing initial endowments. These are only the most blatant cases. The mere existence of "economies of scale', or even the need for taxes on income or commodities, would prevent the optimum from being achieved. A little imagination - and mathematics - can always produce new and more subtle elements of fallibility in the working of the "invisible hand'. The result was a concentration of interest on how an ideal market would work and on a set of interventionist policy prescriptions for dealing with the numerous departures from it likely to occur in the real world. This viewpoint has been labelled by critics the "Nirvana' approach and is known more neutrally as "static welfare theory'.

It would be Luddite to decry the search for greater rigour. It is surely better that government intervention should be based on research rather than on ignorance. But unfortunately this more rigorous approach was achieved at a price. For it tended to assume that the relevant information about people's tastes and behaviour, about production techniques and so on, was (a) known to policy-makers, and (b) either unchanging, or changing in a predictable way. These are assumptions into which anyone is likely to be drawn who attempts to express economic relations in simple mathematical form and who attempts to make economic forecasts.

This approach has the defect of assuming away the main problems of economic policy. No human being or central institution (or computer) can hope to have the information - most of it is not easily reducible to statistical form - to work out an ideal distribution of resources or even a "second best' one. The role of the market is not to bring about an "optimum' but to act as a signalling device to enable information scattered among millions of people to be diffused through the community and to be used as a guide to action. Like all signalling systems, the market is of course capable of improvement.

There are in fact some promising developments in political economy which aim to remedy the defects of the Nirvana approach. Most of these have come from across the Atlantic (often building on foundations laid by Austrian economists, who do not always receive their due acknowledgement). These new approaches are only now beginning to penetrate into the United Kingdom, where they are still largely a closed book to many economic practitioners

skilled in their own subject. Even in the United States they are not yet in the mainstream of teaching or of practice.

The one transatlantic development that has penetrated British consciousness has the unfortunate label, "monetarism'; and it is largely misunderstood either as a technical proposition about banking policy or as the view that "only money matters'. This is almost the opposite of the true monetarist position, which was expressed by John Stuart Mill when he wrote that "There cannot be intrinsically a more insignificant thing in the economy of society than money . . . Like many other kinds of machinery, it only exerts a distinct and independent influence of its own when it gets out of order.' There has been more than enough about such questions in previous chapters, and I would prefer to concentrate here on other transatlantic developments. There are at least five others of outstanding interest.

One of the most important for practical affairs is the analysis of markets as a discovery procedure in a world where tastes and techniques are changing and information scarce and expensive. This has immediate applications to labour markets and to the analysis of unemployment which are not revealed by either the conventional "demand management' (or "macro') approach employed at the Treasury or its critics in most of the public economic debate.

A second development is the analysis of property rights and the effects of their different allocations on the use of resources. It is worth emphasising that nearly all the adverse 'externalities', which are so often cited as arguments for political intervention, arise from the absence of clearly defined exclusive property rights or from the transaction costs of certain kinds of contracts. It is because no one owns the air space, pleasant vistas or the ocean bed that market disciplines do not apply, and exploiters and destroyers can escape without paying a price. Where the public authorities do in some sense "own' resources such as the nation's road space, they inflict untold harm by not behaving like owners and instead allowing "free', and therefore wasteful, use of scarce assets. It is not property rights but their absence that is antisocial. None of this implies, however, that the existing distribution of property rights is right.

The third important development relates to the economics of benevolence and charity, which has emphasised the distinction between privately chosen and seyish aims. The latter are in no way required for the successful functioning of markets, contrary to popular belief and some of the writings of the early economists.

A fourth contribution is the application of the theory of competition to the political market and to the struggle for votes and powers, as well as to the functions of state bureaucracy. Much British thinking on economic policy is rendered worse than valueless by a sharp contrast between the faults of real-world markets and the actions of some non-existing and improbable ideal, benevolent and omniscient government. Real-world markets, with all their faults, have to be compared with real-world politicians, civil servants, pressure groups and experts.

The fifth and to my mind most interesting trend transcends academic demarcation lines and is the work either of philosophers with a special interest in political economy, or of economists using their tools to tackle wider subjects. It aims to throw light on questions such as the "just' distribution of property rights (if there is such a thing), the permissible or required redistribution of income, the legitimacy of the coercion implied by majority voting and the tax and legislative power of the State.

The last two areas of study are of course intertwined and will be discussed further in the final chapters of this book. A preliminary result of this new thinking is to induce a little caution about the improvements that government is likely to bring - a caution, which unlike the old laissez-faire is in no way based on an idealised view of the private market place. A more far-

reaching moral - easier to state than to observe - is that there is little point in preaching enlightened economic policies without asking: Who will carry them out, and under which incentives? Ultimately all reform is constitutional reform.

The forecasting delusion

But before we can move on to these matters there is one delusion that needs to be taken seriously. This is the identification of economic study in the public mind - and still more in the minds of politicians, officials and businessmen - with forecasts; and in particular with forecasts of the course of the whole economy of this country or even of the world. It would come as a surprise to many Whitehall officials and company chairmen to learn that the majority of economists have never made such a global forecast in their lives and are none the worse for that.

Nothing has done more to discredit serious economic analysis than its identification with the set of guesses about output, employment, prices, the balance of payments and so on which British chancellors have so often felt obliged to make, and which immediately became the subject of agonised debate among rival forecasting teams. When predictions of this kind are rendered ludicrous by events (e.g. the "world dollar shortage' which turned into a glut, the supposed ability of sanctions to destroy the Rhodesian economy within "weeks rather than months', or the unexpected runaway rise in unemployment in the winter of 1971-2,) the gibe about economic witchdoctors seems all too justified. Unfortunately, the cause of rational analysis of any kind receivers a body blow.

The fundamental error springs from the mistaken identification of scientific methods with prophecies about the future. It is not the task of the **social** sciences to engage in historical prophecy. The view that it is has been aptly labelled 'historicism' by Sir Karl Popper. (Historicism has been exploded in its 'scientific Marxist' version: the new style Marxists take their inspiration from the younger Marx and not from the arid prophetic economics of Das Kapital).But it is not generally appreciated that even the more mundane concerns of present-day economic punditry suffer from a milder form of the historicist distortion.

Like many distortions, historicism has its origin in a correct observation. This is that the physical sciences, which **social studies** have for so long tried to emulate, have predictive power. But what this argument overlooks is that scientific predictions are conditional. They assert that certain changes, such as an increase to a certain point of the temperature of water in a kettle, will, granted certain other conditions - for example a given atmospheric pressure - lead to a state that we know as "boiling'. But they cannot tell us whether the required conditions will be fulfilled.

Historical prophecies are unconditional scientific predictions. They can be derived from valid scientific theories if, and only if, they can be combined with correct assertions that the required conditions are in fact fulfilled. Sir Karl Popper, who has emphasised this crucial distinction, has pointed out that the requirements for successful longterm prophecies can be fulfilled only for systems that are "well isolated, stationary, and recurrent'. This happens to be approximately true of the solar system, which is why predictions of events such as eclipses of the sun are possible many years ahead. But contrary to popular belief such systems are not typical even of the physical world; and certainly not of the rapidly changing society of human beings.

One must be careful not to overstate the case. There are certain features of business cycles (or, more accurately nowadays, official policy cycles) that tend to be moderately repetitive and only partially dependent on unpredictable changes in, say, the state of technology or is the political colouring of governments. There is an analogy with the cycle of monarchy, oligarchy,

democracy and tyranny observed by the ancient Greek writers which had some very modest predictive value as a scientific hypothesis.

It follows from this that attempts to forecast the short-term business cycle are less open to objection than the more ambitious attempts to forecast **social** changes at the turn of the century. There would be something to be said for starting with a theory of the typical business or policy cycle, and then asking in what respects the present cycle is likely to differ from the past. The second part of such an exercise would have to be impressinistic and subjective. The typical economic forecast is not, however, much like this. It is full-bloodedly historicist, in that it assumes that we have both sufficiently tested theories and enough knowledge of present and future conditions to made a determinate forecast. The criticism is not avoided in attaching an (almost wholly subjective) "range of error' to these forecasts. Either the range of error is ignored in practice, or it is found to be so large that the forecasts are useless for policy purposes. It would, for example, have been little comfort to ministers caught by surprise by the alarming increase of unemployment in the politically traumatic winter of 1971-2 before the Heath-Barber boom to be told that the delay in the unexpected economic upturn was well within the margin of error.

What, after all, were the topics with which the great economists from Adam Smith to Keynes concerned themselves? The main questions that Keynes sought to answer were not what would happen to the economy in 1937 or 1938 (although he was not above a little bit of journalism on the subject); his principal contribution to thought consisted in trying to discover what were the circumstances in which a private enterprise system would fail to provide reasonably full employment and what institutional changes might make such failures less likely. Earlier on he had asked the same question about the types of situation liable to lead to runaway inflation; and at the end of his life he was concerned with devising an international monetary system that would discourage recourse to trade restrictions, competitive devaluations and other unneighbourly behaviour.

None of this is meant as an attack on the use of statistical or econometric methods. But these will be more scientific - as far as the **social** sciences can be scientific - if they confine themselves to conditional hypotheses. It is, for example, very useful to examine (without prejudging the question) whether a systematic relationship can be observed between index of primary product prices, on the one hand, and the rate of domestically generated inflations and deviations of production from trend in the industrial countries, on the other. But an attempt to forecast world commodity prices over the next twelve months is a different matter. It involves assumptions about what domestic costs and prices in the industrial countries will actually do and the rate at which their output will grow. A conditional hypothesis can also reasonably assume average world weather conditions, and either no political disturbances, or none that is untypical of the period in which the hypothesis is supposed to hold; and there are a great many other things implicitly assumed to be given in conditional scientific predictions which are not given in the real world.

It is a wise principle to look for the elements of value as well as of error in methods of thought that are being criticised. There are such elements in the economic forecasting models. One of the main benefits from forcing someone to forecast, say, the national income and the balance of payments next year is that it imposes some consistency check on his separate individual beliefs. We cannot say what will happen. but a good forecasting model might enable one to say that certain events are impossible - or impossible without developments that have had no precedent.

The correct role for forecasting models is thus as one of many backroom research tools. But they do need to be displaced from the central position they have come to occupy in the thinking about the economy; and they are pretty worthless as a way of briefing ministers on

their way into Cabinet meetings. A disadvantage of current orthodoxy is that many economists have acquired a vested interest in the existence of stable, discoverable numerical relationships between phenomena such as incomes and consumption, or short-run changes in the money supply and the price level, or exports and international price relativities, to name only a few. One cannot rule out the successful discovery of relationships of this kind; but, equally, one cannot guarantee it. Scientific method can still be applied to predict certain general features of an interacting system even in the absence of specific numerical relationships. Such procedures are commonplace, for example, in biology and linguistics.

Specific predictions are useful when they can be obtained. But even if they cannot be, some good generalisations are a good deal better than nothing. Indeed, the most important advice that needs to be given often involves extremely elementary economics of a "first-year' kind. It can for example be asserted with considerable confidence that a country cannot have a balance of payments problem if there is no convertibility of its currency into gold or other international assets, and if the authorities do not attempt to peg its rates in terms of any other national currency. But it may not be possible to predict - within a useful margin of accuracy - the numerical value of the exchange rates that will emerge between the dollar and other currencies once convertibility is suspended.

Again, however, the clue is to, look at the market. If economic advice concentrated on such elementary home truths, the need for employing large numbers of specialist advisers might be called into question. On the other hand, economic forecasting looks like a highly technical service, which permanent secretaries could hardly provide for themselves with the aid of a scribbling pad. No matter how often forecasts go **wrong**, the moral that is drawn is that one should continue to work to improve them.

One of the greatest difficulties of accepting the anti-historicist's view is that it means admitting that we know less about the future than some people, especially those in authority, would like. Characteristically, it is just the type of politician that is most scathing about official economic forecasts who asks me over the lunch table: "What do you think will happen to prices next winter?' - as if I, or .anyone else, had some mysterious intuition that could tell him the answer within a range of accuracy that would in any way be useful.

The real art of policy analysis is to work out the appropriate response to an extremely wide range of contingencies that are liable to occur. This could take two forms. One is the formal analysis of a great many contingencies with the aid of decision trees and other tools. I suspect, however, that these would turn out to be largely parade ground exercises, at least for major problems of economic steering. Second, and more promising, would be to work out broad rules which would as far as possible put the economy on an automatic pilot and minimise discretionary intervention. Such rules could never be entirely mechanistic, as they would always call for interpretation; and during any period of difficulty there will be a transitional stage before the rules can again be fully applied. Thus either approach to living with an unknown future is a great deal more difficult than proclaiming the rival merits of different exercises in historical prophecy. But it is also a great deal more worthwhile.

Value judgements

Finally, a word about the intrusion of political considerations into economic analysis. Economists who engage in partisan point scoring have little claim on our respect, but this does not mean that they can or should exclude political considerations from their serious work. Where the investigations of an economist lead him to certain political conclusions he has every right and even duty to promulgate them. Nor should he be deterred by fear of introducing "value judgements". Many apparent value judgements are susceptible to further analysis.

There is a strong but questionable emphasis in much modern academic writing on a strict distinction between "positive' **social** science - which is supposed to have no policy implications - and personal "value judgements'. The distinction was worth making to protect scholarly standards; but it has reached the point where it is doing more harm than good.

Admittedly, no "ought' judgement can be logically inferred from an 'is' statement; but it is extremely difficult to distinguish between the two kinds of statement in actual language. Most generalisations in the **social** sciences are a subtle blend of positive assertion and value judgements. Assertions about "efficiency', "cost', "consumer wants', "harmony', "real income', "economic welfare', "unemployment' or even demand for reserve currencies' usually embody both value judgements and generalisations about the world in a mixture that is very difficult to disentangle. All the above terms - of which "efficiency' is the most frequent - occur in objective tests administered to beginners in economics. It is unconvincing for orthodox economists to assert their scientific virginity when challenged by critics. They would do better to be less defensive, to accept that certain value judgements are involved in their own doctrines, and to come out into the open in their defence.

It is often supposed that, because value judgements cannot be scientifically established, rational discussion of them is impossible. They are usually assumed to emanate mysteriously from governments, or electorates, or the individual economist himself. The ultimate reason why we can argue fruitfully about many value judgements has been given by Professor A. K. Sen. Value judgements can be divided into two types, "basic' and "non-basic'. A basic judgement is one that applies in all conceivable circumstances. If circumstances can be envisaged where it would not apply, it is non-basic. Take the statement, "Men and women should be allowed to dress as they like.' This may appear an ultra-liberal basic judgement. But if the person who utters it flinches when asked, "Even if it turned out that mini-skirts caused cancer in the eye of the beholder?' then it is non-basic.

The fundamental point is that, while it can sometimes be shown that a particular judgement is non-basic, there is no way of demonstrating that a judgement is basic. In Sen's words, "No one would have occasion to consider all conceivable factual circumstances and to decide whether in any of the cases he would change the judgement or not.' Where we have not had to face a concrete choice, we may simply not know what our real values are.

The approach of moving to and fro between principles to case **studies** and back again is probably the best way of proceeding in these matters, and it is used implicitly even by writers who claim to be following other methods. The best that one can hope for from such **studies** is not rigid rules, but some conscious presumptions, guidelines and maxims which may be better than the unconscious ones that guide those who vainly suppose that they are "examining each issue on its merits'.

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Abstract

There are at least two good reasons to pay serious attention to the latest skirmish in the **social** **studies** wars. First, it is one of the most prominent examples of "movement conservatism" to involve established **social** **studies** researchers; and secondly, it provides an opportunity for **social** educators to scrutinize the fundamental dilemma embedded in the field's commitment to "pluralism." The Fordham report--"Where Did **Social** **Studies** Go **Wrong**? (WDSSW)"--includes contributions from long-time National Council for the **Social** **Studies** (NCSS) members (including James Leming, Lucien Ellington, and Mark Schug, among others), and conservative academics such as Diane Ravitch, J. Martin Rochester and Chester E. Finn, Jr. The authors of "WDSSGW" argue, in general, that **social** **studies** content should be based on the beliefs that: certain factual information is important to the practice of good citizenship; the nature of this information remains relatively constant over time; this information is best determined by consensus of authorities and experts; and that the most effective means of teaching is direct instruction. On the other hand, the Contrarians and their allies argue that **social** **studies** education is in deep trouble primarily because the belief systems of education professors are based upon three premises: (1) American society is morally bankrupt; (2) an elite band of university professors, infused with a passion for **social** justice, knows best how to reform the flawed society; and (3) classrooms in the nation's public schools are an essential battleground for this societal transformation. As a result of these belief structures, the report argues, most **social** **studies** education professors believe in using the school as a site for fomenting radical **social** change; eschewing substantive content; and subordinating effective practice to so called "political correctness." These professors are hostile to "the kinds of basic knowledge ordinary Americans think important for their children to learn." In short, the authors of the report view the field as skewed toward an "informed **social** criticism" approach and would prefer **social** **studies** to be oriented toward "citizenship transmission." In this article, Ross and Marker examine how "WDSSGW" fits within "movement conservatism" and challenge the fundamental ideal of intellectual pluralism upon which **social** **studies** education is based. **They** argue that it is time for **social** **studies** educators to engage in a dialogue that creates a contemporary **social** **studies** curriculum that is relevant to students, meets the needs of a rapidly changing society, and prepares citizens to fully participate in democracy. (Contains 3 notes.)

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Teacher Development for Conflict Participation: Facilitating Learning for 'Difficult Citizenship' Education

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ABSTRACT
A key to citizenship for socially just democracy is the development of capacity to nonviolently and equitably manage conflict. How are teachers educated and supported for this responsibility? This paper is drawn from a larger on-going study that compares implicit and explicit curricula, policies and programming for 'peacekeeping' (security), 'peacemaking' (dialogue and conflict resolution), and 'peacebuilding' (difficult citizenship — redressing social fractures and injustices that underlie destructive conflicts) in three urban Canadian school districts serving racially and culturally diverse populations. In particular, this paper examines the professional development-related opportunities available to teachers to support their facilitation and teaching for peacebuilding citizenship. The few teacher learning opportunities offered seem unlikely to enhance teachers' capacity to foster diverse students' development of agency for difficult citizenship. Much of the explicit professional development available in the schools examined emphasizes teachers' control of students and containment of disruption (peacekeeping), instead of their facilitation of diverse students' participation in constructive conflict management (peacemaking and peacebuilding). Professional learning opportunities are often relegated to short, fragmented occasions, primarily during teachers' volunteer time after school: this severely limits their potential to foster critical dialogic learning on the difficult issues of citizenship education practice.

Introduction

"Democratic education at its best," as Amy Gutmann argues, "is a product of many public deliberations reiterated over time" (2004 p.89). Democratic disagreements — in classrooms as well as about classrooms— can be constructive opportunities to rebuild community, to remedy injustices, and to build citizenship capacity in policies and practices. Democratic processes and social institutions are mechanisms for making decisions in the context of social and political conflict. Even constructive conflict behavior —nonviolent confrontation of basic disagreement, opposition, or injustice— provokes uncertainty and discomfort (Curle, Freire, & Galtung, 1974; Galtung, 1996). To really engage in dialogic decision making, across substantial human differences, is 'difficult citizenship.' Difficult citizenship is critical, engaged citizen participation for social change toward justice, not merely passive membership. How might teacher learning opportunities make it more likely that diverse students would gain experience in constructively handling such conflict, as preparation for difficult citizenship?

Teacher expertise and confidence is crucial, to effectively encourage and guide student participation in conflict education. Significant global and local citizenship subject matter is complex, often ill-defined, and sometimes controversial (Kelly & Brandes, 2001; Parker, 2004). Intersecting identities and justice

issues —for example in relation to gender, ethno-cultural/racial diversity, international disparities, heterosexism, and inter-religious biases— influence the interpretation, ramifications, and options for handling each conflict. Much of this social, political, and moral subject matter was not taught to teachers when they were students (Ayers, Hunt, & Quinn, 1998; Boler & Zembylas, 2003; Freire, 1998; Van Galen, 2004). Further, today's populations of students are increasingly diverse, with unequal social status and incommensurate prior knowledge bases (e.g. Banks & Banks, 1995; Bickmore, 1999; Cochran-Smith, 1995; Harris, 1996). Twenty-first century students evidently impact, and are more clearly impacted upon by, a much wider world than students of past generations (e.g. Elkind, 1995; Kirkwood-Tucker, 2004; Thornton, 2005; Torres, 1998). Thus to teach for democratization, in the context of student diversity and globalization, requires more substantive knowledge, more skills, and more comfort with openness and uncertainty than to teach for unquestioned dominant 'common sense.' This can feel overwhelming, especially for novice teachers. Such complexity is not easy to handle, especially in the context of educational systems' social pressures and sanctions (Bigelow et al., 2002; Ladson-Billings, 2004). Teachers' knowledge and comfort zones are shaped by the formal and informal learning experiences they have had access to, by the discourses shaping thought, and by actual participation (practice) and the feedback it elicits. This paper considers how teachers may develop capacity and confidence to teach complex, conflictual, globally-relevant subject matter —thus to facilitate students' capacity development for difficult citizenship— in equitable, inclusive, and dialogic ways. Later, I juxtapose these insights from the research literature with an in-depth investigation in one large urban school district (supplemented by more cursory study in two other districts), of the actual resources and infrastructure available to support such teacher learning for difficult citizenship education.

Contexts for difficult citizenship learning: culture, politics and conflict in schools

Citizens' (students' and teachers') ways of thinking, being and behaving are not completely utonomous. Rather, individual and collective agency is shaped and constrained by the currents of power surrounding cultural patterns, social locations, and education. Prevailing discourse shapes learning by encoding and reinforcing relations of power through its presumptions, for example in the ways it recognizes, denies, normalizes or constructs as 'other' certain identities and patterns of behavior (e.g. Butler, 1999; Ellsworth, 1997). Identities each person 'performs', language used, and mass public media shape what each of us comes to believe is natural and possible (also Epstein & Johnson, 1998). Young citizens can learn to be relatively critical, self-reflexive participants in cultural rituals and popular media — consciously questioning and influencing, though inevitably also influenced by, the discourses around them (Applebaum, 2004; Cary, 2001). There seem to be escalating patterns of social fracture, and disengagement from formal democratic governance, in many parts of the world (e.g. Mátrai, 2002; Print, 1998; Salomon & Nevo, 2002; Tawil & Harley, 2004; Torney-Purta, 1999). The word 'politics' often refers, in prevalent discourse, to destructive conflict —

intra-organizational tensions, corrupt leadership, scheming. To try to reverse this incentive toward cynicism and disengagement, citizenship education often idealizes the politics of governance and inter-group interaction, preaching tolerance and the power of the democratic process. Such avoidance or palliative care is insufficient to handle social ills and build social harmony, and even counter-productive, where school knowledge thereby appears naïve and irrelevant to students steeped in public media images of dirty dealing and social tensions. Any teaching (even or especially that which ignores/assumes power relations) is inevitably political — it has ramifications for the distribution of power. Thus clearly some kind of practice with recognizing and handling social/ political conflict in constructive ways is essential to education for difficult citizenship. A powerful aspect of citizenship education is the modeling and practice embedded in the implicit and informal curriculum of school

social relationships, including the climate of competition or equity, the sanctioning of violence, dissent and (dis)obedience, and the opportunities for democratic engagement by students, faculty and staff (Bickmore, 2004a). Schooling is by no means always a benign force for democratic justice. It can promote violence, for example in dehumanizing and inequitable punishment, condoning sexual and homophobic abuse, or indoctrination into militarism, violent masculinities, or hatred of the 'other' (Bush & Saltarelli, 2000; Callender & Wright, 2000; Davies, 2004; Harber, 2004; McCadden, 1998). Through explicit and implicit expectations and reward structures, school and classroom climates can exacerbate (or alleviate) the status competition and prejudice that underlie most harassment and social exclusion (Aronson, 2000; Bickmore, 2002; Gordon, Holland, & Lahelma, 2000). Educators shape and limit (in)equitable opportunities for diverse students to transcend their traditional roles and practice making a difference, for example in student governance, or peer leadership for conflict resolution, anti-bias, or social and environmental change (Bickmore, 2001, 2003; Close & Lechmann, 1997). School social justice education initiatives will not be successful unless they also help to redress inequities in students' opportunities for educational success (Ghosh, 2004; Maynes & Sarbit, 2000). In an international study, Akiba and colleagues (2003) found that (independent of violence rates outside schools) school systems that reduced the variance between most-successful and least-successful students (for example, because they de-emphasized tracking and/or offered remedial help) also had lower rates of overt physical violence than more competitive systems. Thus citizenship education for social justice includes educators' roles in shaping the school and school system's human rights climate, as well as classroom curriculum (Opffer, 1997; Osler & Starkey, 1998; Smith, 2004). The remainder of this paper investigates how public school teachers might be prepared and supported to build such citizenship capacities. In light of this framework, I then examine the context for teacher professional learning in one large Canadian school district. A core component of critical citizenship teacher education is to develop teachers' capacity to facilitate students' practice with democratic processes and skills. These include dialogue, conflict analysis and resolution, constructive discussion of controversial issues, deliberation and decision-making. Social justice citizenship education applies such processes to various shapes and sizes of interpersonal, political, global, historical and current social questions and problems. Democratic processes are not generic, simple, or technical: questions of unequal power, cultural norms and values, identity and difference, equitable access and voice are inseparable from the processes people use to communicate and make decisions together (e.g. Bickford, 1996; Freire, 1970; Ross, 1993; Young, 1998). Such

individual and procedural capacities are (by themselves) not sufficient to equip students/ citizens for social justice building, but they are certainly a necessary condition. Democracy and social change require conflict management. It seems obvious that students/citizens are likely to gain capacity in democratic processes when they have opportunities to practice these processes, with guidance and feedback, in the classroom. Matters of conflict and fairness are intrinsically interesting (as well as all around us in society), so school knowledge is also more engaging and credible when students have opportunities to practice handling conflicting perspectives. In this postmodern era, alternative (including critical and subaltern) perspectives and knowledges are technically more accessible than ever before. Yet it requires not only pedagogical skill, but also sophisticated subjectmatter understanding, for teachers (and teacher educators) to be able handle such complex information in an open (constructively-conflictual) and accessible manner (Kymlicka, 1998, 2003; Parker, 2004; Thornton, 2005).

Any transformation in curriculum depends heavily on teachers' academic and professional preparation. Especially in resource-poor communities, textbooks (although these typically rely on uncritical master narratives and fragmented/overloaded information) often form the main basis for the implemented curriculum (e.g. Milligan, 2003; Tupper, 2005). Official curriculum materials and textbooks (that very often guide teachers' as well as students' knowledge

development) too often gloss over or censor critical or troubling information — for example, Laura Finley (2003) asks, "how can I teach peace when the book only covers war?" Other such sources are downright inaccurate. For example, Karen Riley and Samuel Totten (2002) critique several U.S. state-endorsed human rights and Holocaust curricula, pointing to shallow analysis, inattention to multiple factors shaping contexts and events, and historical inaccuracy. Paulette Patterson Dilworth (2004) finds similar kinds of problems, along with a few shining alternatives, in the multicultural content of social studies curricula implemented in selected U.S. classrooms. Robert Nash (2005) cites U.S. Supreme Court decisions ensuring schools' right and responsibility to teach about multiple world religions in a balanced fashion, yet laments that such topics are typically avoided or presented in woefully misleading ways. Even relatively-available resources that could supplement or replace textbooks (such as material found on the internet, in newspapers, and distributed by business-oriented development initiatives) themselves can be shallow, decontextualized, and uncritical of social injustices. What makes dominant discourse hegemonic is the way it builds an understanding of the status quo as 'natural' or common sense, masking or closing down openings for re-thinking, so that teachers (and students/ citizens) don't even realize what they don't know. Teachers' capacity to discern that some information, topics, or questions are missing or misleading, their knowing where (and why) to find alternatives, are a necessary precondition for students' critical citizenship learning. This is not merely a matter of adding information to the basic master narrative: knowledge transformation that would open the way for social justice would significantly change both which knowledge is developed and how it is interpreted and juxtaposed with other information (Bickmore, 2004b; Pang & Valle, 2004; Woyshner, 2002). Education for difficult citizenship challenges the partial nature of curriculum resources as well as students' prior knowledge. This requires raising questions about the stories underlying geographic, political, and historical phenomena, and thereby "disrupting the repetition of comforting knowledges" (Kumashiro, 2004 p.47). This disruption, in turn, provokes the desire and the need for further knowledge building. Such discomforting moral and political questioning

is at least as important in teacher education as it is in elementary and secondary classrooms.

Teachers' capacity development for critical citizenship education

The initiatives that show the most promise in meeting teachers' need for deeper, experientially grounded professional development for social justice citizenship education do not involve simple knowledge dissemination. Quantity of knowledge cannot substitute for quality of knowledge, nor for a sense of efficacy (agency) in interpreting and applying that knowledge. The teacher development opportunities that seem to offer this quality tend to be relatively horizontal —built around extended experiences of dialogue, critical reflection on practice, and dissent among peers— rather than the typical vertical, short, administratively convenient dissemination materials or workshops (Little, 1993; McLaughlin, Pfeifer, Swanson-Owens, & Yee, 1986; Solomon, 1995; Wallace & Louden, 1994). This kind of dialogic teacher learning opportunity is by no means the norm in North American public schools.

Despite recognition of its importance, the professional development currently available to teachers is woefully inadequate … inservice seminars and other forms of professional development are fragmented, intellectually superficial, and do not take into account what we know about how teachers learn. … Teachers generally welcome the opportunity to discuss ideas and materials related to their work …

yet, discussions that support critical examination of teaching are relatively rare (Borko, 2004 p.3 & 7).

Research shows that teachers need opportunities to bring artefacts of classroom practice (e.g. lesson plans, videotapes of teaching, student work samples) into discussion-based professional development settings (Borko, 2004; Darling-Hammond, Hammerness, Grossman, Rust, & Shulman, 2005).

A culture of joint educative dialogue among school staff members could be created through schoolwide inquiry and acknowledgement that the curriculum inevitably has moral ramifications that are not (and should not be) neutral: "controversy is inevitable when people talk about things that matter to them" (Simon, 2001 p.219). Facilitation and supportive contexts for such dialogue can arise from inside or outside the school. For example, interactive teacher education pedagogies grounded in carefully-chosen internet-based and United Nations information seem to help build critical, gender-equitable international perspectives and capacities (Crocco & Cramer, 2005; Kirkwood-Tucker, 2004). A series of collaborative dialogues among social studies and English educators from a university and local secondary schools yielded insights about alternate ways to implement a concern for social justice in the classroom (Brandes & Kelly, 2000). In another interesting case, teachers from schools with underachieving African-American students observed master teachers teaching their 'own' students in an after-school program (Foster, Lewis, & Onafowora, 2005). Each of these initiatives provoked both dissonance (in the latter case, watching their students doing things the teachers hadn't known they could do) and dialogue (questioning and problemsolving debriefing among the teachers) to build teachers' understanding.

Culturally relevant teacher development for difficult citizenship education requires both a critical knowledge base about power and domination (based on

histories of marginalization and oppression) and collective participation in culturally meaningful learning activities (Hesch, 1999 p.380). Many teachers already feel a "deep-seated sense of ambiguity" toward prevailing curricula that reflect fragmented information and a "mythic structure of modernism" amid "postmodern realities" (Richardson, 2002 p.135). Richardson facilitated a collaborative teacher action research effort to find legitimate spaces for teaching pluralist and dynamic citizenship within the existing Alberta curriculum, facilitating learning by surfacing the participants' deeply conflicting interpretations of national identity. Instead of shying away from such controversy, it is worth seeking out as the motivation and frame for teacher development.

Unfortunately, even the best professional development initiatives that currently exist primarily involve only the unusually motivated individuals who choose to seek out learning opportunities, often donating their own time (Borko, 2004 p.5). The scarcest resource to support such learning, for the broad majority of North American public school teachers, is time during the school day.

Collaborative time for teachers to undertake and then sustain school improvement may be more important than equipment or facilitities or even [explicit] staff development. … Unless the 'extra energy requirements' [for school change] are met by the provision of the time, the change is not likely to succeed (Raywid, 1993, p.30, citing research by Fullan and Miles, Louis, and Rosenholtz).

Furthermore, Raywid adds, it is unrealistic to expect teachers to add on thoughtful critical and creative work meetings at the exhausted end of a regular school day. 'Creating' that extended, quality professional development time (under conditions of scarcity that prevent adding much staff) requires political will and creativity to redesign existing timetables, add time to school days or school years,

and/or change staffing patterns by creating some larger or combined classes to free up other time.

Open, equitable, well-facilitated classroom discussion of important political and moral issues is a necessary, although by itself insufficient, condition for students' development of social justice citizenship capabilities and motivations. To give such pedagogies life and meaning for democratization requires broadening educators' international, pluralistic, critical knowledge bases, as these apply to their classroom practice. To facilitate such teacher learning, there is no substitute for ensuring that new and continuing teachers have ample opportunity and support to engage in challenging, dialogic, time-intensive problem-solving learning about specific instances of practice with professional colleagues. Teachers' participation in discussion-rich learning about crucial issues, incidents, viewpoints and options can facilitate their capacity to engage diverse students, equitably and effectively, in dialogic learning for social justice citizenship.

Professional development for peacebuilding citizenship education in Canada today

I investigated the realities of implementing the above principles, as part of a larger, multi-year study of 'safe and inclusive schools' programming and policy infrastructure in a few urban Canadian school districts (for more information about the study, please see Bickmore, 2004a, 2005 forthcoming). By virtue of economies of scale (because they are large school districts with hundreds of schools), such large

urban boards would be more likely than others in their regions to have diversified staff allocated to a variety of programme initiatives and professional developmentrelated activities. Prevailing discourse about teachers' knowledge (which influences the spaces available for learning in these school districts) is reflected in what professional development opportunities are offered and how professional learning is discussed.

For this part of the study, my student team and I examined the teacher resource materials and staff/ services available during 2004-05 in three city school districts in different provinces (including resources from ministry of education, teachers' federation, and other organizations). Further, we interviewed over 40 educators (in eight schools, focusing primarily on two high schools and three elementary schools serving low-income populations, plus centrally-assigned staff) in one of those districts. The focus schools were identified by centrally-assigned safe schools staff on the basis that they all had low-income, high-needs student populations, but had different patterns of student conflict and conflict management (as reflected primarily in suspension rates). The other schools and centrally-assigned staff were identified through 'snowball' sampling, focusing on key informants about programming and services especially relevant to peacekeeping (safety and security intervention and discipline), peacemaking (conflict resolution intervention and practice of dialogue), and/or peacebuilding (long range prevention of harm through inclusivity, overcoming inequities, and social justice education).

Each school board (directly and through allied organizations or government programs) did offer a range of teacher development workshops, the vast majority of these in short one-time meetings after school at central locations (see Table 1). What is striking in the lists of workshops and related resources for school staffs (reinforced by interview data) is the emphasis on short-term control for security purposes, such as crisis intervention, threat assessment, discipline, anti-bullying, internet safety. Even many of the workshops potentially related to peacemaking (such as problem-solving, gentle teaching, managing conflict, fixing broken teams) and peacebuilding (such as cross-cultural competency, youth homelessness, teaching in cultural mosaic classrooms), especially given their short duration, seemed more oriented toward quick-fix management of disruption than toward development of

diverse students' citizenship capacities.

With varying degrees of severity in different school boards, staffing and funding for formal professional development, as well as for any joint teacher thinking/ planning time, is extremely scarce. Teachers and school principals report that curriculum changes, coupled with staff cuts, have intensified staff workloads such that there is less time than ever (during their career memories), and fewer resource people to facilitate, opportunities for teachers to talk, work and learn together.

In theory, the board through our division has great programs to offer, and can come out and work with kids, but they're not that accessible. We really haven't had much contact. For example in safe schools, there seem to be only a couple of people for this whole family of schools, and they seem to be run off their feet. Basically I find resources on my own (HS2 T, May 4).

Relatively experienced staff, when asked about the sources of their initiatives, often mentioned an experience they had had at a previous school workplace, rather than any recent formal or informal professional development. Some print resource materials (such as sample lesson plans and teaching kits) relevant to social justice

citizenship are available in board resource centres and on-line. The increasinglyaccessible internet does allow some teachers to find resources produced by educators elsewhere (although in some schools there was little paper to print them on). It also facilitates school board leadership staffs' capacity to disseminate materials and information. Yet most teachers reported that they were unable to find the time (above and beyond their existing workloads) to even find and read these materials, never mind to meet with colleagues for even a few minutes to discuss, assess, implement or adapt them for use in their own classrooms.

No, the [printed teaching resource materials] aren't useful: it's time. … Just trying to manage the needs that the students present on a day-today basis … there just isn't time to make use of those kinds of resources (Elem5 P June 29).

Some staff (especially novice teachers with high needs and motivation) made clear that they didn't know how to access even these basic, generic, non-dialogic resources at all. The sparse curriculum leadership staff surely did reach some individuals, and the people in those leadership positions believed that

if teachers wish to be connected, they can be" (bd. curric. leader, July 6; bd. equity leader, June 15)

However, some teachers, especially those with the fewest years of experience, told a different story:

I realized, students need a forum. They need a place to talk about [bias, equity and peacebuilding issues], without somebody shaking their finger at them and saying 'that's wrong.' So I talked to the principal … There was a [teacher] equity committee, but it wasn't doing anything. … So, in January, four of us [restarted the school equity committee] … Black history month was fast approaching; that seemed like the first opportunity to do something. … We had kept thinking there must be some kind of information, some kind of Bible for Black history month. There must be teachers doing this all over the city! … It didn't seem like we should have to be creating all these things from scratch. … At the same time I was doing my ESL [Additional Qualifications course at the university], and by chance [one of the school board's few remaining equity studies staff] came in as a guest speaker. She had some good ideas and resources. … If it hadn't been for the ESL AQ course I happened to be enrolled in, and that guest

speaker, I wouldn't have known [those resources] existed (HS1 T5, June 3).

Existing formal professional development workshop and curriculum planning opportunities were few, short, fragmented, and nearly always offered only after school hours to teachers who volunteered their time. Labour conflicts that had motivated various bargaining units to work-to-rule during most of the school year caused other staff meetings and seminars to be cancelled or postponed. Some administrative or centrally-assigned staff were able to go off site for an occasional short conference or workshop, but those opportunities were rarer for classroom teachers. Teachers at one high school and one elementary/ middle school did report

having been galvanized into action by one late-April after-school video and workshop on bullying among girls (HS2 T1 May 4, Elem1 T1 May 10). Another teacher reported having attended one slightly-meaningful workshop in recent years:

I can't think of any professional development. Actually that's not true, we had one session that was for mentors and new teachers, about the degrees of inclusivity, multicultural education. … But otherwise, I've not seen a lot of that. … and even some of that is just token, like having books with different pictures in them (HS1 T2 May 5).

In some schools, some teachers complained that even basic information was not disseminated, even when they made inquiries (e.g. HS1 T2 May 5). This information vacuum could have direct ramifications for teachers' interpretation of school rules (patterns of implicit citizenship socialization):

we're not a zero tolerance board any more, we're a progressive discipline school, but I don't think most teachers know about that. We have had no p.d. or information about that at all (Elem1 T2, May 10).

Redesigned (increasingly centralized and cost-saving) leadership infrastructure, especially pertaining to high schools, exacerbated the challenge. For example, when the board replaced department headships (which had been subject-specific and included some release time) with restructured headships (responsible for multiple subject areas, often without release time), the capacity to offer professional development support plummeted (curric. leader July 6; HS1 T4 May 13). Even finding a common lunch period for teachers to work together on committees (that would contribute to teacher learning as well as peacebuilding citizenship education opportunities in the school) was a challenge, especially in the high schools (e.g. HS1 T5 June 3; HS2 support staff1 May 11). As one of the school board staff put it,

we don't have thinking time (safe schls. leader2 July 7).

The most serious problem, according to educators in all eight schools as well as centrally-assigned board personnel, was teacher time to talk and work together (with or without a formal professional development facilitator). A provincial government hostile to public education, in power for about ten years until voted out recently, had caused teachers' 'work' to be defined very narrowly as classroom teaching time, while also cutting resources for support infrastructure such as curriculum development leaders, conflict resolution advisors, and student services. An elementary principal explained that, as one consequence of this shift, many of her staff had no access to formal learning time with their colleagues.

At my previous school, we were able to entice people to [attend training in a popular cooperative learning, social skills, and anti-bias program] during the day. Now … we've kind of limited what we're offering staff, because we don't have the money in the board any more [to release teachers for professional development by covering their classrooms]. So trainings are after school. We've lost some teachers, who have young children [at home] for example, who can't do it after

school. I can't afford to pay for supply [substitute] teachers … Professional development time makes a big difference to staff. Also

…Years ago we used to have a number of [non-teaching] days. Now we have a number of [non-teaching] days for [parent-teacher] interviews, one for the union so we can't do anything in that one, so there's not much (elem3 P April 19).

Furthermore, like many such commercially-produced teacher resource packages, professional developers were only allowed to use the particular material this principal refers to if they had been certified in an expensive training for trainers. Resources to hire one of these trainers, or to get an existing staff member trained, were scarce. It was essentially luck that this school's new vice principal had taken initiative earlier to earn that training certificate, so that she could lead her own staff's inservice workshop series.

However, some innovative principals, supported by area administrators, were able to create exactly the kinds of opportunities for teachers to talk and work together that Borko, Raywid and others recommend. Even though they had no more resources per student or staff member, and if anything fewer explicit peacebuilding citizenship-related programs than any of the other schools in the study, these principals had assigned teachers' work differently in order to make time for dialogue and joint work on an on-going basis. One elementary school principal routinely assigned teachers to work collaboratively with combined grades or integrated divisions (elem2 P & others May 2, May 18, June 30). One high school principal had recently initiated a problem-solving process with all staff, in which every staff member identified issues of concern, and then committees were formed to work on each category of concern. Regular staff meeting time was given over so that these small committees could meet, and the principal had tentative approval to change the students' schedule for the coming year so that these teacher committees could meet every Wednesday morning (HS2 P & others April 26, May 4, May 11). Data analysis is on-going, but it seemed that the staff morale and climates for teacher learning were somewhat more positive in those environments.

Thus there are important exceptions that point toward possibilities for improvement, but the overwhelming finding of this research is that teacher learning for critical democratic citizenship education is profoundly under-supported. The interviews with educators in one district suggest that the vast majority of the scarcest resources (the time of educational leaders who could directly or indirectly support teacher learning) seem to be allocated to intervention after violence has erupted and to short-term control. The discourse of teacher learning primarily describes quickfix packages and coping with disruption. Most of the currently-available professional development resources in this school district do not even pay lip service to the kinds of teacher knowledge-building pedagogy and collective discussion that we know facilitate inclusive democratic citizenship education. It is not clear that many opportunities for dialogic examination of important difficult issues are provided for most students: It is crystal clear that such opportunities are hardly ever provided for most of their teachers.

Conclusion

The discourse and resources for teacher professional learning evident in these school districts bear no resemblance to what the research suggests is needed to support effective teaching for 'difficult' democratic citizenship. Research literature reviewed indicates that the kinds of pedagogy and curriculum content that could prepare diverse students for constructive engagement in conflictual postmodern

contexts are quite rare in North American classrooms. It shows that teachers' content knowledge, especially about social justice concepts and alternative information sources, is important —along with open, inclusive pedagogies emphasizing dialogue about conflictual perspectives— to students' development of interest and capacity for citizen engagement. Further, research in teachers' professional development shows that, to develop such capacity, teachers want and need sustained, dialogic learning opportunities that attend to practical problems and issues (analogous to what their students need for citizenship learning). Teacher education for peacebuilding citizenship, in particular, cannot be reduced to technical recipes that could be learned in the occasional hour after school. The study of one large public school district shows that these kinds of critical dialogic learning opportunities are very rarely provided or supported for teachers in their in-service workplace environment. If teachers are not enabled to discuss, try out, critique, and re-discuss their citizenship education work, then they are unlikely to offer quality education for democracy to their students.

TABLE 1: Safe & Inclusive Schools-Related Teacher Professional Development Resources

Toronto District School Board (300000 students)
PeaceBUILDING-related
Tchg in cultural mosaic classrm
Equity dept. wksps (array, limited staff to deliver)
(e.g. racism, body image, class bias, homophobia, gender equity, Holocaust ed, linking isms, etc)
Equity dept print resources (array)
Print & video resources include African & Asian heritage activities, anti-racism, challenging homophobia, Aboriginal studies, disability
Fedn print resources include equity school, First Nations activities, community role models
Online courses include gender equity, Native studies
PeaceMAKING-related
Tribes (2+)
Cognitive coaching (expensive)
Fixing broken teams
Listening, handling tough situations (staff & Ts)
Critical thinking in organizations (staff & Ts)
Emotional intelligence (staff & Ts)
(Communication & CR for admin staff only)
Print resources include environmental ed, dealing w/ controversial issues, media studies, civics, world politics, social studies g.1-3, healthy active living
Teachers federation print resources include critical media Gr.7-8, environmental studies
PeaceKEEPING-related
Creating safe schools (admin, elem & sec Ts)
Internet safety (2)
Print resources include Stop Bullying, internet safety for PHE, rules & responsibilities (Gr.1)
Bullying/violence (federation conference)
Safe/healthy schools (federation conference)
Online courses include internet safety
Federation wksps include CALM crisis preventn

Halifax Regional School Board (57000 students)
PeaceBUILDING-related
RCH=Race,X-cultural,HumanRts
(admin/ldrsp)

Diversity management
Building inclusive schls (5+, conf. grant& Oct PD)
Racial equity interdiscip. (conf. grant& Oct PD)
Queer eye for straight &not T Oct PD day
Youth justice (2) Oct PD day
Gender diffs in learning Oct PD day
Youth homelessness/preventive Oct PD day
Schooling & social justice (conf)
PeaceMAKING-related
Managing conflict (admin/leadership staff)
Tribes (2, conference grants)
Managing conflict/strong schl culture (conf. grant)
Caring education (St FX U conference)
Roots of Empathy Oct PD day
Student leadership teams Oct PD day
World village Oct PD day
Fair trade/global economy Oct PD day
Wars have limits Oct PD day
Facing fear: terrorism Oct PD day
PeaceKEEPING-related
NV crisis intervention (5, admin & some Ts)
S behaviour & discipline (admin/ldrsp)
Threat assessment (3, w/safe schls consultant)
Bullying/ peaceful schools Oct PD day
Law, conflict mgt, justice, young offenders (conf.)

Winnipeg School Division 1 (34000 students)

PeaceBUILDING-related
Aboriginal/First Nations education
Worldviews/awareness (8, some for admin)
X-cultural competency
Body image/weight preoccupation
Diversity (Assn School Superintendents conf)
Cross-cultural understanding (Ctr for the Performing Arts workshop)
PeaceMAKING-related
Comprehensive Assessment Pgm workshops include Social-Emotional learning (other CAP - health, English Language Arts)
Problem solving (N-Gr2, Gr4-5)
Lions Quest
Talking tools
Gentle teaching
Child Guidance Ctr wksps including leadership, peer mentoring, teacher advisory
Education & democracy (U of MB conf)
PeaceKEEPING-related
NV crisis intervention
Talking about touching
Restitution (1 & 2)
Behaviour support
Positive classroom management & discipline
Crisis negotiation (administrators?)
Bullyproofing
Harassment/intimidation
Protecting children/youth on internet
Safe Schools Forum (provincial Dept of Ed)
Child Guidance Ctr wksps including gangs info, defiant children

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Curriculum Standards for Social Studies: I. Introduction

Curriculum Standards Table of Contents

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What Is Social Studies?

In 1992, the Board of Directors of National Council for the **Social Studies**, the primary membership organization for **social studies** educators, adopted the following definition:

Social studies is the integrated study of the **social** sciences and humanities to promote civic competence. Within the school program, **social studies** provides coordinated, systematic study drawing upon such disciplines as anthropology, archaeology, economics, geography, history, law, philosophy, political science, psychology, religion, and sociology, as well as appropriate content from the humanities, mathematics, and natural sciences. The primary purpose of **social studies** is to help young people develop the ability to make informed and reasoned decisions for the public good as citizens of a culturally diverse, democratic society in an interdependent world.

Social studies is taught in kindergarten through grade 12 in schools across the nation. As a field of study, **social studies** may be more **difficult** to define than is a single discipline such as history or geography, precisely because it is multidisciplinary and interdisciplinary and because it is sometimes taught in one class (perhaps called "**social studies**") and sometimes in separate discipline-based classes within a department of **social studies**.

Two main characteristics, however, distinguish **social studies** as a field of study: it is designed to promote civic competence; and it is integrative, incorporating many fields of endeavor. In specific and more detailed terms, these distinctions mean the following:

1. ***Social studies*** *programs have as a major purpose the promotion of civic competence-which is the knowledge, skills, and attitudes required of students to be able to assume "the office of citizen" (as Thomas Jefferson called it) in our democratic republic.* Although civic competence is not the only responsibility of **social studies** nor is it exclusive to the field, it is more central to **social studies** than any other subject area in the schools.

National Council for the **Social Studies** (NCSS) has long supported civic competence as the goal of **social studies**. By doing so, NCSS has recognized the importance of educating students who are committed to the ideas and values of our democratic republic and who are able to use knowledge about their community, nation, and world, along with skills of data collection and analysis, collaboration, decision-making, and problem-solving. Students who have these commitments, knowledge, and skills will be the most capable of shaping our future and sustaining and improving our democracy.

2. *K-12* ***social studies*** *programs integrate knowledge, skills, and attitudes within and across disciplines.* Integrated **social studies** programs across the nation take many forms, varying in the amount and form of disciplinary integration:

- At *primary levels*, children often learn **social studies** through **learning** opportunities that are highly integrated across several disciplines. These often take the form of units constructed around themes. For example, teachers using the theme "time, continuity, and change" would likely engage young learners in **studies** using history, science, and language arts.
- As students proceed to *middle and higher levels*, **social studies** programs may continue to be highly integrated and in some cases planned by interdisciplinary teams of teachers (for example, **social studies**, science, mathematics, humanities). Alternatively, programs may be planned as interdisciplinary courses or more exclusively linked to specific disciplines (for example, a history course that also draws from geography, economics, political science).

3. ***Social studies*** *programs help students construct a knowledge base and attitudes drawn from academic disciplines as specialized ways of viewing reality.* Each discipline begins from a specific perspective and applies unique "processes for knowing" to the study of reality. History, for instance, uses the perspective of time to explore causes and effects of events in the past. Political science, on the other hand, uses the perspective of political institutions to explore structures and processes of governing.

It is important for students in **social studies** programs to begin to understand, appreciate, and apply knowledge, processes, and attitudes from academic disciplines. But even such discipline-based **learning** draws simultaneously from several disciplines in clarifying specific concepts. A study of the concept of "the common good," for example, may draw upon some or all of the following:

- the discipline of *history*, to determine the concept's origin, study primary source documents that define and address the concept, and analyze the concept's development over time;
- the discipline of *geography*, to locate where the concept was first developed, map its movement from one continent or nation to another, and recognize the power of the diffusion of ideas as an example of global linkage;
- the discipline of *political science*, to determine the developing meaning of the concept as it is promoted or limited through existing political institutions, to study examples of actual practice related to the common good, and to acknowledge the need for citizen involvement in closing the distance between the ideal and reality;
- the discipline of *sociology*, to examine the role of individuals, groups, and institutions and their relationship and responsibility to the common good, and to develop an understanding of the complexities of those relationships resulting from the diversity of beliefs, values, and structures within and among them; and
- communication abilities from *language arts/English* and the *fine arts* to enable students to express their understanding of the concept in a personally meaningful way.

The example could be extended to other disciplines, but the point is that discipline-based knowledge, processes, and attitudes are fully utilized within **social studies** programs. Students in **social studies** programs must study the development of **social** phenomena and concepts over time; must have a sense of place and interrelationships among places across time and space; must understand institutions and processes that define our democratic republic; must draw from other disciplines appropriate to a more complete understanding of an idea or phenomenon; and must experience concepts reflectively and actively, through reading, thinking, discussing, and writing.

4. ***Social studies*** *programs reflect the changing nature of knowledge, fostering entirely new and highly integrated approaches to resolving issues of significance to humanity.* Over the last fifty years, the scholarly community has begun to rethink disciplinary boundaries and encourage more integration across disciplines. This process has been spurred by pressures such as the following:

- **Social** issues, such as poverty, crime, and public health, are increasingly understood to transcend the boundaries of disciplines, cultures, and nations. As these issues grow increasingly complex, the work to develop solutions demands an increasingly integrated view of scholarly domains and of the world itself.

- Many scholars now define themselves by the issues and problems they address and use several disciplines to inform their work. Entirely new departments and programs reflect this development. Academic programs in American **Studies**, African-American **Studies**, Biotechnology, and Medical Ethics, for example, draw on multiple disciplines and their processes to address the needs of humanity.
- Technology provides increasingly easy access to data bases that are cross-disciplinary and multidisciplinary as well as to scholarship in many disciplines.
- Scholars increasingly consider themselves to be members of the international academic community and share findings regularly across intellectual and geographic boundaries.

The more accurately the K-12 **social** **studies** program addresses the contemporary conditions of real life and of academic scholarship, the more likely such a program is to help students develop a deeper understanding of how to know, how to apply what they know, and how to participate in building a future.

It is within this context that these **social** **studies** standards were created. They pay attention to the specific contributions of history, the **social** sciences, humanities, fine arts, the natural sciences, and other disciplines, while simultaneously providing an umbrella for the integrative potential of these several disciplines. This characteristic is the nature and strength of **social** **studies**: recognizing the importance of the disciplines and their specific perspectives in understanding topics, issues, and problems, but also recognizing that topics, issues, and problems transcend the boundaries of single disciplines and demand the power of integration within and across them.

How Do We Achieve Excellence in Social Studies?

To achieve the vision of **social** **studies**, we must ensure that students become intimately acquainted with scholarship, artisanship, leadership, and citizenship. Excellence in **social** **studies** will be achieved by programs in which students gain the knowledge, skills, and attitudes necessary to understand, respect, and practice the ways of the scholar, the artisan, the leader, and the citizen in support of the common good.

Supporting the Common Good

As citizens of a democracy, we support one of our republic's most important ideals: the common good, i.e., the general welfare of all individuals and groups within the community.

The common good is supported when all citizens become aware that the meaning and purpose of education in a democratic republic is the intellectual and ethical development of "student-citizens," young people who will soon assume the role of citizen. Individuals must understand that their self-interest is dependent upon the well-being of others in the community. Attention to the common good means putting first things first. If educators address the ethical and intellectual habits of students, other priorities will be realized.

Our moral imperative as educators is to see all children as precious and recognize that they will inherit a world of baffling complexity. Our responsibility is to respect and support the dignity of the individual, the health of the community, and the common good of all. This responsibility demands that we teach our students to recognize and respect the diversity that exists within the community.

Adopting Common and Multiple Perspectives

Each person experiences life in an individual way, responding to the world from a very personal perspective. People also share common perspectives as members of groups,

communities, societies, and nations-that is, as part of a dynamic world community. A well-designed **social studies** curriculum will help each learner construct a blend of personal, academic, pluralist, and global views of the human condition in the following ways:

- Students should be helped to construct a *personal perspective* that enables them to explore emerging events and persistent or recurring issues, considering implications for self, family, and the whole national and world community. **Social studies** students need to learn to make choices after weighing their personal expectations, along with the pros, cons, responsibilities, and consequences of those choices for themselves and others.
- Students should be helped to construct an *academic perspective* through study and application of **social studies learning** experiences. The **social studies** disciplines provide specific points of view. Discipline-based concepts such as "democratic republic," "citizen," "common good," and others help learners construct the meaning of ideals U.S. citizens hold in common. Discipline-based concepts such as "class," "race," "equal access," and others help learners ask how to live in communities characterized by both unity and diversity and how to close the gap between ideals and reality. The informed **social studies** learner applies knowledge and processes from academic disciplines and from interdisciplinary means to both personal and **social** experiences.
- Students should be helped to construct a *pluralist perspective* based on diversity. This perspective involves respect for differences of opinion and preference; of race, religion, and gender; of class and ethnicity; and of culture in general. This construction should be based on the realization that differences exist among individuals and the conviction that this diversity can be positive and socially enriching. Students need to learn that the existence of cultural and philosophical differences are not "problems" to be solved; rather, they are healthy and desirable qualities of democratic community life.
- Students should be helped to construct a *global perspective* that includes knowledge, skills, and commitments needed to live wisely in a world that possesses limited resources and that is characterized by cultural diversity. A global perspective involves viewing the world and its people with understanding and concern. This perspective develops a sense of responsibility for the needs of all people and a commitment to finding just and peaceful solutions to global problems.

Personal, academic, pluralist, and global perspectives all develop within the framework of civic responsibility that is the hallmark of the democratic national culture committed to individual liberty and the common good. These interrelated perspectives will be developed in a **social studies** curriculum designed to enable students to use knowledge in the following ways: to conceptualize contexts of issues or phenomena; to consider causality; to inquire about the validity of explanations; and to create new explanations and models for grappling with persistent and/or recurring issues across time, space, and cultures.

Applying Knowledge, Skills, and Values to Civic Action

It is important that students become able to connect knowledge, skills, and values to civic action as they engage in **social** inquiry.

Knowledge
Knowledge is constructed by learners as they attempt to fit new information, experiences, feelings, and relationships into their existing or emerging intellectual, aesthetic, and emotional constructs. Disciplinary or specialized knowledge is useful but not always sufficient for developing contextual understanding of the phenomena we seek to comprehend. In these instances, ideas, principles, concepts, and information from a number of fields may be relevant to the topic studied. In the **social studies**, therefore, educators draw widely from a number of disciplines to construct curricular experiences enabling students to actively relate new knowledge to existing understanding.

If we want our students to be better thinkers and better decision-makers, they must have contact with those accustomed to thinking with precision, refinement, and clarity. We must encourage them to be critical and copious readers of the best media, print, audio, and video content, writers of reflective essays, and critics of **social** phenomena. An awareness of the relationship among **social studies** content, skills, and **learning** context can help us establish criteria for developing reflective **social** inquiry. This disposition toward reflective thinking is essential if we wish to foster democratic thought and action.

Skills
The skills that should be promoted in an excellent **social studies** program include the following:

- acquiring information and manipulating data;
- developing and presenting policies, arguments, and stories;
- constructing new knowledge; and
- participating in groups.

These skill categories should not be seen as a fragmented list of things that students and teachers should do. Rather, they should be used as an interconnected framework in which each skill is dependent upon and enriched by all other skills. All together are necessary for a program of excellence:

Acquiring information and manipulating data. To develop this skill category, the **social studies** program should be designed to increase the student's ability to read, study, search for information, use **social** science technical vocabulary and methods, and use computers and other electronic media.

Developing and presenting policies, arguments, and stories. To develop this skill category, the **social studies** program should be designed to increase the student's ability to use the writing process and to classify, interpret, analyze, summarize, evaluate, and present information in well-reasoned ways that support better decision-making for both individuals and society.

Constructing new knowledge. To develop this skill category, the **social studies** program should be designed to increase the student's ability to conceptualize unfamiliar categories of information, establish cause/effect relationships, determine the validity of information and arguments, and develop a new story, model, narrative, picture, or chart that adds to the student's understanding of an event, idea, or persons while meeting criteria of valid **social studies** research.

Participating in groups. To develop this skill category, the **social studies** program should be designed to increase the student's ability to express and advocate reasoned personal convictions within groups, recognize mutual ethical responsibility in groups, participate in negotiating conflicts and differences or maintain an individual position because of its ethical basis, work individually and in groups, and accept and fulfill responsibilities associated with

citizenship in a democratic republic. (See Appendix A. Essential Skills for **Social Studies** for additional details on necessary skills.)

Values

Some values are so central to our way of life and view of the common good that we need to develop student commitment to them through systematic **social studies** experiences. These include such fundamental rights as the right to life, liberty, individual dignity, equality of opportunity, justice, privacy, security, and ownership of private property. They include as well the basic freedoms of worship, thought, conscience, expression, inquiry, assembly, and participation in the political process. In some instances, the **social studies** curriculum will focus on how values are formed and how they influence human behavior rather than on building commitment to specific values. In other instances, the emphasis will be placed upon helping students weigh priorities in situations in which a conflict exists between or among desirable values (i.e., those that form our common beliefs about rights, freedoms, and responsibilities of human beings in a democratic society). (See Appendix B. Democratic Beliefs and Values for the complete list.)

Democratic societies are characterized by hard choices. Many choices involve personal behavior; for example, should I vacation in a state that has just passed a law of which I disapprove? In a democratic society, many choices involve whether to support people or groups who advocate certain public policies. Choices become dilemmas when they involve issues that pit our most cherished values against each other. For example, we value business competition and believe that consumers should decide what survives in the marketplace, but we also believe that the public should be protected from unsafe products. Because we value human life, we vote for legislators who support helmet and seat-belt laws, but we also believe that people should control their own lives. **Social studies** should not dictate to students what the solutions should be to such dilemmas, but it should teach them how to analyze and discuss those dilemmas within the context of the civil discourse required to maintain a democratic society.

Sometimes the choices confronting citizens are extremely **difficult**, and decisions may lead to actions that require personal sacrifice-even at the risk of personal well-being or life. We generally value law-abiding behavior, for example, but we also recognize that there are times when laws represent something so wrong that they must be broken. The civil rights movement in the 1960s involved just such a dilemma, as did the choice in the eighteenth century between obeying British laws or supporting the American Revolution.

Social studies can help students search for situations analogous to these issues in both contemporary and historical settings. By **learning** ways others have responded to such dilemmas, students can begin to understand that choices they or their society face have been confronted by others in different times and places. By helping students learn how to understand ideals such as patriotism and loyalty and to examine the meaning of justice, equality, and privacy in specific dilemma situations, educators can give them practice in discussing the arguments and evidence that surround such dilemmas. By guiding them to clarify the facts connected with value dilemmas and teaching them how to identify pros, cons, and consequences of various positions, educators can also give students tools that will inform their decision-making processes as they face **difficult** choices in life.

Although there is no finite list of persistent issues and dilemmas in **social studies**, the following are typical of those with which people have wrestled over time. They are often stated as one value versus another because that is the choice that often must be made. However, most issues, when framed from the perspective of two or more differing points of view, allow for a broader, more reasoned discussion rather than an immediate debate of one view versus an opposite view. If worker security is guaranteed by legislation, for example, it is often

thought to be at the expense of the rights of employers, but it might also address what is best in the common interest. With that potential for complexity in mind, then, the following illustrative list of persistent issues and dilemmas is presented:

- individual beliefs/majority rule
- obeying the law/the right to dissent
- cultural variety/cultural assimilation/uniformity
- community progress/individual liberties
- individual rights/public safety
- national security/individual freedom
- national/state/local community control
- worker security/employer rights
- free enterprise/public planning
- global business competition/the national interest

Civic *Action*

Discussions and arguments about how to deal with these persistent issues and dilemmas go on in families, groups, and the community at large. **Social studies** should help public discourse to be more enlightened because students possess the knowledge, intellectual skills, and attitudes necessary to confront, discuss, and consider action on such issues. **Social studies** educators have an obligation to help students explore a variety of positions in a thorough, fair-minded manner. As each position is studied and discussed to determine the strongest points in favor of it, the strongest points in opposition to it, and the consequences that would follow from selecting it, students become better able to improve the ways in which they deal with persistent issues and dilemmas and participate with others in making decisions about them.

Students who possess knowledge, skills, and values are prepared to take appropriate civic action as individuals or as members of groups devoted to civic improvement. Individual and group action designed to support both individual dignity and the common good bring our nation's ideals and practices closer together. In this way, civic participation supports and extends civic ideals and practices in a democratic republic.

How Do We Meet the Social Studies Standards?

No single ingredient can guarantee student achievement of the **social studies** standards as set forth in this document. In general terms, public commitment, ideal **learning** conditions, and excellent instruction are equally important and must receive equal attention in educational settings.

Needed: Public Commitment, Time, and Resources

To provide a **social studies** program of excellence, the ingredient that is most often ignored, yet upon which all others depend, is public commitment. Public commitment requires that the public receive information that clearly demonstrates the importance of **social studies** programs for the education of all children. Public commitment also requires that the public recognize all that it takes to support excellence in **social studies** programs.

What does it take? Many things. But when asked to name their most critical need in implementing these standards, teachers, without exception, listed "time." Adequate facilities to foster active **learning** and house the multitude of materials required to maintain a high-interest laboratory setting are also frequently named by teachers, as are high-quality technology, resources, and opportunities for students to engage in meaningful **learning**. All of this requires more adequate funding for **social studies** programs.

Principles of Teaching and Learning

The curriculum standards presented in this document describe major themes and outcome expectations to assure excellence in **social studies**. The delivery of such a program at the level of classroom teaching is equally important and is discussed at length in the NCSS position statement, A Vision of Powerful Teaching and **Learning** in the **Social Studies**: Building **Social** Understanding and Civic Efficacy, ***Social*** *Education* 57, no. 5 (September 1993): 213-223, reprinted at the end of this volume.

That document identifies and describes those principles of teaching and **learning** that must undergird all **social studies** programs of excellence. Those principles are:

1. ***Social studies*** *teaching and* ***learning*** *are powerful when they are meaningful.*

- Students learn connected networks of knowledge, skills, beliefs, and attitudes that they will find useful both in and outside of school.
- Instruction emphasizes depth of development of important ideas within appropriate breadth of topic coverage and focuses on teaching these important ideas for understanding, appreciation, and life application.
- The significance and meaningfulness of the content is emphasized both in how it is presented to students and how it is developed through activities.
- Classroom interaction focuses on sustained examination of a few important topics rather than superficial coverage of many.
- Meaningful **learning** activities and assessment strategies focus students' attention on the most important ideas embedded in what they are **learning**.
- The teacher is reflective in planning, implementing, and assessing instruction.

2. ***Social studies*** *teaching and* ***learning*** *are powerful when they are integrative.*

- **Social studies** is integrative in its treatment of topics.
- It is integrative across time and space.
- **Social studies** teaching integrates knowledge, skills, beliefs, values, and attitudes to action.
- **Social studies** teaching and **learning** integrate effective use of technology.
- **Social studies** teaching and **learning** integrate across the curriculum.

3. ***Social studies*** *teaching and* ***learning*** *are powerful when they are value-based.*

- Powerful **social studies** teaching considers the ethical dimensions of topics and addresses controversial issues, providing an arena for reflective development of concern for the common good and application of **social** values.
- Students are made aware of potential **social** policy implications and taught to think critically and make value-based decisions about related **social** issues.
- Rather than promulgating personal, sectarian, or political views, these teachers make sure that students: 1) become aware of the values, complexities, and dilemmas involved in an issue; 2) consider the costs and benefits to various groups that are embedded in potential courses of action; and 3) develop well-reasoned positions consistent with basic democratic **social** and political values.

- Powerful **social** **studies** teaching encourages recognition of opposing points of view, respect for well-supported positions, sensitivity to cultural similarities and differences, and a commitment to **social** responsibility.

4. ***Social*** ***studies*** *teaching and* ***learning*** *are powerful when they are challenging.*

- Students are expected to strive to accomplish the instructional goals, both as individuals and as group members.
- Teachers model seriousness of purpose and a thoughtful approach to inquiry and use instructional strategies designed to elicit and support similar qualities from students.
- Teachers show interest in and respect for students' thinking, but demand well-reasoned arguments rather than opinions voiced without adequate thought or commitment.

5. ***Social*** ***studies*** *teaching and* ***learning*** *are powerful when they are active.*

- Active **social** **studies** teaching requires reflective thinking and decision-making as events unfold during instruction.
- Students develop new understanding through a process of active construction of knowledge.
- Interactive discourse facilitates the construction of meaning required to develop important **social** understanding.
- Teachers gradually move from providing considerable guidance by modeling, explaining, or supplying information that builds student knowledge, to a less directive role that encourages students to become independent and self-regulated learners.
- Powerful **social** **studies** teaching emphasizes authentic activities that call for real-life applications using the skills and content of the field.

The teaching and **learning** document goes on to delineate additional requirements to support an excellent **social** **studies** program which lie beyond the control of the individual teacher. These include:

- continuous program assessment;
- preparation of pre-service teachers that is aligned with curriculum and teaching and **learning** standards;
- provision of in-service training to support teachers in understanding and implementing standards;
- community and governmental support to
    - recognize the subject's vital purpose for civic education
    - sustain teacher education and professional development
    - provide adequate funding and leadership (from school districts and state and federal government).

School as a Learning Place

Successful schools are unique places, not simply spaces. When students conceive of a school

as space, they focus on "getting through it" as quickly as possible. Time and destination are foremost in their minds. Rather than having **learning** as the main focus, their objective is to move on, to get through. Society often reinforces this concept of school by using extrinsic motivational cliches like "finish school to earn more money." Extrinsic motivation with its emphasis on time and destination tends to corrupt true **learning**. Only rarely do we hear, "Stay in school and learn for your sake as a learner."

Our responsibility as educators is to imagine and create places of **learning**. Such places foster aesthetics, civility, ethics, openness, conversation, security, stewardship/ public responsibility, craftsmanship, and individual liberty. Although all educators must take responsibility for creating a **learning** place, **social studies** educators should be leaders in this effort.

Unless this concept of school is taken seriously, with all the necessary resource and time dimensions, curriculum and instruction will remain a symbolic adventure in rhetoric and retribution. **Learning** is a dependent variable, relying heavily upon a deep sense of place and community within that place. A focus on school as a **learning** place will help students stop simply moving "through" school and instead find the satisfaction that comes from creating and working within a place that values **learning**. This focus on school as a place for the community of learners will in the end be advantageous to individuals as well as to society as a whole.

The elements of curriculum; public commitment, time, and resources; powerful teaching and **learning**; and the concept of school as a **learning** place are all essential if students are to achieve the **social studies** standards we advocate.

What Is the Purpose of the Social Studies Standards?

Our world is changing rapidly. Students in our schools today, who will be the citizens of the twenty-first century, are living and **learning** in the midst of a knowledge explosion unlike any humankind has ever experienced. Because schools and teachers cannot teach everything and because students cannot learn all there is to know, this document focuses on three purposes for these standards. The **social studies** standards should:

1. serve as a framework for K-12 **social studies** program design through the use of ten thematic strands;
2. serve as a guide for curriculum decisions by providing performance expectations regarding knowledge, processes, and attitudes essential for all students; and
3. provide examples of classroom practice to guide teachers in designing instruction to help students meet performance expectations.

These **social studies** standards provide criteria for making decisions as curriculum planners and teachers address such issues as why teach **social studies**, what to include in the curriculum, how to teach it well to all students, and how to assess whether or not students are able to apply what they have learned. The ten thematic curriculum standards and accompanying sets of student performance expectations constitute an irreducible minimum of what is essential in **social studies**. Along with the examples of classroom practice, these standards and performance expectations help answer the following questions:

- How can the **social studies** curriculum help students construct an accurate and positive view of citizenship and become citizens able to address persistent issues, promote civic ideals and practices, and improve our democratic republic?

- What content themes are essential to the curriculum at every level (early, middle, and high school) because they address societal expectations and the needs of young future citizens and are drawn from disciplines and fields related to **social studies** and from other disciplines and fields that are natural allies of **social studies**?
- What are the student performance expectations at early, middle, and high school levels for knowledge, skills, attitudes, civic ideals, and practices that encompass **social studies** as an integrative field?
- How can **learning** opportunities be structured at each school level to help students meet **social studies** performance expectations?
- How might performance expectations be assessed to show that students have constructed an understanding that allows them to demonstrate and apply what they have learned?

How Are the Social Studies Standards Organized?

The **social studies** standards present, in the next chapters of this document, a set of ten thematically based curriculum standards, corresponding sets of performance expectations, and illustrations of exemplary teaching and **learning** to foster student achievement of the standards at each school level.

A **curriculum standard** is a statement of what should occur programmatically in the formal schooling process; it provides a guiding vision of content and purpose. The **social studies** curriculum standards, designated by roman numerals, are expressed in thematic statements that begin: "**Social studies** programs should include experiences that provide for the study of. . . ." These curriculum experiences should enable students to exhibit the knowledge, skills, scholarly perspectives, and commitments to American democratic ideals identified in the **performance expectations**.

For each school level, two or three examples of **classroom activities** related to each theme appear in the "Standards into Practice" chapters (Chapters 4, 5, and 6). In each case, the performance expectations addressed by the example are identified.

Since these themes are interdisciplinary, there is often a close relationship among performance expectations across the curriculum standards. To show these connections, roman numerals representing related themes are cross-referenced in the "Standards into Practice" chapters (Chapters 4, 5, and 6).

The ten themes that serve as organizing strands for the **social studies** curriculum at every school level are:

I **CULTURE**

II **TIME, CONTINUITY, AND CHANGE**

III **PEOPLE, PLACES, AND ENVIRONMENTS**

IV **INDIVIDUAL DEVELOPMENT AND IDENTITY**

Two features of these curriculum strands are especially important. First, they are interrelated. To understand culture, for example, students need to understand time, continuity, and change; the relationship among people, places, and environments; and civic ideals and practices. To understand power, authority, and governance, students need to understand the relationship among culture; people, places, and environments; and individuals, groups, and institutions.

Second, the thematic strands draw from all of the **social** science disciplines and other related disciplines and fields of scholarly study to build a framework for **social studies** curriculum design. The ten themes thus present a holistic framework for state and local curriculum standards. To further enhance the curriculum design, **social studies** educators are encouraged to seek detailed content from standards developed for history, geography, civics, economics, and other fields.

Who Can Use the Social Studies Standards and How?

The **social studies** curriculum standards offer educators, parents, and policymakers the essential conceptual components for curriculum development. Classroom teachers, scholars, and state, district, and school administrators should use this document as a starting point for the systematic development of a K-12 **social studies** curriculum of excellence.

State governments and departments of education can use the standards to:

- guide change to standards-based education;
- review and evaluate current state curriculum guidelines; and
- develop a state curriculum framework.

School districts and schools can use the standards to:

- provide a framework for curriculum development;
- review and evaluate current **social studies** programs; and
- provide ideas for instruction and assessment.

Individual teachers can use the standards to:

- provide outcome goals for units and courses;
- evaluate current practices; and

- glean ideas for instruction and assessment.

Parents and community members can use the standards to:

- understand how social studies learning contributes to meeting the broad educational goals of our society;
- assess the quality of social studies education in local school districts; and
- judge children's development as social studies learners.

Teacher educators can use the standards to:

- introduce pre-service and in-service teachers to standards-based planning and curriculum development;
- assess the instructional planning and teaching of pre-service and in-service teachers in their programs and courses; and
- guide the development of pre-service and in-service teacher education programs and courses.

What Is the Relationship of the Social Studies Standards to Other Standards in the Field?

The social studies standards will help teachers, program and curriculum designers, and administrators at the state, district, and school-site levels develop a systematic K-12 social studies program. Using the social studies standards as an umbrella can assist program development by:

- Ensuring integrated, cumulative social studies learning at each level (that is, learning that addresses powerful discipline-based and interdisciplinary themes at the early, middle, and high school levels).
- Encouraging program designers to use the inclusive social studies themes as the basis for a curriculum design that can also draw upon other standards projects (for example, history, geography, civics) for specific grade levels or courses within the K-12 program as appropriate. Most importantly, the several social science disciplines thus find a curriculum "home" in social studies since no one discipline is sufficient in and of itself to meet the vision of social studies as an integrative field.

A metaphor can help readers conceptualize the relationship of social studies and specific, individual disciplines as they promote learning in a K-12 social studies program. Consider a musical ensemble such as an orchestra (the social studies program) as it performs a specific musical composition (a grade level or specific course within the curriculum). At certain times, one instrument (a discipline such as history) takes the lead while others (such as geography and economics) play supporting roles. At other times, several instruments (history, geography, etc.) or the full ensemble play together to fully address the composer's thematic aims. The quality of the performance is the result of the composer's creation of the music (design of the social studies curriculum), the unique qualities of individual instruments (the contribution of individual disciplines), the acoustics of the setting (expertise of curriculum planners and teachers, school site facilities, and instructional resources), and the skills of

musicians and the conductor (students, teachers, program planners, and implementers) to know when and how to express the meaning of the composition (curriculum).

There is a rational relationship between the **social studies** standards and the standards of the several **social** sciences. The **social studies** standards address the overall curriculum design and the comprehensive student performance expectations of a program of excellence, while the individual sets of discipline standards provide enhanced content detail to ensure quality instructional programs. Teachers and curriculum designers are encouraged first to establish their program frameworks using the **social studies** standards as a guide, then to use the individual sets of standards from history, geography, civics, economics, or other disciplines to guide the development of strands and courses within their programs. Using these standards in concert with one another can enable educators to give adequate attention to both integrated and single discipline configurations within the **social studies** curriculum.

The effective use of the **social studies** curriculum standards will depend not only on the quality of their design, but also on the skills of educators to know when and how to integrate content, to design quality **learning** environments, and to construct with these standards more complete K-12 **social studies** programs that reflect the newest research in **learning**, developmental abilities of students, and knowledge construction. Only such a thoughtfully designed curriculum will carry forth a vision of **social studies** for the next century.

XI

How People Learn: Brain, Mind, Experience, and School

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Contents

3

Learning and Transfer

Processes of **learning** and the transfer of **learning** are central to understanding how people develop important competencies. **Learning** is important because no one is born with the ability to function competently as an adult in society. It is especially important to understand the kinds of **learning** experiences that lead to transfer, defined as the ability to extend what has been learned in one context to new contexts (e.g., Byrnes, 1996:74). Educators hope that students will transfer **learning** from one problem to another within a course, from one year in school to another, between school and home, and from school to workplace. Assumptions about transfer accompany the belief that it is better to broadly "educate" people than simply "train" them to perform particular tasks (e.g., Broudy, 1977).

Measures of transfer play an important role in assessing the quality of people's **learning** experiences. Different kinds of **learning** experiences can look equivalent when tests of **learning** focus solely on remembering (e.g., on the ability to repeat previously taught facts or procedures), but they can look quite different when tests of transfer are used. Some kinds of **learning** experiences result in effective memory but poor transfer; others produce effective memory plus positive transfer.

Thorndike and his colleagues were among the first to use transfer tests to examine assumptions about **learning** (e.g., Thorndike and Woodworth, 1901). One of their goals was to test the doctrine of "formal discipline" that was prevalent at the turn of the century. According to this doctrine, practice by **learning** Latin and other **difficult** subjects had broad-based effects, such as developing general skills of **learning** and attention. But these **studies** raised serious questions about the fruitfulness of designing educational experiences based on the assumption of formal discipline. Rather than developing some kind of "general skill" or "mental muscle" that affected a wide range of performances, people seemed to learn things that were more specific; see Box 3.1.

Early research on the transfer of **learning** was guided by theories that emphasized the similarity between conditions of **learning** and conditions of transfer. Thorndike (1913), for example, hypothesized that the degree of transfer between initial and later **learning** depends upon the match between *elements* across the two events. The essential elements were presumed to be specific facts and skills. By such an account, skills of writing letters of the alphabet are useful to writing words (vertical transfer). The theory posited that transfer from one school task and a highly similar task (near transfer), and from school subjects to nonschool settings (far transfer), could be facilitated by teaching knowledge and skills in school subjects that have elements *identical* to activities encountered in the transfer context (Klausmeier, 1985). Transfer could also be negative in the sense that experience with one set of events could hurt performance on related tasks (Luchins and Luchins, 1970); see Box 3.2.

The emphasis on identical elements of tasks excluded consideration of any learner characteristics, including when attention was directed, whether relevant principles were extrapolated, problem solving, or creativity and motivation. The primary emphasis was on drill and practice. Modern theories of **learning** and transfer retain the emphasis on practice, but they specify the kinds of practice that are important and take learner characteristics (e.g., existing knowledge and strategies) into account (e.g., Singley and Anderson, 1989).

In the discussion below we explore key characteristics of **learning** and transfer that have important implications for education:

- Initial **learning** is necessary for transfer, and a considerable amount is known about the kinds of **learning** experiences that support transfer.
- Knowledge that is overly contextualized can reduce transfer; abstract representations of knowledge can help promote transfer.
- Transfer is best viewed as an active, dynamic process rather than a passive end-product of a particular set of **learning** experiences.
- All new **learning** involves transfer based on previous **learning**, and this fact has important implications for the design of instruction that helps students learn.

ELEMENTS THAT PROMOTE INITIAL **LEARNING**

The first factor that influences successful transfer is degree of mastery of the original subject. Without an adequate level of initial **learning**, transfer cannot be expected. This point seems obvious, but it is often overlooked.

The importance of initial **learning** is illustrated by a series of **studies** designed to assess the effects of **learning** to program in the computer language LOGO. The hypothesis was that students who learned LOGO would transfer this knowledge to other areas that required thinking and problem solving (Papert, 1980). Yet in many cases, the

studies found no differences on transfer tests between students who had been taught LOGO and those who had not (see Cognition and Technology Group at Vanderbilt, 1996; Mayer, 1988). However, many of these studies failed to assess the degree to which LOGO was learned in the first place (see Klahr and Carver, 1988; Littlefield et al., 1988). When initial learning was assessed, it was found that students often had not learned enough about LOGO to provide a basis for transfer. Subsequent studies began to pay more attention to student learning, and they did find transfer to related tasks (Klahr and Carver, 1988; Littlefield et al., 1988). Other research studies have shown that additional qualities of initial learning affect transfer and are reviewed next.

Understanding Versus Memorizing

Transfer is affected by the degree to which people learn with understanding rather than merely memorize sets of facts or follow a fixed set of procedures; see Boxes 3.3 and 3.4.

In Chapter 1, the advantages of learning with understanding were illustrated with an example from biology that involved learning about the physical properties of veins and arteries. We noted that the ability to remember properties of veins and arteries (e.g., that arteries are thicker than veins, more elastic, and carry blood from the heart) is not the same as understanding why they have particular properties. The ability to understand becomes important for transfer problems, such as: "Imagine trying to design an artificial artery. Would it have to be elastic? Why or why not?" Students who only memorize facts have little basis for approaching this kind of problem-solving task (Bransford and Stein, 1993; Bransford et al., 1983). The act of organizing facts about veins and arteries around more general principles such as "how structure is related to function" is consistent with the knowledge organization of experts discussed in Chapter 2.

Time to Learn

It is important to be realistic about the amount of time it takes to learn complex subject matter. It has been estimated that world-class chess masters require from 50,000 to 100,000 hours of practice to reach that level of expertise; they rely on a knowledge base containing some 50,000 familiar chess patterns to guide their selection of moves (Chase and Simon, 1973; Simon and Chase, 1973). Much of this time involves the development of pattern recognition skills that support the fluent identification of meaningful patterns of information plus knowledge of their implications for future outcomes (see Chapter 2). In all domains of learning, the development of expertise occurs only with major investments of time, and the amount of time it takes to learn material is roughly proportional to the amount of material being learned (Singley and Anderson, 1989); see Box 3.5. Although many people believe that "talent" plays a role in who becomes an expert in a particular area, even seemingly talented individuals require a great deal of practice in order to develop their expertise (Ericsson et al., 1993).

Learners, especially in school settings, are often faced with tasks that do not have apparent meaning or logic (Klausmeier, 1985). It can be difficult for them to learn with understanding at the start; they may need to take time to explore underlying concepts and to generate connections to other information they possess. Attempts to cover too many topics too quickly may hinder learning and subsequent transfer because students (a) learn only isolated sets of facts that are not organized and connected or (b) are introduced to organizing principles that they cannot grasp because they lack enough specific knowledge to make them meaningful. Providing students with opportunities to first grapple with specific information relevant to a topic has been shown to create a "time for telling" that enables them to learn much more from an organizing lecture (as measured by subsequent abilities to transfer) than students who did not first have these specific opportunities; see Box 3.6.

Providing students with time to learn also includes providing enough time for them to process information. Pezdek and Miceli (1982) found that on one particular task, it took 3rd graders 15 seconds to integrate pictorial and verbal information; when given only 8 seconds, they couldn't mentally integrate the information, probably due to short-term memory limitations. The implication is that **learning** cannot be rushed; the complex cognitive activity of information integration requires time.

Beyond "Time on Task"

It is clear that different ways of using one's time have different effects on **learning** and transfer. A considerable amount is known about variables that affect **learning**. For example, **learning** is most effective when people engage in "deliberate practice" that includes active monitoring of one's **learning** experiences (Ericsson et al., 1993). Monitoring involves attempts to seek and use feedback about one's progress. Feedback has long been identified as important for successful **learning** (see, e.g., Thorndike, 1913), but it should not be regarded as a unidimensional concept. For example, feedback that signals progress in memorizing facts and formulas is different from feedback that signals the state of the students' understanding (Chi et al., 1989, 1994). In addition, as noted in Chapter 2, students need feedback about the degree to which they know when, where, and how to use the knowledge they are **learning**. By inadvertently relying on clues--such as which chapter in a text the practice problems came from--students can erroneously think they have conditionalized their knowledge when, in fact, they have not (Bransford, 1979).

Understanding when, where, and why to use new knowledge can be enhanced through the use of "contrasting cases," a concept from the field of perceptual **learning** (see, e.g., Gagné and Gibson, 1947; Garner, 1974; Gibson and Gibson, 1955). Appropriately arranged contrasts can help people notice new features that previously escaped their attention and learn which features are relevant or irrelevant to a particular concept. The benefits of appropriately arranged contrasting cases apply not only to perceptual **learning**, but also to conceptual **learning** (Bransford et al., 1989; Schwartz et al., in press). For example, the concept of linear function becomes clearer when contrasted with nonlinear functions; the concept of recognition memory
becomes clearer when contrasted with measures such as free recall and cued recall.

A number of **studies** converge on the conclusion that transfer is enhanced by helping students see potential transfer implications of what they are **learning** (Anderson et al., 1996). In one of the **studies** on **learning** LOGO programming (Klahr and Carver, 1988), the goal was to help students learn to generate "bug-free" instructions for others to follow. The researchers first conducted a careful task analysis of the important skills underlying the ability to program in LOGO and focused especially on LOGO debugging skills--the process by which children find and correct errors in their programs. Part of the researchers' success in teaching LOGO depended on this task analysis. The researchers identified the four key aspects of debugging a program as identifying the buggy behavior, representing the program, locating the bug in the program, and then correcting the bug. They highlighted these key abstract steps and signaled to the students that the steps would be relevant to the transfer task of writing debugging directions. Students who had LOGO training increased from 33 percent correct instructions to 55 percent correct instructions. They could have approached this task by memorizing the procedures for programming LOGO routines to "make a house," "make a polygon," and so forth. Simply memorizing the procedures, however, would not be expected to help students accomplish the transfer task of generating clear, bug-free instructions.

Motivation to Learn

Motivation affects the amount of time that people are willing to devote to **learning**. Humans are motivated to develop competence and to solve problems; they have, as White (1959) put

it, "competence motivation." Although extrinsic rewards and punishments clearly affect behavior (see Chapter 1), people work hard for intrinsic reasons, as well.

Challenges, however, must be at the proper level of difficulty in order to be and to remain motivating: tasks that are too easy become boring; tasks that are too **difficult** cause frustration. In addition, learners' tendencies to persist in the face of difficulty are strongly affected by whether they are "performance oriented" or "**learning** oriented" (Dweck, 1989). Students who are **learning** oriented like new challenges; those who are performance oriented are more worried about making errors than about **learning**. Being **learning** oriented is similar to the concept of adaptive expertise discussed in Chapter 2. It is probable, but needs to be verified experimentally, that being "**learning** oriented" or "performance oriented" is not a stable trait of an individual but, instead, varies across disciplines (e.g., a person may be performance oriented in mathematics but **learning** oriented in science and **social** **studies** or vice versa).

Social opportunities also affect motivation. Feeling that one is contributing something to others appears to be especially motivating (Schwartz et al., in press). For example, young learners are highly motivated to write
stories and draw pictures that they can share with others. First graders in an inner-city school were so highly motivated to write books to be shared with others that the teachers had to make a rule: "No leaving recess early to go back to class to work on your book" (Cognition and Technology Group at Vanderbilt, 1998).

Learners of all ages are more motivated when they can see the usefulness of what they are **learning** and when they can use that information to do something that has an impact on others--especially their local community (McCombs, 1996; Pintrich and Schunk, 1996). Sixth graders in an inner-city school were asked to explain the highlights of their previous year in fifth grade to an anonymous interviewer, who asked them to describe anything that made them feel proud, successful, or creative (Barron et al., 1998). Students frequently mentioned projects that had strong **social** consequences, such as tutoring younger children, **learning** to make presentations to outside audiences, designing blueprints for playhouses that were to be built by professionals and then donated to preschool programs, and **learning** to work effectively in groups. Many of the activities mentioned by the students had involved a great deal of hard work on their part: for example, they had had to learn about geometry and architecture in order to get the chance to create blueprints for the playhouses, and they had had to explain their blueprints to a group of outside experts who held them to very high standards. (For other examples and discussions of highly motivating activities, see Pintrich and Schunk, 1996.)

OTHER FACTORS THAT INFLUENCE TRANSFER

Context

Transfer is also affected by the context of original **learning**; people can learn in one context, yet fail to transfer to other contexts. For example, a group of Orange County homemakers did very well at making supermarket best-buy calculations despite doing poorly on equivalent school-like paper-and-pencil mathematics problems (Lave, 1988). Similarly, some Brazilian street children could perform mathematics when making sales in the street but were unable to answer similar problems presented in a school context (Carraher, 1986; Carraher et al., 1985).

How tightly **learning** is tied to contexts depends on how the knowledge is acquired (Eich, 1985). Research has indicated that transfer across contexts is especially **difficult** when a subject is taught only in a single context rather than in multiple contexts (Bjork and Richardson-Klavhen, 1989). One frequently used teaching technique is to get learners to elaborate on the examples used during **learning** in order to facilitate retrieval at a later time.

The practice, however, has the potential of actually making it more **difficult** to retrieve the lesson material in other contexts, because knowledge tends to be especially context-bound when learners elaborate the new material with details of the context in which the material is learned (Eich, 1985). When a subject is taught in multiple contexts, however, and includes examples that demonstrate wide application of what is being taught, people are more likely to abstract the relevant features of concepts and to develop a flexible representation of knowledge (Gick and Holyoak, 1983).

The problem of overly contextualized knowledge has been studied in instructional programs that use case-based and problem-based **learning**. In these programs, information is presented in a context of attempting to solve complex, realistic problems (e.g., Barrows, 1985; Cognition and Technology Group at Vanderbilt, 1997; Gragg, 1940; Hmelo, 1995; Williams, 1992). For example, fifth- and sixth-grade students may learn mathematical concepts of distance-rate-time in the context of solving a complex case involving planning for a boat trip. The findings indicate that if students learn only in this context, they often fail to transfer flexibly to new situations (Cognition and Technology Group at Vanderbilt, 1997). The issue is how to promote wide transfer of the **learning**.

One way to deal with lack of flexibility is to ask learners to solve a specific case and then provide them with an additional, similar case; the goal is to help them abstract general principles that lead to more flexible transfer (Gick and Holyoak, 1983); see Box 3.7. A second way to improve flexibility is to let students learn in a specific context and then help them engage in "what-if" problem solving designed to increase the flexibility of their understanding. They might be asked: "What if this part of the problem were changed, or this part?" (Cognition and Technology Group at Vanderbilt, 1997). A third way is to generalize the case so that learners are asked to create a solution that applies not simply to a single problem, but to a whole class of related problems. For example, instead of planning a single boat trip, students might run a trip planning company that has to advise people on travel times for different regions of the country. Learners are asked to adopt the goal of **learning** to "work smart" by creating mathematical models that characterize a variety of travel problems and using these models to create tools, ranging from simple tables and graphs to computer programs. Under these conditions, transfer to novel problems is enhanced (e.g., Bransford et al., 1998).

Problem Representations

Transfer is also enhanced by instruction that helps students represent problems at higher levels of abstraction. For example, students who create a specific business plan for a complex problem may not initially realize that their plan works well for "fixed-cost" situations but not for others. Helping students represent their solution strategies at a more general level can
help them increase the probability of positive transfer and decrease the degree to which a previous solution strategy is used inappropriately (negative transfer).

Advantages of abstract problem representations have been studied in the context of algebra word problems involving mixtures. Some students were trained with pictures of the mixtures and other students were trained with abstract tabular representations that highlighted the underlying mathematical relationships (Singley and Anderson, 1989). Students who were trained on specific task components without being provided with the principles underlying the problems could do the specific tasks well, but they could not apply their **learning** to new problems. By contrast, the students who received abstract

training showed transfer to new problems that involved *analogous* mathematical relations. Research has also shown that developing a suite of representations enables learners to think flexibly about complex domains (Spiro et al., 1991).

Relationships Between **Learning** and Transfer Conditions

Transfer is always a function of relationships between what is learned and what is tested. Many theorists argue that the amount of transfer will be a function of the overlap between the original domain of **learning** and the novel one. Measuring overlap requires a theory of how knowledge is represented and conceptually mapped across domains. Examples of research **studies** on conceptual representation include Brown (1986), Bassok and Holyoak (1989a, b), and Singley and Anderson (1989). Whether students will transfer across domains--such as distance formulas from physics to formally equivalent biological growth problems, for example--depends on whether they conceive of the growth as occurring continuously (successful transfer) or in discrete steps (unsuccessful transfer) (Bassok and Olseth, 1995).

Singley and Anderson (1989) argue that transfer between tasks is a function of the degree to which the tasks share *cognitive* elements. This hypothesis was also put forth very early in the development of research on transfer of identical elements, mentioned previously (Thorndike and Woodworth, 1901; Woodworth, 1938), but it was hard to test experimentally until there was a way to identify task components. In addition, modern theorists include cognitive representations and strategies as "elements" that vary across tasks (Singley and Anderson, 1989).

Singley and Anderson taught students several text editors, one after another, and sought to predict transfer, defined as the savings in time of **learning** a new editor when it was not taught first. They found that students learned subsequent text editors more rapidly and that the number of procedural elements shared by two text editors predicted the amount of this transfer. In fact, there was large transfer across editors that were very different in surface structures but that had common abstract structures. Singley and Anderson also found that similar principles govern transfer of mathematical competence across multiple domains when they considered transfer of declarative as well as procedural knowledge.

A study by Biederman and Shiffrar (1987) is a striking example of the benefits of abstract instruction. They studied a task that is typically **difficult** to learn in apprentice-like roles: how to examine day-old chicks to determine their sex. Biederman and Shiffrar found that twenty minutes of instruction on abstract principles helped the novices improve considerably (see also Anderson et al., 1996). Research **studies** generally provide strong support for the benefits of helping students represent their experiences at levels of abstraction that transcend the specificity of particular contexts and examples (National Research Council, 1994). Examples include algebra (Singley and Anderson, 1989), computer language tasks (Klahr and Carver, 1988), motor skills (e.g., dart

throwing, Judd, 1908), analogical reasoning (Gick and Holyoak, 1983), and visual **learning** (e.g., sexing chicks, Biederman and Shiffrar, 1987).

Studies show that abstracted representations do not remain as isolated instances of events but become components of larger, related events, schemata (Holyoak, 1984; Novick and Holyoak, 1991). Knowledge representations are built up through many opportunities for observing similarities and differences across diverse events. Schemata are posited as particularly important guides to complex thinking, including analogical reasoning: "Successful analogical transfer leads to the induction of a general schema for the solved problems that can be applied to subsequent problems" (National Research Council, 1994:43). Memory retrieval and transfer are promoted by schemata because they derive from a broader scope of related instances than single **learning** experiences.

Active Versus Passive Approaches to Transfer

It is important to view transfer as a dynamic process that requires learners to actively choose and evaluate strategies, consider resources, and receive feedback. This active view of transfer is different from more static views, which assume that transfer is adequately reflected by learners' abilities to solve a set of transfer problems right after they have engaged in an initial **learning** task. These "one-shot" tests often seriously underestimate the amount of transfer that students display from one domain to another (Bransford and Schwartz, in press; Brown et al., 1983; Bruer, 1993).

Studies of transfer from **learning** one text editor to another illustrate the importance of viewing transfer from a dynamic rather than a static perspective. Researchers have found much greater transfer to a second text editor on the *second* day of transfer than the first (Singley and Anderson, 1989): this finding suggests that transfer should be viewed as increased speed in **learning** a new domain--not simply initial performance. Similarly, one educational goal for a course in calculus is how it facilitates **learning** of physics, but not necessarily its benefit on the first day of physics class.

Ideally, an individual spontaneously transfers appropriate knowledge without a need for prompting. Sometimes, however, prompting is necessary. With prompting, transfer can improve quite dramatically (e.g., Gick and Holyoak, 1980; Perfetto et al., 1983). "The amount of transfer depends on where attention is directed during **learning** or at transfer" (Anderson et al., 1996:8).

An especially sensitive way to assess the degree to which students' **learning** has prepared them for transfer is to use methods of dynamic assessment, such as "graduated prompting" (Campione and Brown, 1987; Newman et al., 1989). This method can be used to assess the amount of help needed for transfer by counting the number and types of prompts that are necessary before students are able to transfer. Some learners can transfer after receiving a general prompt such as "Can you think of something you did earlier that might be relevant?" Other learners need prompts that are much more specific. Tests of transfer that use graduated prompting provide more fine-grained analysis of

learning and its effects on transfer than simple one-shot assessments of whether or not transfer occurs.

Transfer and Metacognition

Transfer can be improved by helping students become more aware of themselves as learners who actively monitor their **learning** strategies and resources and assess their readiness for particular tests and performances. We briefly discussed the concept of metacognition in Chapters 1 and 3 (see Brown, 1975; Flavell, 1973). Metacognitive approaches to instruction have been shown to increase the degree to which students will transfer to new situations without the need for explicit prompting. The following examples illustrate research on teaching metacognitive skills across domains of reading, writing, and mathematics.

Reciprocal teaching to increase reading comprehension (Palincsar and Brown, 1984) is designed to help students acquire specific knowledge and also to learn a set of strategies for explicating, elaborating, and monitoring the understanding necessary for independent **learning**. The three major components of reciprocal teaching are instruction and practice with strategies that enable students to monitor their understanding; provision, initially by a teacher, of an expert model of metacognitive processes; and a **social** setting that enables joint negotiation for understanding. The knowledge-acquisition strategies the students learn in working on a specific text are not acquired as abstract memorized procedures, but as skills instrumental in achieving subject-area knowledge and understanding. The instructional procedure is reciprocal in the sense that a teacher and a group of students take turns in leading the group to discuss and use strategies for comprehending and remembering text content.

A program of procedural facilitation for teaching written composition (Scardamalia et al., 1984) shares many features with reciprocal teaching. The method prompts learners to adopt the metacognitive activities embedded in sophisticated writing strategies. The prompts help learners think about and reflect on the activities by getting them to identify goals, generate new ideas, improve and elaborate existing ideas, and strive for idea cohesion. Students in the procedural facilitation program take turns presenting their ideas to the group and detailing how they use prompts in planning to write. The teacher also models these procedures. Thus, the program involves modeling, scaffolding, and taking turns which are designed to help students externalize mental events in a collaborative context.

Alan Schoenfeld (1983, 1985, 1991) teaches heuristic methods for mathematical problem solving to college students. The methods are derived, to some extent, from the problem-solving heuristics of Polya (1957). Schoenfeld's program adopts methods similar to reciprocal teaching and procedural facilitation. He teaches and demonstrates control or managerial strategies and makes explicit such processes as generating alternative courses of action, evaluating which course one will be able to carry out and whether it can be managed in the time available, and assessing one's progress. Again, elements of modeling, coaching, and scaffolding, as well as collective problem solving and whole-class and small group discussions, are used. Gradually, students come to ask self-regulatory questions themselves as the teacher fades out. At the end of each of the problem-solving sessions, students and teacher alternate in characterizing major themes by analyzing what they did and why. The recapitulations highlight the generalizable features of the critical decisions and actions and focus on strategic levels rather than on the specific solutions (see also White and Frederickson, 1998).

An emphasis on metacognition can enhance many programs that use new technologies to introduce students to the inquiry methods and other tools that are used by professionals in the workplace (see Chapter 8). The important role of metacognition for **learning** has been demonstrated in the context of a "thinker tools" program that lets students run simulations of

physics experiments (White and Frederickson, 1998), as well as in adding a metacognitive component to a computer program designed to help college students learn biology (Lin and Bielaczyc, in press). The value of using video to model important metacognitive **learning** procedures has also been shown to help learners analyze and reflect on models (Bielaczyc et al., 1995). All of these strategies engage learners as active participants in their **learning** by focusing their attention on critical elements, encouraging abstraction of common themes or procedures (principles), and evaluating their own progress toward understanding.

LEARNING AS TRANSFER FROM PREVIOUS EXPERIENCES

When people think about transfer, it is common to think first about **learning** something and then assessing the learner's abilities to apply it to something else. But even the initial **learning** phase involves transfer because it is based on the knowledge that people bring to any **learning** situation; see Box 3.8. The principle that people learn by using what they know to construct new understandings (see Chapter 1) can be paraphrased as "all **learning** involves transfer from previous experiences." This principle has a number of important implications for educational practice. First, students may have knowledge that is relevant to a **learning** situation that is not activated. By helping activate this knowledge, teachers can build on students' strengths. Second, students may misinterpret new information because of previous knowledge they use to construct new understandings. Third, students may have difficulty with particular school teaching practices that conflict with practices in their community. This section discusses these three implications.

Building on Existing Knowledge

Children's early mathematics knowledge illustrates the benefits of helping students draw on relevant knowledge that can serve as a source of transfer. By the time children begin school, most have built a considerable knowledge store relevant to arithmetic. They have experiences of adding and subtracting numbers of items in their everyday play, although they lack the symbolic representations of addition and subtraction that are taught in school. If children's knowledge is tapped and built on as teachers attempt to teach them the formal operations of addition and subtraction, it is likely that children will acquire a more coherent and thorough understanding of these processes than if they taught them as isolated abstractions. Without specific guidance from teachers, students may fail to connect everyday knowledge to subjects taught in school.

Understanding Conceptual Change

Because **learning** involves transfer from previous experiences, one's existing knowledge can also make it **difficult** to learn new information. Sometimes new information will seem incomprehensible to students, but this feeling of confusion can at least let them identify the existence of a problem (see, e.g., Bransford and Johnson, 1972; Dooling and Lachman, 1971). A more problematic situation occurs when people construct a coherent (for them) representation of information while deeply misunderstanding the new information. Under these conditions, the learner doesn't realize that he or she is failing to understand. Two examples of this phenomenon are in Chapter 1: *Fish Is Fish* (Lionni, 1970), where the fish listens to the frog's descriptions of people and constructs its own idiosyncratic images, and attempts to help children learn that the earth is spherical (Vosniadou and Brewer, 1989). Children's interpretations of the new information are much different than what adults intend.

The *Fish Is Fish* scenario is relevant to many additional attempts to help students learn new information. For example, when high school or college physics students are asked to identify the forces being exerted on a ball that is thrown vertically up in the air after it leaves the hand, many mention the "force of the hand" (Clement, 1982a, b). This force is exerted only so long as the ball is in contact with the hand, but is not present when the ball is in flight. Students claim that this force diminishes as the ball ascends and is used up by the time the ball reaches the top of its trajectory. As the ball descends, these students claim, it "acquires" increasing amounts of the gravitational force, which results in the ball picking up speed as it falls back down. This "motion requires a force" misconception is quite common among students and is akin to the medieval theory of "impetus" (Hestenes et al., 1992). These explanations fail to take account of the fact that the only forces being exerted on the ball while it is traveling through the air are the gravitational force caused by the earth and the drag force due to air resistance. (For similar examples, see Mestre, 1994.)

In biology, people's knowledge of human and animal needs for food provides an example of how existing knowledge can make it **difficult** to understand new information. A study of how plants make food was conducted with students from elementary school through college. It probed understanding of the role of soil and photosynthesis in plant growth and of the primary source of food in green plants (Wandersee, 1983). Although students in the higher grades displayed a better understanding, students from all levels displayed several misconceptions: soil is the plants' food; plants get their food from the roots and store it in the leaves; and chlorophyll is the plants' blood. Many of the students in this study, especially those in the higher grades, had already studied photosynthesis. Yet formal instruction had done little to overcome their erroneous prior beliefs. Clearly, presenting a sophisticated explanation in science class, without also probing for students' preconceptions on the subject, will leave many students with incorrect understanding (for a review of **studies**, see Mestre, 1994).

For young children, early concepts in mathematics guide students' attention and thinking (Gelman, 1967; we discuss this more in Chapter 4). Most children bring to their school mathematics lessons the idea that numbers are grounded in the counting principles (and related rules of addition and subtraction). This knowledge works well during the early years of schooling. However, once students are introduced to rational numbers, their assumptions about mathematics can hurt their abilities to learn.

Consider **learning** about fractions. The mathematical principles underlying the numberhood of fractions are not consistent with the principles of counting and children's ideas that numbers are sets of things that are counted and addition involves "putting together" two sets. One cannot count things to generate a fraction. Formally, a fraction is defined as the division of one cardinal number by another: this definition solves the problem that there is a lack of closure of the integers under division. To complicate matters, some number-counting principles do not apply to fractions. Rational numbers do not have unique successors; there is an infinite number of numbers between any two rational numbers. One cannot use counting-based algorithms for sequencing fractions: for example, 1/4 is not more than 1/2. Neither the nonverbal nor the verbal counting principle maps to a tripartite symbolic representations of fractions--two cardinal numbers X and Y separated by a line. Related mapping problems have been noted by others (e.g., Behr et al., 1992; Fishbein et al., 1985; Silver et al., 1993). Overall, early knowledge of numbers has the potential to serve as a barrier to **learning** about fractions--and for many learners it does.

The fact that learners construct new understandings based on their current knowledge highlights some of the dangers in "teaching by telling." Lectures and other forms of direct instruction can sometimes be very useful, but only under the right conditions (Schwartz and Bransford, in press). Often, students construct understandings like those noted above. To counteract these problems, teachers must strive to make students' thinking visible and find

ways to help them reconceptualize faulty conceptions. (Strategies for such teaching are discussed in more detail in Chapters 6 and 7.)

Transfer and Cultural Practices

Prior knowledge is not simply the individual **learning** that students bring to the classroom, based on their personal and idiosyncratic experiences (e.g., some children will know many things because they have traveled widely or because their parents have particular kinds of jobs; some children may have suffered a traumatic experience). Prior knowledge is also not only a generic set of experiences attributable to developmental stages through which learners may have passed (i.e., believing that heaven is "up" or that milk comes from refrigerated cartons). Prior knowledge also includes the kind of knowledge that learners acquire because of their **social** roles, such as those connected with race, class, gender, and their culture and ethnic affiliations (Brice-Heath, 1981, 1983; Lave, 1988; Moll and Whitmore, 1993; Moll et al., 1993-1998; Rogoff, 1990, 1998; Saxe, 1990). This cultural knowledge can sometimes support and sometimes conflict with children's **learning** in schools (Greenfield and Suzuki, 1998); see Box 3.9.

School failure may be partly explained by the mismatch between what students have learned in their home cultures and what is required of them in school (see Allen and Boykin, 1992; Au and Jordan, 1981; Boykin and Tom, 1985; Erickson and Mohatt, 1982). Everyday family habits and rituals can either be reinforced or ignored in schools, and they can produce different responses from teachers (Heath, 1983). For example, if young learners are never asked questions at home that seem obvious to some families--such as "What color is the sky?" or "Where is your nose?"--teachers who ask such questions may find students reluctant or resistant to answer. How teachers interpret this reticence or resistance has consequences for how intelligent or academically capable they judge students and their instructional approaches toward them.

These differences have their roots in early adult-infant interactions (Blake, 1994). Whereas middle-class Anglo mothers tend to have frequent language interactions that are focused on didactic naming and pointing with their infants around objects ("Look at that red truck!"), African American mothers show comparable frequency levels of language interactions with their infants, but focused on affective dimensions of language ("Isn't that a pretty toy? Doesn't it make you feel happy?"). The language that children bring with them to school involves a broad set of skills rooted in the early context of adult-child interactions. What happens when the adults, peers, and contexts change (Suina, 1988; Suina and Smolkin, 1994)? This is an important question that relates to the transfer of **learning**.

The meanings that are attached to cultural knowledge are important in promoting transfer--that is, in encouraging people to use what they have learned. For example, story-telling is a language skill. Topic-associative oral styles have been observed among African American children (Michaels, 1981a,b; 1986). In contrast, white children use a more linear narrative style that more closely approximates the linear expository style of writing and speaking that schools teach (see Gee, 1989; Taylor and Lee, 1987; Cazden et al., 1985; Lee and Slaughter-Defoe, 1995). Judgments may be made by white and black teachers as they listen to these two language styles: white teachers find the topic-associative stories hard to follow and are much more likely to infer that the narrator is a low-achieving student; black teachers are more likely to positively evaluate the topic-associative style (Cazden, 1988:17). African American children who come to school speaking in a topic-associative style may be seen by many teachers as having less potential for **learning**. Teachers can be helped to view different cultural backgrounds as strengths to be built on, rather than as signs of "deficits."

TRANSFER BETWEEN SCHOOL AND EVERYDAY LIFE

We began this chapter by stressing that the ultimate goal of **learning** is to have access to information for a wide set of purposes--that the **learning** will in some way transfer to other circumstances. In this sense, then, the ultimate goal of schooling is to help students transfer what they have learned in school to everyday settings of home, community, and workplace. Since transfer between tasks is a function of the similarity by transfer tasks and **learning** experiences, an important strategy for enhancing transfer from schools to other settings may be to better understand the nonschool environments in which students must function. Since these environments change rapidly, it is also important to explore ways to help students develop the characteristics of adaptive expertise (see Chapter 1).

The question of how people function in a number of practical settings has been examined by many scientists, including cognitive anthropologists, sociologists, and psychologists (e.g., Lave, 1988; Rogoff, 1990). One major contrast between everyday settings and school environments is that the latter place much more emphasis on individual work than most other environments (Resnick, 1987). A study of navigation on U.S. ships found that no individual can pilot the ship alone; people must work collaboratively and share their expertise. More recent **studies** of collaboration confirm its importance. For example, many scientific discoveries in several genetics laboratories involve in-depth collaboration (Dunbar, 1996). Similarly, decision making in hospital emergency rooms is distributed among many different members of the medical team (Patel et al., 1996).

A second major contrast between schools and everyday settings is the heavy use of tools to solve problems in everyday settings, compared with "mental work" in school settings (Resnick, 1987). The use of tools in practical environments helps people work almost error free (e.g., Cohen, 1983; Schliemann and Acioly, 1989; Simon, 1972; see also Norman, 1993). New technologies make it possible for students in schools to use tools very much like those used by professionals in workplaces (see Chapter 8). Proficiency with relevant tools may provide a way to enhance transfer across domains.

A third contrast between schools and everyday environments is that abstract reasoning is often emphasized in school, whereas contextualized reasoning is often used in everyday settings (Resnick, 1987). Reasoning can be improved when abstract logical arguments are embodied in concrete contexts (see Wason and Johnson-Laird, 1972). A well-known study of people in a Weight Watchers program provides similar insights into everyday problem solving (see Lave et al., 1984). One example is of a man who needed three-fourths of two-thirds of a cup of cottage cheese to create a dish he was cooking. He did not attempt to multiply the fractions as students would do in a school context. Instead, he measured two-thirds of a cup of cottage cheese, removed that amount from the measuring cup and then patted the cheese into a round shape, divided it into quarters, and used three of the quarters; see Box 3.10. Abstract arithmetic was never used. In similar examples of contextualized reasoning, dairy workers use knowledge, such as the size of milk cases, to make their computational work more efficient (Scribner, 1984); grocery store shoppers use nonschool mathematics under standard supermarket and simulated conditions (Lave, 1988); see Box 3.11.

There are potential problems with contextualized reasoning, which are similar to those associated with overly contextualized knowledge in general. The "pat it out" strategy used for cottage cheese works in only a narrow range of situations; the man would have difficulty if he were trying to measure molasses or other liquids rather than cottage cheese (Wineburg, 1989a, b; see also Bereiter, 1997). Could he generate a new strategy for molasses or other liquids? The answer to this question depends on the degree to which he can relate his procedure to more general sets of solution strategies.

Analyses of everyday environments have potential implications for education that are intriguing but need to be thought through and researched carefully. There are many appealing strengths to the idea that **learning** should be organized around authentic problems and projects that are frequently encountered in nonschool settings: in John Dewey's vision, "School should be less about preparation for life and more like life itself." The use of problem-based **learning** in medical schools is an excellent example of the benefits of looking at what people need to do once they graduate and then crafting educational experiences that best prepare them for these competencies (Barrows, 1985). Opportunities to engage in problem-based **learning** during the first year of medical school lead to a greater ability to diagnose and understand medical problems than do opportunities to learn in typical lecture-based medical courses (Hmelo, 1995). Attempts to make schooling more relevant to the subsequent workplace have also guided the use of case-based **learning** in business schools, law schools, and schools that teach educational leadership (Hallinger et al., 1993; Williams, 1992).

The transfer literature also highlights some of the potential limitations of **learning** in particular contexts. Simply **learning** to perform procedures, and **learning** in only a single context, does not promote flexible transfer. The transfer literature suggests that the most effective transfer may come from a balance of specific examples and general principles, not from either one alone.

SUMMARY AND CONCLUSION

A major goal of schooling is to prepare students for flexible adaptation to new problems and settings. The ability of students to transfer provides an important index of **learning** that can help teachers evaluate and improve their instruction. Many approaches to instruction look equivalent when the only measure of **learning** is memory for information that was specifically presented. Instructional differences become more apparent when evaluated from the perspective of how well the **learning** transfers to new problems and settings.

Several critical features of **learning** affect people's abilities to transfer what they have learned. The amount and kind of initial **learning** is a key determinant of the development of expertise and the ability to transfer knowledge. Students are motivated to spend the time needed to learn complex subjects and to solve problems that they find interesting. Opportunities to use knowledge to create products and benefits for others are particularly motivating for students.

While time on task is necessary for **learning**, it is not sufficient for effective **learning**. Time spent **learning** for understanding has different consequences for transfer than time spent simply memorizing facts or procedures from textbooks or lectures. In order for learners to gain insight into their **learning** and their understanding, frequent feedback is critical: students need to monitor their **learning** and actively evaluate their strategies and their current levels of understanding.

The context in which one learns is also important for promoting transfer. Knowledge that is taught in only a single context is less likely to support flexible transfer than knowledge that is taught in multiple contexts. With multiple contexts, students are more likely to abstract the relevant features of concepts and develop a more flexible representation of knowledge. The use of well-chosen contrasting cases can help students

learn the conditions under which new knowledge is applicable. Abstract representations of problems can also facilitate transfer. Transfer between tasks is related to the degree to which they share common elements, although the concept of elements must be defined cognitively. In assessing **learning**, the key is increased speed of **learning** the concepts underlying the new material, rather than early performance attempts in a new subject domain.

All new **learning** involves transfer. Previous knowledge can help or hinder the understanding of new information. For example, knowledge of everyday counting-based arithmetic can make it **difficult** to deal with rational numbers; assumptions based on everyday physical experiences (e.g., walking upright on a seemingly flat earth) can make it **difficult** for learners to understand concepts in astronomy and physics and so forth. Teachers can help students change their original conceptions by helping students make their thinking visible so that misconceptions can be corrected and so that students can be encouraged to think beyond the specific problem or to think about variations on the problem. One aspect of previous knowledge that is extremely important for understanding **learning** is cultural practices that support learners' prior knowledge. Effective teaching supports positive transfer by actively identifying the relevant knowledge and strengths that students bring to a **learning** situation and building on them.

Transfer from school to everyday environments is the ultimate purpose of school-based **learning**. An analysis of everyday environments provides opportunities to rethink school practices in order to bring them into alignment with the requirements of everyday environments. But it is important to avoid instruction that is overly dependent on context. Helping learners choose, adapt, and invent tools for solving problems is one way to facilitate transfer while also encouraging flexibility.

Finally, a metacognative approach to teaching can increase transfer by helping students learn about themselves as learners in the context of acquiring content knowledge. One characteristic of experts is an ability to monitor and regulate their own understanding in ways that allows them to keep **learning** adaptive expertise: this is an important model for students to emulate.

XI

How People Learn: Brain, Mind, Experience, and School

John D. Bransford,
Ann L. Brown, and
Rodney R. Cocking, *editors*

Committee on Developments in the Science of Learning

Commission on Behavioral and Social Sciences and Education

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In Memory of
Ann L. Brown
(1943- 1999)
Scholar and Scientist
Champion of Children and Those Who Teach Them
Whose Vision It Was to
Bring Learning Research
into the Classroom

Acknowledgments

How People Learn is the product of a 2-year project during which 16 individuals, as a committee, evaluated new developments in the science of learning. We had the good fortune of working with a number of people outside the committee who shared our enthusiasm for this project and we are indebted to the intellectual insights and support that they provided in a number of ways.

A good deal of the excitement that surrounded the project was due to people's seeing the relevance of basic science to education. In light of that connection, the committee held a workshop in fall 1996--"The Science of Science Learning"--to broaden its understanding of the influences that cognitive science has had on science and mathematics learning and teaching. We benefited greatly from the stimulating papers and discussions that grew out of that meeting, as have others who since have used the model of the workshop. We extend our thanks especially to the following people who presented papers and led discussions during the workshop: Susan Carey, Department of Psychology, New York University; Orville L. Chapman, Department of Chemistry, University of California, Los Angeles; Kevin Dunbar, Psychology Department, McGill University; Jill H. Larkin, Department of Psychology, Carnegie-Mellon University; Kevin Miller, Beckman Institute, University of Illinois; Edward F. Redish, Department of Physics and Astronomy, University of Maryland; Leona Schauble, Department of Educational Psychology, University of Wisconsin, Madison; Lee S. Shulman, Stanford University School of Education; Herbert A. Simon, Department of Psychology, Carnegie-Mellon University; and Philip Uri Treisman, Dana Center for Mathematics and Science Education, University of Texas, Austin.

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Although the project was an intellectually exciting undertaking for the committee, we were also mindful of the important role of our sponsor. The Office of Educational Research and Improvement of the U.S. Department of Education established the committee's charge to review the nation's investment in research and the challenge of determining how that investment can pay high returns. We thank Joseph Conaty, Judith Segal, and C. Kent McGuire for the support they provided to this committee in their individual and official capacities.

This report has been reviewed by individuals chosen for their diverse perspectives and technical expertise, in accordance with procedures approved by the Report Review Committee of the National Research Council (NRC). The purpose of this independent review is to provide candid and critical comments that will assist the authors and the NRC in making the published report as sound as possible and to ensure that the report meets institutional standards for objectivity, evidence, and responsiveness to the study charge. The content of the review comments and draft manuscript remain confidential to protect the integrity of the deliberative process.

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Finally, there are several NRC staff and others who made significant contributions to our work. Alexandra Wigdor, director of the Division of Education, Labor, and Human Performance, of the NRC's Commission on Behavioral and Social Sciences and Education (CBASSE), provided the initial impetus for this project and nurtured it in many different ways that were indispensable to its completion. Eugenia Grohman, associate director for reports of CBASSE, patiently worked with us through several drafts of the report and significantly improved the text. Key support in facilitating our work came from Jane Phillips, senior project assistant in CBASSE, with assistance from Neale Baxter; Susan M. Coke, division administrative associate; Faapio Poe, administrative assistant, Vanderbilt University; and Carol Cannon, administrative assistant, University of California, Berkeley. All of these "behind the scenes" people played critical roles, and to each of them we are very grateful.

Executive Summary

Learning is a basic, adaptive function of humans. More than any other species, people are designed to be flexible learners and active agents in acquiring knowledge and skills. Much of what people learn occurs without formal instruction, but highly systematic and organized information systems--reading, mathematics, the sciences, literature, and the history of a society--require formal training, usually in schools. Over time, science, mathematics, and history have posed new problems for learning because of their growing volume and increasing complexity. The value of the knowledge taught in school also began to be examined for its applicability to situations outside school.

Science now offers new conceptions of the learning process and the development of competent performance. Recent research provides a deep understanding of complex reasoning and performance on problem-solving tasks and how skill and understanding in key subjects are acquired. This book presents a contemporary account of principles of learning, and this summary provides an overview of the new science of learning.

FIVE THEMES THAT CHANGED CONCEPTIONS OF LEARNING

In the last 30 years, research has generated new conceptions of learning in five areas. As a result of the accumulation of new kinds of information about human learning, views of how effective learning proceeds have shifted from the benefits of diligent drill and practice to focus on students' understanding and application of knowledge.

1. ***Memory and structure of knowledge*** Memory has come to be understood as more than simple associations; evidence describes the structures that represent knowledge and meaning. Knowing how learners develop coherent structures of information has been particularly useful in understanding the nature of organized knowledge that underlies effective comprehension and thinking.

2. ***Analysis of problem solving and reasoning*** One of the most important influences on contemporary learning theory has been the basic research on expert learners. Learning theory can now account for how learners acquire skills to search a problem space and then use these general strategies in many problem-solving situations. There is a clear distinction between learned problem-solving skills in novice learners and the specialized expertise of individuals who have proficiency in particular subjects.

3. ***Early foundations*** The development of creative methodologies for assessing infants' responses in controlled research settings has done much to illuminate early learning. Scientific studies of infants and young children have revealed the relationships between children's learning predispositions and their emergent abilities to organize and coordinate information, make inferences, and discover strategies for problem solving. As a result, educators are rethinking the role of the skills and abilities children bring with them to school to take advantage of opportunities for learning in school.

4. ***Metacognitive processes and self-regulatory capabilities*** Individuals can be taught to regulate their behaviors, and these regulatory activities enable self-monitoring and executive control of one's performance. The activities include such strategies as predicting outcomes, planning ahead, apportioning one's time, explaining to one's self in order to improve understanding, noting failures to comprehend, and activating background knowledge.

5. ***Cultural experience and community participation*** Participation in social practice is a fundamental form of learning. Learning involves becoming attuned to the constraints and resources, the limits and possibilities, that are involved in the practices of the community. Learning is promoted by social norms that value the search for understanding. Early learning is assisted by the supportive context of the family and the social environment, through the kinds of activities in which adults engage with children. These activities have the effect of providing to toddlers the structure and interpretation of the culture's norms and rules, and these processes occur long before children enter school.

EXPERT PERFORMANCE

By definition, experts have developed particular ways to think and reason effectively. Understanding expertise is important because it provides insights into the nature of thinking and problem solving. It is not simply general abilities, such as memory or intelligence, nor the use of general strategies that differentiate experts from novices. Instead, experts have acquired extensive knowledge that affects what they notice and how they organize, represent, and interpret information in their environments. This, in turn, affects their abilities to remember, reason, and solve problems.

Key scientific findings have come from studies of people who have developed expertise in areas such as chess, physics, mathematics, electronics, and history. The examples are important *not* because all school children are expected to become experts in these or any other areas, but because the study of expertise shows what the results of successful learning look like.

Key conclusions:

- Experts notice features and meaningful patterns of information that are not noticed by novices.
- Experts have acquired a great deal of content knowledge that is organized, and their organization of information reflects a deep understanding of the subject matter.
- Experts' knowledge cannot be reduced to sets of isolated facts or propositions but, instead, reflects contexts of applicability, i.e., it is "conditionalized."
- Experts are able to retrieve important aspects of their knowledge with little attentional effort.
- Though experts know their disciplines thoroughly, this does not guarantee that they are able to instruct others about the topic.

- Experts have varying levels of flexibility in their approaches to new situations.

TRANSFER OF LEARNING

Another aspect of *effective* learning is its durability--does the learning have long-term impact in the ways it influences other kinds of learning or performance? Research studies on the concept of transfer of learning comprise a vast literature that can be synthesized into the new science of learning.

Key conclusions:

- Skills and knowledge must be extended beyond the narrow contexts in which they are initially learned. For example, knowing how to solve a math problem in school may not transfer to solving math problems in other contexts.
- It is essential for a learner to develop a sense of *when* what has been learned can be used--the conditions of application. Failure to transfer is often due to learners' lack of this type of conditional knowledge.
- Learning must be guided by generalized principles in order to be widely applicable. Knowledge learned at the level of rote memory rarely transfers; transfer most likely occurs when the learner knows and understands underlying principles that can be applied to problems in new contexts.
- Learners are helped in their independent learning attempts if they have conceptual knowledge. Studies of children's concept formation and conceptual development show the role of learners' mental representations of problems, including how one problem is similar *and* different from others and understanding the part-whole relationships of the components in the overall structure of a problem.
- Learners are most successful if they are mindful of themselves as learners and thinkers. A learner's self-awareness as a learner and the role of appraisal strategies keep learning on target or help keep the learner asking if s/he understands. Learners can become independent learners who are capable of sustaining their own learning--in essence, this is how human beings become life-long learners.

CHILDREN AS LEARNERS

While there are remarkable commonalties across learners of all ages, children differ from adult learners in many ways. Studies of young children offer a window into the development of learning, and they show a dynamic picture of learning as it unfolds over time. A fresh understanding of infant cognition and of how young children build on early learning predispositions also offers ideas on ways to ease their transition into formal school settings.

Key findings:

- Humans have a predisposition to learn in certain domains, and young children actively engage in making sense of their worlds. In particular domains, such as biological and physical causality, number, and language, infants and young

children have strong predispositions to learn rapidly and readily. These biases toward learning support and may make early learning possible and pave the way for competence in early schooling.

- Children lack knowledge and experience, but not reasoning ability. Although young children are inexperienced, they reason facilely with the knowledge they have.
- Precocious knowledge may jump-start the learning process, but because of limited experience and undeveloped systems for logical thinking, children's knowledge contains misconceptions. Misinformation can impede school learning, so teachers need to be aware of the ways in which children's background knowledge influences what they understand. Such awareness on the part of teachers will help them anticipate children's confusion and recognize why the children have difficulties grasping new ideas.
- Strategies for learning are important. Children can learn practically anything by sheer will and effort, but when required to learn about non-privileged domains, they need to develop strategies of intentional learning.
- Children need to understand what it means to learn, who they are as learners, and how to go about planning, monitoring, and revising, to reflect upon their learning and that of others, and to learn to determine for themselves if they understand. These skills of metacognition provide strategic competencies for learning.
- Children are both problem solvers and problem generators. They attempt to solve problems presented to them, and they seek novel challenges. They refine and improve their problem-solving strategies in the face of failure and often build on prior successes. They persist because success and understanding are motivating in their own right.
- Adults help children make connections between new situations and familiar ones. Children's curiosity and persistence are supported by adults who direct children's attention, structure experiences, support learning attempts, and regulate the complexity and difficulty levels of information for children.

Children, thus, exhibit capacities that are shaped by environmental experiences and the individuals who care for them. Developmental processes involve interactions between children's early competencies and the environmental supports--strengthening relevant capacities and pruning the early abilities that are less relevant to the child's community. Learning is promoted and regulated by both the biology and ecology of the child; learning *produces* development.

COLLATERAL DEVELOPMENT OF MIND AND BRAIN

Advances in neuroscience are confirming many theoretical hypotheses, including the important role of early experience in development. What is new, and therefore important for a new science of learning, is the *convergence* of evidence from a number of scientific fields. As developmental psychology, cognitive psychology, and neuroscience, to name but three, have contributed vast numbers of research studies, details about learning and development have converged to form a more complete picture of how intellectual development occurs. Clarification of some of the mechanisms of learning by

neuroscience advanced with the advent of non-invasive imaging technologies, such as positron emission tomography (PET) and functional magnetic resonance imaging (fMRI). These technologies enabled researchers to observe directly functions of human learning.

The key finding is the importance of experience in building the structure of the mind by modifying the structures of the brain: development is not solely the unfolding of preprogrammed patterns. Some of the rules that govern learning are now known. One of the simplest rules is that practice increases learning and there is a corresponding relationship between the amount of experience in a complex environment and the amount of structural change in the brain.

Key conclusions:

- Learning changes the physical structure of the brain.
- Structural changes alter the functional organization of the brain; in other words, learning organizes and reorganizes the brain.
- Different parts of the brain may be ready to learn at different times.

DESIGNS FOR LEARNING ENVIRONMENTS

Theoretical physics does not prescribe the design of a bridge, but surely it constrains the design of successful ones. Similarly, learning theory provides no simple recipe for designing effective learning environments, but it constrains the design of effective ones. New research raises important questions about the design of learning environments--questions that suggest the value of rethinking what is taught, how it is taught, and how it is assessed.

A fundamental tenet of modern learning theory is that different kinds of learning goals require different approaches to instruction; new goals for education require changes in opportunities to learn. The design of learning environments is linked to issues that are especially important in the processes of learning, transfer, and competent performance. Those processes, in turn, are affected by the degree to which learning environments are student centered, knowledge centered, assessment centered, and community centered.

Key conclusions:

- ***Learner-centered environments*** Effective instruction begins with what learners bring to the setting; this includes cultural practices and beliefs, as well as knowledge of academic content. A focus on the degree to which environments are learner centered is consistent with the evidence showing that learners use their current knowledge to construct new knowledge and that what they know and believe at the moment affects how they interpret new information. Sometimes learners' current knowledge supports new learning; sometimes it hampers learning.

People may have acquired knowledge yet fail to activate it in a particular setting. Learner-centered environments attempt to help students make connections between their previous knowledge and their current academic tasks. Parents are especially good at helping their children make connections. Teachers have a harder time because they do not share the life experiences of all of their students, so they have to become familiar with each student's special interests and strengths.

- ***Knowledge-centered environments*** The ability to think and solve problems requires knowledge that is accessible and applied appropriately. An emphasis on knowledge-centered instruction raises a number of questions, such as the degree to which instruction focuses on ways to help students use their current knowledge and skills. New knowledge about early learning suggests that young students are capable of grasping more complex concepts than was believed previously. However, these concepts must be presented in ways that are developmentally appropriate by linking learning to their current understanding. A knowledge-centered perspective on learning environments highlights the importance of thinking about designs for curricula. To what extent do they help students learn with understanding versus promote the acquisition of disconnected sets of facts and skills? Curricula that are a "mile wide and an inch deep" run the risk of developing disconnected rather than connected knowledge.
- ***Assessment to support learning*** Issues of assessment also represent an important perspective for viewing the design of learning environments. Feedback is fundamental to learning, but feedback opportunities are often scarce in classrooms. Students may receive grades on tests and essays, but these are summative assessments that occur at the end of projects. What are needed are formative assessments, which provide students with opportunities to revise and improve the quality of their thinking and understanding. Assessments must reflect the learning goals that define various environments. If the goal is to enhance understanding and applicability of knowledge, it is not sufficient to provide assessments that focus primarily on memory for facts and formulas.
- ***Community-centered environments*** The fourth, important perspective on learning environments is the degree to which they promote a sense of community. Students, teachers, and other interested participants share norms that value learning and high standards. Norms such as these increase people's opportunities and motivation to interact, receive feedback, and learn. The importance of connected communities becomes clear when one examines the relatively small amount of time spent in school compared to other settings. Activities in homes, community centers, and after-school clubs can have important effects on students' academic achievement.

EFFECTIVE TEACHING

Expertise of any kind involves more than a set of general problem-solving skills; it also requires well-organized knowledge of concepts and inquiry procedures. Various disciplines are organized differently and have their own methods of inquiry. For example, the evidence needed to support a set of historical claims is different from the evidence

needed to prove a mathematical conjecture, and both of these differ from the evidence needed to test a scientific theory.

Key conclusions:

- Effective teachers need "pedagogical content knowledge"--knowledge about how to teach in particular disciplines, which is different from knowledge of general teaching methods.
- Expert teachers know the structure of their disciplines and this provides them with cognitive roadmaps that guide the assignments they give students, the assessments they use to gauge student progress, and the questions they ask in the give and take of classroom life.

In short, teachers' knowledge of the discipline and their knowledge of pedagogy interact. But knowledge of the discipline structure does not in itself guide a teacher. Expert teachers are sensitive to those aspects of the discipline that are especially hard and easy for new students to master. An emphasis on interactions between disciplinary knowledge and pedagogical knowledge directly contradicts a common misconception about what teachers need to know in order to design effective learning environments for their students. The misconception is that teaching consists only of a set of general methods, that a good teacher can teach any subject, and that content knowledge alone is sufficient.

Teacher learning is relatively new as a research topic, so there is limited information about it. Nevertheless, the research that exists, generally in the form of rich case studies, provides important information about what kinds of learning opportunities teachers need in order to change their practices.

Key findings:

- Opportunities for teachers to continue their learning fall short when viewed from the perspective of being learner, knowledge, assessment, and community centered. Preservice programs often fail to provide the kinds of learning experiences that lead to learning for understanding or teaching for understanding.
- Successful learning for teachers requires a continuum of coordinated efforts that range from preservice education to early mentored teaching to opportunities for lifelong development as professionals. Creating such opportunities represents a major challenge.

NEW TECHNOLOGIES

A number of the features of new technologies are consistent with the principles of a new science of learning.

Key conclusions:

- Because many new technologies are interactive, it is now easier to create environments in which students can learn by doing, receive feedback, and continually refine their understanding and build new knowledge.
- Technologies can help people visualize difficult-to-understand concepts, such as differentiating heat from temperature. Students are able to work with visualization and modeling software similar to the tools used in nonschool environments to increase their conceptual understanding and the likelihood of transfer from school to nonschool settings.
- New technologies provide access to a vast array of information, including digital libraries, real-world data for analysis, and connections to other people who provide information, feedback, and inspiration, all of which can enhance the learning of teachers and administrators as well as students.

There are many ways that technology can be used to help create such environments, both for teachers and for the students whom they teach. However, many issues arise in considering how to educate teachers to use new technologies effectively. What do they need to know about learning processes? About the technology? What kinds of training are most effective for helping teachers use high-quality instructional programs? What is the best way to use technology to facilitate teacher learning? Good educational software and teacher-support tools, developed with full understanding of principles of learning, have not yet become the norm.

RESEARCH FOR THE FUTURE

It will take time and effort to communicate the new approaches to learning and teaching throughout the very decentralized U.S. education system. We suggest a number of ways to begin the process through a research agenda that follows from our conclusions. The research will have greatest potential for impact in education if it is implemented as a program of research, making educational research an integrative science.

The Research Foundations of the Learning Sciences

- The committee recommends a commitment to basic research programs in cognition, learning, and teaching.

Our report has shown the payoff from investing in research on such topics as the foundational role of learners' prior knowledge in acquiring new information; plasticity and adaptability of learning; the importance of social and cultural contexts in learning; understanding the conditions of transfer of learning; how the organizational structure of a discipline affects learning; how time, familiarity, and exploration impact fluency in learning; and many other topics. While these areas have produced an impressive body of research findings, the research needs to be continued. The framework has been constructed from the earlier research; details now need to be provided in order to advance the science of learning by refining the principles.

- The committee recommends establishing new research programs in emerging areas, including technology, neurocognition, and sociocultural factors that mediate learning. Research is needed on the interrelations between learning and learning environments and between teaching and learning.

This research will build on current findings in areas such as how children learn to apply their competencies as they encounter new information; how early competencies relate to later school learning; the conditions and experiences that support knowledge scaffolding; and how representational systems are challenged by new tools of technology, such as visual cognition and other types of symbolic thinking.

- The committee recommends new assessment research to focus on improving and implementing formative assessment.

Teachers need a variety of supports and learning opportunities for making their classrooms assessment centered in ways that support learning. Research questions that remain to be addressed include: How does a teacher use assessment? What skills do teachers need in order to be able to use formative assessments in ways that will improve their teaching? What kinds of supports do teachers need for learning and adopting innovative assessment processes?

The Foundations for Science Learning

The committee held a workshop on children's cognitive development and the ways in which cognitive science research has influenced science instruction in recent years. The workshop explored ways in which new research findings can facilitate new directions in areas of science and mathematics learning.

Key questions:

- How does the field "scale up" successful demonstrations of research-based curricula so that they can be implemented in many diverse settings under the guidance of many different kinds of teachers?
- Which factors influence the conversion of research knowledge into effective instructional methods in real settings?
- Do strategies that work for science education also work to improve instruction in other subject areas?
- How can preschool children be assisted in developing representational structures so that there are bridges, rather than gaps, between early and later school learning?
- How can collaborative learning environments be organized in ways that counteract societal stereotypes and tap diversity as a positive resource for learning?
- Which kinds of assessments can effectively measure new kinds of science learning?

- How do the features of a constructivist curriculum interact with other social factors in classrooms?
- What is the impact of new technologies on school performance?

Methodologies of the Learning Sciences

The research areas relevant to the science of learning are demonstratively broad, including cognitive development, cognitive science, developmental psychology, neuroscience, anthropology, social psychology, sociology, cross-cultural research, research on learning in subject areas such as science, mathematics, history, and research on effective teaching, pedagogy, and the design of learning environments. New technologies are needed for assessing learning in ways that track the growth of learning, not just the cumulation of facts. Developing effective research methodologies is particularly important for research from this diverse array of disciplines.

- The committee recommends that government agencies and research foundations develop initiatives and mechanisms of support specifically aimed at strengthening the methodological underpinnings of learning sciences. Such mechanisms should include cross-field collaborations, internships, visiting scholar programs, training junior scholars in interdisciplinary approaches, and other procedures to foster collaborations for learning and developing new methodologies that can lead to more rigorous investigations in the science of learning.
- The committee recommends research aimed at developing and standardizing new measures and methods. Studies should be conducted and validated with diverse populations. New statistical techniques should be developed for analyzing the complex systems of learning. New qualitative measurement techniques need to be developed.
- The committee recommends new research that is focused on ways to integrate qualitative and quantitative methods across the learning sciences.

Collaborations in the Science of Learning

This book emphasizes the breadth of knowledge areas that affect learners and the significant advances that have been the direct result of collaborative research efforts across disciplines. That kind of collaboration is critical to further development of the learning sciences.

- The committee recommends that government agencies and research foundations explicitly support a wide variety of interdisciplinary collaborations in the learning sciences. Such work should include teachers.

The field of learning research needs to become more integrated in focus and draw together relevant fields for interdisciplinary collaborations. To this end, mechanisms are needed to prepare a new generation of learning scientists by supporting interdisciplinary training for students and scientists to work together. It is important to expand the research scope so that basic researchers and educational researchers can work together on basic

and applied issues and to facilitate ways for teachers and researchers to work together. Fields such as neuroscience and cognitive science have made important advances through their joint efforts, but researchers had to learn the methodologies and techniques of each discipline before new research studies could be conducted. Efforts are now needed to direct training programs in order to foster such interdisciplinary learning.

- The committee recommends establishing national databases to encourage collaboration.

To capitalize on the new developments in information systems, research scientists of varying disciplines should be linked together, and teachers should be included in these virtual dialogues. In addition to electronic linkages through websites, scientists should begin to share databases with one another and work with national databases that they can access electronically.

Databases that link physics researchers with classroom physics educators, for example, have the potential to bring the two sectors closer to the core issues of the field. Basic researchers often have a poor understanding of why learners fail to grasp basic concepts of the field; teachers often fail to see relationships of core concepts that, if better understood from the standpoint of theory, could facilitate their teaching. National databases can foster interdisciplinary collaboration and uses of cross-disciplinary data, promote broader exploration of testable questions across datasets, increase the quality of data by maintaining accurate and uniform records, and promote cost-effectiveness through the sharing of research data. Furthermore, national databases that are built from representative samples of the changing school population have the potential of broadening the scope and power of research findings.

Technology Research to Enhance Learning

Because many computer-based technologies are relatively new to classrooms, basic premises about learning with these tools need to be examined with respect to the principles of learning.

- The committee recommends extensive evaluation research be conducted through both small-scale studies and large-scale evaluations to determine the goals, assumptions, and uses of technologies in classrooms and the match or mismatch of these uses with the principles of learning and the transfer of learning.

Teachers' Professional Development

Much of what constitutes the typical approach to formal teacher professional development is antithetical to what promotes teacher learning.

- The committee recommends research to explain how people learn to be effective teachers.

Research studies are needed to determine the efficacy of various types of professional development activities, including preservice and inservice seminars, workshops, and summer institutes. Studies should include professional activities that are extended over time and across broad teacher learning communities in order to identify the processes and mechanisms that contribute to the development of teachers' learning communities.

1

Learning: From Speculation to Science

The essence of matter, the origins of the universe, the nature of the human mind--these are the profound questions that have engaged thinkers through the centuries. Until quite recently, understanding the mind--and the thinking and learning that the mind makes possible--has remained an elusive quest, in part because of a lack of powerful research tools. Today, the world is in the midst of an extraordinary outpouring of scientific work on the mind and brain, on the processes of thinking and learning, on the neural processes that occur during thought and learning, and on the development of competence.

The revolution in the study of the mind that has occurred in the last three or four decades has important implications for education. As we illustrate, a new theory of learning is coming into focus that leads to very different approaches to the design of curriculum, teaching, and assessment than those often found in schools today. Equally important, the growth of interdisciplinary inquiries and new kinds of scientific collaborations have begun to make the path from basic research to educational practice somewhat more visible, if not yet easy to travel. Thirty years ago, educators paid little attention to the work of cognitive scientists, and researchers in the nascent field of cognitive science worked far removed from classrooms. Today, cognitive researchers are spending more time working with teachers, testing and refining their theories in real classrooms where they can see how different settings and classroom interactions influence applications of their theories.

What is perhaps currently most striking is the variety of research approaches and techniques that have been developed and ways in which evidence from many different branches of science are beginning to converge. The story we can now tell about learning is far richer than ever before, and it promises to evolve dramatically in the next generation. For example:

- Research from cognitive psychology has increased understanding of the nature of competent performance and the principles of knowledge organization that underlie people's abilities to solve problems in a wide variety of areas, including mathematics, science, literature, social studies, and history.
- Developmental researchers have shown that young children understand a great deal about basic principles of biology and physical causality, about number, narrative, and personal intent, and that these capabilities make it possible to create innovative curricula that introduce important concepts for advanced reasoning at early ages.
- Research on learning and transfer has uncovered important principles for structuring learning experiences that enable people to use what they have learned in new settings.
- Work in social psychology, cognitive psychology, and anthropology is making clear that all learning takes place in settings that have particular sets of cultural and social norms and expectations and that these settings influence learning and transfer in powerful ways.

- Neuroscience is beginning to provide evidence for many principles of learning that have emerged from laboratory research, and it is showing how learning changes the physical structure of the brain and, with it, the functional organization of the brain.
- Collaborative studies of the design and evaluation of learning environments, among cognitive and developmental psychologists and educators, are yielding new knowledge about the nature of learning and teaching as it takes place in a variety of settings. In addition, researchers are discovering ways to learn from the "wisdom of practice" that comes from successful teachers who can share their expertise.
- Emerging technologies are leading to the development of many new opportunities to guide and enhance learning that were unimagined even a few years ago.

All of these developments in the study of learning have led to an era of new relevance of science to practice. In short, investment in basic research is paying off in practical applications. These developments in understanding of how humans learn have particular significance in light of changes in what is expected of the nation's educational systems.

In the early part of the twentieth century, education focused on the acquisition of literacy skills: simple reading, writing, and calculating. It was not the general rule for educational systems to train people to think and read critically, to express themselves clearly and persuasively, to solve complex problems in science and mathematics. Now, at the end of the century, these aspects of high literacy are required of almost everyone in order to successfully negotiate the complexities of contemporary life. The skill demands for work have increased dramatically, as has the need for organizations and workers to change in response to competitive workplace pressures. Thoughtful participation in the democratic process has also become increasingly complicated as the locus of attention has shifted from local to national and global concerns.

Above all, information and knowledge are growing at a far more rapid rate than ever before in the history of humankind. As Nobel laureate Herbert Simon wisely stated, the meaning of "knowing" has shifted from being able to remember and repeat information to being able to find and use it (Simon, 1996). More than ever, the sheer magnitude of human knowledge renders its coverage by education an impossibility; rather, the goal of education is better conceived as helping students develop the intellectual tools and learning strategies needed to acquire the knowledge that allows people to think productively about history, science and technology, social phenomena, mathematics, and the arts. Fundamental understanding about subjects, including how to frame and ask meaningful questions about various subject areas, contributes to individuals' more basic understanding of principles of learning that can assist them in becoming self-sustaining, lifelong learners.

FOCUS: PEOPLE, SCHOOLS, AND THE POTENTIAL TO LEARN

The scientific literatures on cognition, learning, development, culture, and brain are voluminous. Three organizing decisions, made fairly early in the work of the committee, provided the framework for our study and are reflected in the contents of this book.

- First, we focus primarily on research on human learning (though the study of animal learning provides important collateral information), including new developments from neuroscience.

- Second, we focus especially on learning research that has implications for the design of formal instructional environments, primarily preschools, kindergarten through high schools (K-12), and colleges.
- Third, and related to the second point, we focus on research that helps explore the possibility of helping all individuals achieve their fullest potential.

New ideas about ways to facilitate learning--and about who is most capable of learning--can powerfully affect the quality of people's lives. At different points in history, scholars have worried that formal educational environments have been better at selecting talent than developing it (see, e.g., Bloom, 1964). Many people who had difficulty in school might have prospered if the new ideas about effective instructional practices had been available. Furthermore, given new instructional practices, even those who did well in traditional educational environments might have developed skills, knowledge, and attitudes that would have significantly enhanced their achievements.

Learning research suggests that there are new ways to introduce students to traditional subjects, such as mathematics, science, history and literature, and that these new approaches make it possible for the majority of individuals to develop a deep understanding of important subject matter. This committee is especially interested in theories and data that are relevant to the development of new ways to introduce students to such traditional subjects as mathematics, science, history, and literature. There is hope that new approaches can make it possible for a majority of individuals to develop a moderate to deep understanding of important subjects.

DEVELOPMENT OF THE SCIENCE OF LEARNING

This report builds on research that began in the latter part of the nineteenth century--the time in history at which systematic attempts were made to study the human mind through scientific methods. Before then, such study was the province of philosophy and theology. Some of the most influential early work was done in Leipzig in the laboratory of Wilhelm Wundt, who with his colleagues tried to subject human consciousness to precise analysis--mainly by asking subjects to reflect on their thought processes through introspection.

By the turn of the century, a new school of behaviorism was emerging. In reaction to the subjectivity inherent in introspection, behaviorists held that the scientific study of psychology must restrict itself to the study of observable behaviors and the stimulus conditions that control them. An extremely influential article, published by John B. Watson in 1913, provides a glimpse of the behaviorist credo:

> . . . all schools of psychology except that of behaviorism claim that "consciousness" is the subject-matter of psychology. Behaviorism, on the contrary, holds that the subject matter of human psychology is the behavior or activities of the human being. Behaviorism claims that "consciousness" is neither a definable nor a useable concept; that it is merely another word for the "soul" of more ancient times. The old psychology is thus dominated by a kind of subtle religious philosophy (p. 1).

Drawing on the empiricist tradition, behaviorists conceptualized learning as a process of forming connections between stimuli and responses. Motivation to learn was assumed to be driven primarily by drives, such as hunger, and the availability of external forces, such as rewards and punishments (e.g., Thorndike, 1913; Skinner, 1950).

In a classic behaviorist study by Edward L. Thorndike (1913), hungry cats had to learn to pull a string hanging in a "puzzle box" in order for a door to open that let them escape and get

food. What was involved in learning to escape in this manner? Thorndike concluded that the cats did not think about how to escape and then do it; instead, they engaged in trial-and-error behavior; see Box 1.1. Sometimes a cat in the puzzle box accidentally pulled the strings while playing and the door opened, allowing the cat to escape. But this event did not appear to produce an insight on the part of the cat because, when placed in the puzzle box again, the cat did not immediately pull the string to escape. Instead, it took a number of trials for the cats to learn through trial and error. Thorndike argued that rewards (e.g., food) increased the strength of connections between stimuli and responses. The explanation of what appeared to be complex problem-solving phenomena as escaping from a complicated puzzle box could thus be explained without recourse to unobservable mental events, such as thinking.

A limitation of early behaviorism stemmed from its focus on observable stimulus conditions and the behaviors associated with those conditions. This orientation made it difficult to study such phenomena as understanding, reasoning, and thinking--phenomena that are of paramount importance for education. Over time, radical behaviorism (often called "Behaviorism with a Capital B") gave way to a more moderate form of behaviorism ("behaviorism with a small b") that preserved the scientific rigor of using behavior as data, but also allowed hypotheses about internal "mental" states when these became necessary to explain various phenomena (e.g., Hull, 1943; Spence, 1942).

In the late 1950s, the complexity of understanding humans and their environments became increasingly apparent, and a new field emerged--cognitive science. From its inception, cognitive science approached learning from a multidisciplinary perspective that included anthropology, linguistics, philosophy, developmental psychology, computer science, neuroscience, and several branches of psychology (Norman, 1980,1993; Newell and Simon, 1972). New experimental tools, methodologies, and ways of postulating theories made it possible for scientists to begin serious study of mental functioning: to test their theories rather than simply speculate about thinking and learning (see, e.g., Anderson, 1982, 1987; deGroot, 1965,1969; Newell and Simon, 1972; Ericsson and Charness, 1994), and, in recent years, to develop insights into the importance of the social and cultural contexts of learning (e.g., Cole, 1996; Lave, 1988; Lave and Wenger, 1991; Rogoff, 1990; Rogoff et al., 1993). The introduction of rigorous qualitative research methodologies have provided perspectives on learning that complement and enrich the experimental research traditions (Erickson, 1986; Hammersly and Atkinson, 1983; Heath, 1982; Lincoln and Guba, 1985; Marshall and Rossman, 1955; Miles and Huberman, 1984; Spradley, 1979).

Learning with Understanding

One of the hallmarks of the new science of learning is its emphasis on learning with understanding. Intuitively, understanding is good, but it has been difficult to study from a scientific perspective. At the same time, students often have limited opportunities to understand or make sense of topics because many curricula have emphasized memory rather than understanding. Textbooks are filled with facts that students are expected to memorize, and most tests assess students' abilities to remember the facts. When studying about veins and arteries, for example, students may be expected to remember that arteries are thicker than veins, more elastic, and carry blood from the heart; veins carry blood back to the heart. A test item for this information may look like the following:

1. Arteries
    a. Are more elastic than veins
    b. Carry blood that is pumped from the heart
    c. Are less elastic than veins

d. Both a and b
e. Both b and c

The new science of learning does not deny that facts are important for thinking and problem solving. Research on expertise in areas such as chess, history, science, and mathematics demonstrate that experts' abilities to think and solve problems depend strongly on a rich body of knowledge about subject matter (e.g., Chase and Simon, 1973; Chi et al., 1981; deGroot, 1965). However, the research also shows clearly that "usable knowledge" is not the same as a mere list of disconnected facts. Experts' knowledge is connected and organized around important concepts (e.g., Newton's second law of motion); it is "conditionalized" to specify the contexts in which it is applicable; it supports understanding and transfer (to other contexts) rather than only the ability to remember.

For example, people who are knowledgeable about veins and arteries know more than the facts noted above: they also understand why veins and arteries have particular properties. They know that blood pumped from the heart exits in spurts and that the elasticity of the arteries helps accommodate pressure changes. They know that blood from the heart needs to move upward (to the brain) as well as downward and that the elasticity of an artery permits it to function as a one-way valve that closes at the end of each spurt and prevents the blood from flowing backward. Because they understand relationships between the structure and function of veins and arteries, knowledgeable individuals are more likely to be able to use what they have learned to solve novel problems--to show evidence of transfer. For example, imagine being asked to design an artificial artery--would it have to be elastic? Why or why not? An understanding of reasons for the properties of arteries suggests that elasticity may not be necessary--perhaps the problem can be solved by creating a conduit that is strong enough to handle the pressure of spurts from the heart and also function as a one-way valve. An understanding of veins and arteries does not guarantee an answer to this design question, but it does support thinking about alternatives that are not readily available if one only memorizes facts (Bransford and Stein, 1993).

Pre-Existing Knowledge

An emphasis on understanding leads to one of the primary characteristics of the new science of learning: its focus on the processes of knowing (e.g., Piaget, 1978; Vygotsky, 1978). Humans are viewed as goal-directed agents who actively seek information. They come to formal education with a range of prior knowledge, skills, beliefs, and concepts that significantly influence what they notice about the environment and how they organize and interpret it. This, in turn, affects their abilities to remember, reason, solve problems, and acquire new knowledge.

Even young infants are active learners who bring a point of view to the learning setting. The world they enter is not a "booming, buzzing confusion" (James, 1890), where every stimulus is equally salient. Instead, an infant's brain gives precedence to certain kinds of information: language, basic concepts of number, physical properties, and the movement of animate and inanimate objects. In the most general sense, the contemporary view of learning is that people construct new knowledge and understandings based on what they already know

and believe (e.g., Cobb, 1994; Piaget, 1952, 1973a,b, 1977, 1978; Vygotsky, 1962, 1978). A classic children's book illustrates this point; see Box 1.2.

A logical extension of the view that new knowledge must be constructed from existing knowledge is that teachers need to pay attention to the incomplete understandings, the false beliefs, and the naive renditions of concepts that learners bring with them to a given subject. Teachers then need to build on these ideas in ways that help each student achieve a more mature understanding. If students' initial ideas and beliefs are ignored, the understandings that they develop can be very different from what the teacher intends.

Consider the challenge of working with children who believe that the earth is flat and attempting to help them understand that it is spherical. When told it is round, children picture the earth as a pancake rather than as a sphere (Vosniadou and Brewer, 1989). If they are then told that it is round like a sphere, they interpret the new information about a spherical earth within their flat-earth view by picturing a pancake-like flat surface inside or on top of a sphere, with humans standing on top of the pancake. The children's construction of their new understandings has been guided by a model of the earth that helped them explain how they could stand or walk upon its surface, and a spherical earth did not fit their mental model. Like *Fish Is Fish*, everything the children heard was incorporated into that pre-existing view.

Fish Is Fish is relevant not only for young children, but for learners of all ages. For example, college students often have developed beliefs about physical and biological phenomena that fit their experiences but do not fit scientific accounts of these phenomena. These preconceptions must be addressed in order for them to change their beliefs (e.g., Confrey, 1990; Mestre, 1994; Minstrell, 1989; Redish, 1996).

A common misconception regarding "constructivist" theories of knowing (that existing knowledge is used to build new knowledge) is that teachers should never tell students anything directly but, instead, should always allow them to construct knowledge for themselves. This perspective confuses a theory of pedagogy (teaching) with a theory of knowing. Constructivists assume that all knowledge is constructed from previous knowledge, irrespective of how one is taught (e.g., Cobb, 1994)--even listening to a lecture involves active attempts to construct new knowledge. *Fish Is Fish* (Lionni, 1970) and attempts to teach children that the earth is round (Vosniadou and Brewer, 1989) show why simply providing lectures frequently does not work. Nevertheless, there are times, usually after people have first grappled with issues on their own, that "teaching by telling" can work extremely well (e.g., Schwartz and Bransford, in press). However, teachers still need to pay attention to students' interpretations and provide guidance when necessary.

There is a good deal of evidence that learning is enhanced when teachers pay attention to the knowledge and beliefs that learners bring to a learning task, use this knowledge as a starting point for new instruction, and monitor students' changing conceptions as instruction proceeds. For example, sixth graders in a suburban school who were given inquiry-based physics instruction were shown to do better on conceptual physics problems than eleventh and twelfth grade physics students taught by conventional methods in the same school system. A second study comparing seventh-ninth grade urban students with the eleventh and twelfth grade suburban physics students again showed that the younger students, taught by the inquiry-based approach, had a better grasp of the fundamental principles of physics (White and Frederickson, 1997, 1998). New curricula for young children have also demonstrated results that are extremely promising: for example, a new approach to teaching geometry helped second-grade children learn to represent and visualize three-dimensional forms in ways that exceeded the skills of a comparison group of undergraduate students at a leading university (Lehrer and Chazan, 1998). Similarly, young children have been taught to

demonstrate powerful forms of early geometry generalizations (Lehrer and Chazan, 1998) and generalizations about science (Schauble et al., 1995; Warren and Rosebery, 1996).

Active Learning

New developments in the science of learning also emphasize the importance of helping people take control of their own learning. Since understanding is viewed as important, people must learn to recognize when they understand and when they need more information. What strategies might they use to assess whether they understand someone else's meaning? What kinds of evidence do they need in order to believe particular claims? How can they build their own theories of phenomena and test them effectively?

Many important activities that support active learning have been studied under the heading of "metacognition," a topic discussed in more detail in Chapters 2 and 3. Metacognition refers to people's abilities to predict their performances on various tasks (e.g., how well they will be able to remember various stimuli) and to monitor their current levels of mastery and understanding (e.g., Brown, 1975; Flavell, 1973). Teaching practices congruent with a metacognitive approach to learning include those that focus on sense-making, self-assessment, and reflection on what worked and what needs improving. These practices have been shown to increase the degree to which students transfer their learning to new settings and events (e.g., Palincsar and Brown, 1984; Scardamalia et al., 1984; Schoenfeld, 1983, 1985, 1991).

Imagine three teachers whose practices affect whether students learn to take control of their own learning (Scardamalia and Bereiter, 1991). Teacher A's goal is to get the students to produce work; this is accomplished by supervising and overseeing the quantity and quality of the work done by the students. The focus is on activities, which could be anything from old-style workbook activities to the trendiest of space-age projects. Teacher B assumes responsibility for what the students are learning as they carry out their activities. Teacher C does this as well, but with the added objective of continually turning more of the learning process over to the students. Walking into a classroom, you cannot immediately tell these three kinds of teachers apart. One of the things you might see is the students working in groups to produce videos or multimedia presentations. The teacher is likely to be found going from group to group, checking how things are going and responding to requests. Over the course of a few days, however, differences between Teacher A and Teacher B would become evident. Teacher A's focus is entirely on the production process and its products--whether the students are engaged, whether everyone is getting fair treatment, and whether they are turning out good pieces of work. Teacher B attends to all of this as well, but Teacher B is also attending to what the students are learning from the experience and is taking steps to ensure that the students are processing content and not just dealing with show. To see a difference between Teachers B and C, however, you might need to go back into the history of the media production project. What brought it about in the first place? Was it conceived from the start as a learning activity, or did it emerge from the students' own knowledge building efforts? In one striking example of a Teacher C classroom, the students had been studying cockroaches and had learned so much from their reading and observation that they wanted to share it with the rest of the school; the production of a video came about to achieve that purpose (Lamon et al., 1997).

The differences in what might seem to be the same learning activity are thus quite profound. In Teacher A's classroom, the students are learning something of media production, but the media production may very well be getting in the way of learning anything else. In Teacher B's classroom, the teacher is working to ensure that the original educational purposes of the activity are met, that it does not deteriorate into a mere media production exercise. In Teacher C's classroom, the media production is continuous with and a direct outgrowth of the

learning that is embodied in the media production. The greater part of Teacher C's work has been done before the idea of a media production even comes up, and it remains only to help the students keep sight of their purposes as they carry out the project.

These hypothetical teachers--A, B, and C--are abstract models that of course fit real teachers only partly, and more on some days than others. Nevertheless, they provide important glimpses of connections between goals for learning and teaching practices that can affect students' abilities to accomplish these goals.

Implications for Education

Overall, the new science of learning is beginning to provide knowledge to improve significantly people's abilities to become active learners who seek to understand complex subject matter and are better prepared to transfer what they have learned to new problems and settings. Making this happen is a major challenge (e.g., Elmore et al., 1996), but it is not impossible. The emerging science of learning underscores the importance of rethinking what is taught, how it is taught, and how learning is assessed. These ideas are developed throughout this report.

An Evolving Science

This volume synthesizes the scientific basis of learning. The scientific achievements include a fuller understanding of: (1) memory and the structure of knowledge; (2) problem solving and reasoning; (3) the early foundations of learning; (4) regulatory processes that govern learning, including metacognition; and (5) how symbolic thinking emerges from the culture and community of the learner.

These key characteristics of learned proficiency by no means plumb the depths of human cognition and learning. What has been learned about the principles that guide some aspects of learning do not constitute a complete picture of the principles that govern all domains of learning. The scientific bases, while not superficial in themselves, do represent only a surface level of a complete understanding of the subject. Only a few domains of learning have been examined in depth, as reflected in this book, and new, emergent areas, such as interactive technologies (Greenfield and Cocking, 1996) are challenging generalizations from older research studies.

As scientists continue to study learning, new research procedures and methodologies are emerging that are likely to alter current theoretical conceptions of learning, such as computational modeling research. The scientific work encompasses a broad range of cognitive and neuroscience issues in learning, memory, language, and cognitive development. Studies of parallel distributed processing, for example (McClelland et al., 1995; Plaut et al., 1996; Munakata et al., 1997; McClelland and Chappell, 1998) look at learning as occurring through the adaptation of connections among participating neurons. The research is designed to develop explicit computational models to refine and extend basic principles, as well as to apply the models to substantive research questions through behavioral experiments, computer simulations, functional brain imaging, and mathematical analyses. These studies are thus contributing to modification of both theory and practice. New models also encompass learning in adulthood to add an important dimension to the scientific knowledge base.

OVERVIEW OF THE BOOK

Figure 1.1 illustrates the organization of this book. This chapter (Chapter 1) represents the framework of the committee's study. We then focus on what is known about learners and learning (Chapters 2-5), followed by the implications of this research for the design of effective learning environments, including roles for technology, while emphasizing the key role of teachers (Chapters 6-9). We end with a set of conclusions and recommendations for future research (Chapter 10).

It is important to keep in mind that there has been a longer history of rigorous research on issues of learners and learning (Chapters 2-5) than on the design of learning environments and the implications of technology (Chapters 6-9). Research on classroom-based learning and teacher learning (especially the many opportunities for informal learning) often use newer qualitative methodologies, such as ethnography and case-study analysis, to capture the richness of learning in context. A rigorous methodology has been developed for conducting such studies (e.g., see Erickson, 1986; Hammersly and Atkinson, 1983; Heath, 1982; Lincoln and Guba, 1985; Marshall and Rossman, 1955; Miles and Huberman, 1984; Spradley, 1979).

Chapter 2, on expertise, discusses lessons learned from studies of people who have become experts in areas such as chess, physics, mathematics, or history. What is known about experts is important not because all students are expected to become experts, but because the knowledge of expertise provides valuable insights into what the results of effective learning look like.

Chapter 3 moves from what is known about experts to an examination of processes of learning that underlie effective knowledge acquisition. Special emphasis is placed on understanding the kinds of learning experiences that lead to transfer--the ability to use what was learned in one setting to deal with new problems and events.

Chapter 4 extends the examination of learning to infants and young children. Data show that children's early competencies in areas such as causal relationships, numbers, and language are much more sophisticated than was previously believed. These competencies provide the foundations for important concepts and ideas that children build on in later learning.

Chapter 5 explores new developments in neuroscience, while providing some cautionary advice about a number of popular myths that should not influence education. Neuroscience provides converging evidence about processes of learning and development and enriches understanding of learning by explicating the mechanisms by which learning occurs.

Chapter 6 explores general principles for the design of effective learning environments that are suggested by the science of learning. It explores the degree to which environments are learner centered, knowledge centered, assessment centered, and community centered. These components must be brought into alignment in order for effective change to occur.

Chapter 7 presents examples of effective teaching practices that are consistent with new knowledge about learning. We present contrasting illustrations of effective teaching in history, mathematics, and science. Effective teaching practices vary across subjects because knowledge in different subjects is organized differently and based on different ways of knowing (epistemologies).

Chapter 8 explores teacher learning--which includes both practicing teachers and college students studying to be teachers. The science of learning has important implications for helping teachers continue to learn throughout their lives.

Chapter 9 presents promising new developments in technology that have the potential to provide new possibilities for enhancing learning. We discuss data on technology and learning when they exist, but we also discuss new possibilities that future research should explore.

Chapter 10 concludes our study with a summary of the major findings of the study on learners and learning, teachers and teaching, and learning environments and recommends new areas of research.

2

How Experts Differ from Novices

People who have developed expertise in particular areas are, by definition, able to think effectively about problems in those areas. Understanding expertise is important because it provides insights into the nature of thinking and problem solving. Research shows that it is not simply general abilities, such as memory or intelligence, nor the use of general strategies that differentiate experts from novices. Instead, experts have acquired extensive knowledge that affects what they notice and how they organize, represent, and interpret information in their environment. This, in turn, affects their abilities to remember, reason, and solve problems.

This chapter illustrates key scientific findings that have come from the study of people who have developed expertise in areas such as chess, physics, mathematics, electronics, and history. We discuss these examples *not* because all school children are expected to become experts in these or any other areas, but because the study of expertise shows what the results of successful learning look like. In later chapters we explore what is known about processes of learning that can eventually lead to the development of expertise.

We consider several key principles of experts' knowledge and their potential implications for learning and instruction:

1. Experts notice features and meaningful patterns of information that are not noticed by novices.
2. Experts have acquired a great deal of content knowledge that is organized in ways that reflect a deep understanding of their subject matter.
3. Experts' knowledge cannot be reduced to sets of isolated facts or propositions but, instead, reflects contexts of applicability: that is, the knowledge is "conditionalized" on a set of circumstances.
4. Experts are able to flexibly retrieve important aspects of their knowledge with little attentional effort.
5. Though experts know their disciplines thoroughly, this does not guarantee that they are able to teach others.
6. Experts have varying levels of flexibility in their approach to new situations.

MEANINGFUL PATTERNS OF INFORMATION

One of the earliest studies of expertise demonstrated that the same stimulus is perceived and understood differently, depending on the knowledge that a person brings to the situation. DeGroot (1965) was interested in understanding how world-class chess masters are consistently able to out-think their opponents. Chess masters and less experienced but still extremely good players were shown examples of chess games and asked to think aloud as they decided on the move they would make if they were one of the players; see Box 2.1. DeGroot's hypothesis was that the chess masters would be more likely than the nonmasters to (a) think through all the possibilities before making a move (greater breadth of search) and (b) think through all the possible countermoves of the opponent for every move considered (greater depth of search). In this pioneering research, the chess masters did exhibit considerable breadth and depth to their searches, but so did the lesser ranked chess players. And none of them conducted searches that covered all the possibilities. Somehow, the chess masters considered possibilities for moves that were of higher quality than those considered by the lesser experienced players. Something other than differences in general strategies seemed to be responsible for differences in expertise.

DeGroot concluded that the knowledge acquired over tens of thousands of hours of chess playing enabled chess masters to out-play their opponents. Specifically, masters were more likely to recognize meaningful chess configurations and realize the strategic implications of these situations; this recognition allowed them to consider sets of possible moves that were superior to others. The meaningful patterns seemed readily apparent to the masters, leading deGroot (1965:33-34) to note:

> We know that increasing experience and knowledge in a specific field (chess, for instance) has the effect that things (properties, etc.) which, at earlier stages, had to be abstracted, or even inferred are apt to be immediately perceived at later stages. To a rather large extent, abstraction is replaced by perception, but we do not know much about how this works, nor where the borderline lies. As an effect of this replacement, a so-called 'given' problem situation is not really given since it is seen differently by an expert than it is perceived by an inexperienced person. . . .

DeGroot's think-aloud method provided for a very careful analysis of the conditions of specialized learning and the kinds of conclusions one can draw from them (see Ericsson and Simon, 1993). Hypotheses generated from think-aloud protocols are usually cross-validated through the use of other methodologies.

The superior recall ability of experts, illustrated in the example in the box, has been explained in terms of how they "chunk" various elements of a configuration that are related by an underlying function or strategy. Since there are limits on the amount of information that people can hold in short-term memory, short-term memory is enhanced when people are able to chunk information into familiar patterns (Miller, 1956). Chess masters perceive chunks of meaningful information, which affects their memory for what they see. Chess masters are able to chunk together several chess pieces in a configuration that is governed by some strategic component of the game. Lacking a hierarchical, highly organized structure for the domain, novices cannot use this chunking strategy. It is noteworthy that people do not have to be world-class experts to benefit from their abilities to encode meaningful chunks of information: 10- and 11-year-olds who are experienced in chess are able to remember more chess pieces than college students who are not chess players. In contrast, when the college students were presented with other stimuli, such as strings of numbers, they were able to remember more (Chi, 1978; Schneider et al., 1993); see Figure 2.3.

Skills similar to those of master chess players have been demonstrated for experts in other domains, including electronic circuitry (Egan and Schwartz, 1979), radiology (Lesgold, 1988), and computer programming (Ehrlich and Soloway, 1984). In each case, expertise in a domain helps people develop a sensitivity to patterns of meaningful information that are not available to novices. For example, electronics technicians were able to reproduce large portions of complex circuit diagrams after only a few seconds of viewing; novices could not. The expert

circuit technicians chunked several individual circuit elements (e.g., resistors and capacitors) that performed the function of an amplifier. By remembering the structure and function of a typical amplifier, experts were able to recall the arrangement of many of the individual circuit elements comprising the "amplifier chunk."

Mathematics experts are also able to quickly recognize patterns of information, such as particular problem types that involve specific classes of mathematical solutions (Hinsley et al., 1977; Robinson and Hayes, 1978). For example, physicists recognize problems of river currents and problems of headwinds and tailwinds in airplanes as involving similar mathematical principles, such as relative velocities. The expert knowledge that underlies the ability to recognize problem types has been characterized as involving the development of organized conceptual structures, or schemas, that guide how problems are represented and understood (e.g., Glaser and Chi, 1988).

Expert teachers, too, have been shown to have schemas similar to those found in chess and mathematics. Expert and novice teachers were shown a videotaped classroom lesson (Sabers et al., 1991). The experimental set-up involved three screens that showed simultaneous events occurring throughout the classroom (the left, center, and right). During part of the session, the expert and novice teachers were asked to talk aloud about what they were seeing. Later, they were asked questions about classroom events. Overall, the expert teachers had very different understandings of the events they were watching than did the novice teachers; see examples in Box 2.2.

The idea that experts recognize features and patterns that are not noticed by novices is potentially important for improving instruction. When viewing instructional texts, slides, and videotapes, for example, the information noticed by novices can be quite different from what is noticed by experts (e.g., Sabers et al., 1991; Bransford et al., 1988). One dimension of acquiring greater competence appears to be the increased ability to segment the perceptual field (learning how to see). Research on expertise suggests the importance of providing students with learning experiences that specifically enhance their abilities to recognize meaningful patterns of information (e.g., Simon, 1980; Bransford et al., 1989).

ORGANIZATION OF KNOWLEDGE

We turn now to the question of how experts' knowledge is organized and how this affects their abilities to understand and represent problems. Their knowledge is not simply a list of facts and formulas that are relevant to their domain; instead, their knowledge is organized around core concepts or "big ideas" that guide their thinking about their domains.

In an example from physics, experts and competent beginners (college students) were asked to describe verbally the approach they would use to solve physics problems. Experts usually mentioned the major principle(s) or law(s) that were applicable to the problem, together with a rationale for why those laws applied to the problem and how one could apply them (Chi et al., 1981). In contrast, competent beginners rarely referred to major principles and laws in physics; instead, they typically described which equations they would use and how those equations would be manipulated (Larkin, 1981, 1983).

Experts' thinking seems to be organized around big ideas in physics, such as Newton's second law and how it would apply, while novices tend to perceive problem solving in physics as memorizing, recalling, and manipulating equations to get answers. When solving problems, experts in physics often pause to draw a simple qualitative diagram--they do not simply attempt to plug numbers into a formula. The diagram is often elaborated as the expert seeks to find a workable solution path (e.g., see Larkin et al., 1980; Larkin and Simon, 1987; Simon and Simon, 1978).

Differences in how physics experts and novices approach problems can also be seen when they are asked to sort problems, written on index cards, according to the approach that could be used to solve them (Chi et al., 1981). Experts' problem piles are arranged on the basis of the principles that can be applied to solve the problems; novices' piles are arranged on the basis of the problems' surface attributes. For example, in the physics subfield of mechanics, an expert's pile might consist of problems that can be solved by conservation of energy, while a novice's pile might consist of problems that contain inclined planes; see Figure 2.4. Responding to the surface characteristics of problems is not very useful, since two problems that share the same objects and look very similar may actually be solved by entirely different approaches.

Some studies of experts and novices in physics have explored the organization of the knowledge structures that are available to these different groups of individuals (Chi et al., 1982); see Figure 2.5. In representing a schema for an incline plane, the novice's schema contains primarily surface features of the incline plane. In contrast, the expert's schema immediately connects the notion of an incline plane with the laws of physics and the conditions under which laws are applicable.

Pause times have also been used to infer the structure of expert knowledge in domains such as chess and physics. Physics experts appear to evoke sets of related equations, with the recall of one equation activating related equations that are retrieved rapidly (Larkin, 1979). Novices, in contrast, retrieve equations more equally spaced in time, suggesting a sequential search in memory. Experts appear to possess an efficient organization of knowledge with meaningful relations among related elements clustered into related units that are governed by underlying concepts and principles; see Box 2.3. Within this picture of expertise, "knowing more" means having more conceptual chunks in memory, more relations or features defining each chunk, more interrelations among the chunks, and efficient methods for retrieving related chunks and procedures for applying these informational units in problem-solving contexts (Chi et al., 1981).

Differences between how experts and nonexperts organize knowledge has also been demonstrated in such fields as history (Wineburg, 1991). A group of history experts and a group of gifted, high-achieving high school seniors enrolled in an advanced placement course in history were first given a test of facts about the American Revolution. The historians with backgrounds in American history knew most of the items. However, many of the historians had specialties that lay elsewhere and they knew only one-third of the facts on the tests. Several of the students outscored several of the historians on the factual test. The study then compared how the historians and students made sense of historical documents; the result revealed dramatic differences on virtually any criterion. The historians excelled in the elaborateness of understandings they developed in their ability to pose alternative explanations for events and in their use of corroborating evidence. This depth of understanding was as true for the Asian specialists and the medievalists as it was for the Americanists.

When the two groups were asked to select one of three pictures that best reflect their understanding of the battle of Lexington, historians and students displayed the greatest differences. Historians carefully navigated back and forth between the corpus of written documents and the three images of the battlefield. For them, the picture selection task was the quintessential epistemological exercise, a task that explored the limits of historical knowledge. They knew that no single document or picture could tell the story of history; hence, they thought very hard about their choices. In contrast, the students generally just looked at the pictures and made a selection without regard or qualification. For students, the process was similar to finding the correct answer on a multiple choice test.

In sum, although the students scored very well on facts about history, they were largely unacquainted with modes of inquiry with real historical thinking. They had no systematic way of making sense of contradictory claims. Thrust into a set of historical documents that demanded that they sort out competing claims and formulate a reasoned interpretation, the students, on the whole, were stymied. They lacked the experts' deep understanding of how to formulate reasoned interpretations of sets of historical documents. Experts in other social sciences also organize their problem solving around big ideas (see, e.g., Voss et al., 1984).

The fact that experts' knowledge is organized around important ideas or concepts suggests that curricula should also be organized in ways that lead to conceptual understanding. Many approaches to curriculum design make it difficult for students to organize knowledge meaningfully. Often there is only superficial coverage of facts before moving on to the next topic; there is little time to develop important, organizing ideas. History texts sometimes emphasize facts without providing support for understanding (e.g., Beck et al., 1989, 1991). Many ways of teaching science also overemphasize facts (American Association for the Advancement of Science, 1989; National Research Council, 1996).

The Third International Mathematics and Science Survey (TIMSS) (Schmidt et al., 1997) criticized curricula that were "a mile wide and an inch deep" and argued that this is much more of a problem in America than in most other countries. Research on expertise suggests that a superficial coverage of many topics in the domain may be a poor way to help students develop the competencies that will prepare them for future learning and work. The idea of helping students organize their knowledge also suggests that novices might benefit from models of how experts approach problem solving--especially if they then receive coaching in using similar strategies (e.g., Brown et al., 1989; we discuss this more fully in Chapters 3 and 7).

CONTEXT AND ACCESS TO KNOWLEDGE

Experts have a vast repertoire of knowledge that is relevant to their domain or discipline, but only a subset of that knowledge is relevant to any particular problem. Experts do not have to search through everything they know in order to find what is relevant; such an approach would overwhelm their working memory (Miller, 1956). For example, the chess masters described above considered only a subset of possible chess moves, but those moves were generally superior to the ones considered by the lesser ranked players. Experts have not only acquired knowledge, but are also good at retrieving the knowledge that is relevant to a particular task. In the language of cognitive scientists, experts' knowledge is "conditionalized"--it includes a specification of the contexts in which it is useful (Simon, 1980; Glaser, 1992). Knowledge that is not conditionalized is often "inert" because it is not activated, even though it is relevant (Whitehead, 1929).

The concept of conditionalized knowledge has implications for the design of curriculum, instruction, and assessment practices that promote effective learning. Many forms of curricula and instruction do not help students conditionalize their knowledge: "Textbooks are much more explicit in enunciating the laws of mathematics or of nature than in saying anything about when these laws may be useful in solving problems" (Simon, 1980:92). It is left largely to students to generate the condition-action pairs required for solving novel problems.

One way to help students learn about conditions of applicability is to assign word problems that require students to use appropriate concepts and formulas (Lesgold, 1984, 1988; Simon, 1980). If well designed, these problems can help students learn when, where, and why to use the knowledge they are learning. Sometimes, however, students can solve sets of practice problems but fail to conditionalize their knowledge because they know which chapter the problems came from and so automatically use this information to decide which concepts and formulas are relevant. Practice problems that are organized into very structured worksheets can also cause this problem. Sometimes students who have done well on such assignments--and believe that they are learning--are unpleasantly surprised when they take tests in which problems from the entire course are randomly presented so there are no clues about where they appeared in a text (Bransford, 1979).

The concept of conditionalized knowledge also has important implications for assessment practices that provide feedback about learning. Many types of tests fail to help teachers and students assess the degree to which the students' knowledge is conditionalized. For example, students might be asked whether the formula that quantifies the relationship between mass and energy is $E = MC$, $E = MC^2$, or $E = MC^3$. A correct answer requires no knowledge of the conditions under which it is appropriate to use the formula. Similarly, students in a literature class might be asked to explain the meaning of familiar proverbs, such as "he who hesitates is lost" or "too many cooks spoil the broth." The ability to explain the meaning of each proverb provides no guarantee that students will know the conditions under which either proverb is useful. Such knowledge is important because, when viewed solely as propositions, proverbs often contradict one another. To use them effectively, people need to know when and why it is appropriate to apply the maxim "too many cooks spoil the broth" versus "many hands make light work" or "he who hesitates is lost" versus "haste makes waste" (see Bransford and Stein, 1993).

FLUENT RETRIEVAL

People's abilities to retrieve relevant knowledge can vary from being "effortful" to "relatively effortless" (fluent) to "automatic" (Schneider and Shiffrin, 1977). Automatic and fluent retrieval are important characteristics of expertise.

Fluent retrieval does not mean that experts always perform a task faster than novices. Because experts attempt to understand problems rather than to jump immediately to solution strategies, they sometimes take more time than novices (e.g., Getzels and Csikszentmihalyi, 1976). But within the overall process of problem solving there are a number of subprocesses that, for experts, vary from fluent to automatic. Fluency is important because effortless processing places fewer demands on conscious attention. Since the amount of information a person can attend to at any one time is limited (Miller, 1956), ease of processing some aspects of a task gives a person more capacity to attend to other aspects of the task (LaBerge and Samuels, 1974; Schneider and Shiffrin, 1985; Anderson, 1981, 1982; Lesgold et al., 1988).

Learning to drive a car provides a good example of fluency and automaticity. When first learning, novices cannot drive and simultaneously carry on a conversation. With experience, it becomes easy to do so. Similarly, novice readers whose ability to decode words is not yet fluent are unable to devote attention to the task of understanding what they are reading (LaBerge and Samuels, 1974). Issues of fluency are very important for understanding learning and instruction. Many instructional environments stop short of helping all students develop the fluency needed to successfully perform cognitive tasks (Beck et al., 1989; Case, 1978; Hasselbring et al., 1987; LaBerge and Samuels, 1974).

An important aspect of learning is to become fluent at recognizing problem types in particular domains--such as problems involving Newton's second law or concepts of rate and functions--so that appropriate solutions can be easily retrieved from memory. The use of instructional procedures that speed pattern recognition are promising in this regard (e.g., Simon, 1980).

EXPERTS AND TEACHING

Expertise in a particular domain does not guarantee that one is good at helping others learn it. In fact, expertise can sometimes hurt teaching because many experts forget what is easy and what is difficult for students. Recognizing this fact, some groups who design educational materials pair content area experts with "accomplished novices" whose area of expertise lies elsewhere: their task is to continually challenge the experts until the experts' ideas for instruction begin to make sense to them (Cognition and Technology Group at Vanderbilt, 1997).

The content knowledge necessary for expertise in a discipline needs to be differentiated from the pedagogical content knowledge that underlies effective teaching (Redish, 1996; Shulman, 1986, 1987). The latter includes information about typical difficulties that students encounter as they attempt to learn about a set of topics; typical paths students must traverse in order to achieve understanding; and sets of potential strategies for helping students overcome the difficulties that they encounter. Shulman (1986, 1987) argues that pedagogical content knowledge is not equivalent to knowledge of a content domain plus a generic set of teaching strategies; instead, teaching strategies differ across disciplines. Expert teachers know the kinds of difficulties that students are likely to face; they know how to tap into students' existing knowledge in order to make new information meaningful; and they know how to assess their students' progress. Expert teachers have acquired pedagogical content knowledge as well as content knowledge; see Box 2.4. In the absence of pedagogical content knowledge, teachers often rely on textbook publishers for decisions about how to best organize subjects for students. They are therefore forced to rely on the "prescriptions of absentee curriculum developers" (Brophy, 1983), who know nothing about the particular students in each teacher's classroom. Pedagogical content knowledge is an extremely important part of what teachers need to learn to be more effective. (This topic is discussed more fully in Chapter 7.)

ADAPTIVE EXPERTISE

An important question for educators is whether some ways of organizing knowledge are better at helping people remain flexible and adaptive to new situations than others. For example, contrast two types of Japanese sushi experts (Hatano and Ignaki, 1986): one excels at following a fixed recipe; the other has "adaptive expertise" and is able to prepare sushi quite creatively. These appear to be examples of two very different types of

expertise, one that is relatively routinized and one that is flexible and more adaptable to external demands: experts have been characterized as being "merely skilled" versus "highly competent" or more colorfully as "artisans" versus "virtuosos" (Miller, 1978). These differences apparently exist across a wide range of jobs.

One analysis looked at these differences in terms of information systems design (Miller, 1978). Information systems designers typically work with clients who specify what they want. The goal of the designer is to construct systems that allow people to efficiently store and access relevant information (usually through computers). Artisan experts seek to identify the functions that their clients want automated; they tend to accept the problem and its limits as stated by the clients. They approach new problems as opportunities to use their existing expertise to do familiar tasks more efficiently. It is important to emphasize that artisans' skills are often extensive and should not be underestimated. In contrast, however, the virtuoso experts treat the client's statement of the problem with respect, but consider it "a point for departure and exploration" (Miller, 1978). They view assignments as opportunities to explore and expand their current levels of expertise. Miller also observes that, in his experience, virtuosos exhibit their positive characteristics *despite* their training, which is usually restricted solely to technical skills.

The concept of adaptive expertise has also been explored in a study of history experts (Wineburg, 1998). Two history experts and a group of future teachers were asked to read and interpret a set of documents about Abraham Lincoln and his view of slavery. This is a complex issue that, for Lincoln, involved conflicts between enacted law (the Constitution), natural law (as encoded in the Declaration of Independence), and divine law (assumptions about basic rights). One of the historians was an expert on Lincoln; the second historian's expertise lay elsewhere. The Lincoln expert brought detailed content knowledge to the documents and easily interpreted them; the other historian was familiar with some of the broad themes in the documents but quickly became confused in the details. In fact, at the beginning of the task, the second historian reacted no differently than a group of future high school teachers who were faced with the same task (Wineburg and Fournier, 1994): attempting to harmonize discrepant information about Lincoln's position, they both appealed to an array of present social forms and institutions--such as speech writers, press conferences, and "spin doctors"--to explain why things seemed discrepant. Unlike the future teachers, however, the second historian did not stop with his initial analysis. He instead adopted a working hypothesis that assumed that the apparent contradictions might be rooted less in Lincoln's duplicity than in his own ignorance of the nineteenth century. The expert stepped back from his own initial interpretation and searched for a deeper understanding of the issues. As he read texts from this perspective, his understanding deepened, and he learned from the experience. After considerable work, the second historian was able to piece together an interpretive structure that brought him by the task's end to where his more knowledgeable colleague had begun. The future history teachers, in contrast, never moved beyond their initial interpretations of events.

An important characteristic exhibited by the history expert involves what is known as "metacognition"--the ability to monitor one's current level of understanding and decide

when it is not adequate. The concept of metacognition was originally introduced in the context of studying young children (e.g., Brown, 1980; Flavell, 1985, 1991). For example, young children often erroneously believe that they can remember information and hence fail to use effective strategies, such as rehearsal. The ability to recognize the limits of one's current knowledge, then take steps to remedy the situation, is extremely important for learners at all ages. The history expert who was not a specialist in Lincoln was metacognitive in the sense that he successfully recognized the insufficiency of his initial attempts to explain Lincoln's position. As a consequence, he adopted the working hypothesis that he needed to learn more about the context of Lincoln's times before coming to a reasoned conclusion.

Beliefs about what it means to be an expert can affect the degree to which people explicitly search for what they don't know and take steps to improve the situation. In a study of researchers and veteran teachers, a common assumption was that "an expert is someone who knows all the answers" (Cognition and Technology Group at Vanderbilt, 1997). This assumption had been implicit rather than explicit and had never been questioned and discussed. But when the researchers and teachers discussed this concept, they discovered that it placed severe constraints on new learning because the tendency was to worry about looking competent rather than publicly acknowledging the need for help in certain areas (see Dweck, 1989, for similar findings with students). The researchers and the teachers found it useful to replace their previous model of "answer-filled experts" with the model of "accomplished novices." Accomplished novices are skilled in many areas and proud of their accomplishments, but they realize that what they know is minuscule compared to all that is potentially knowable. This model helps free people to continue to learn even though they may have spent 10 to 20 years as an "expert" in their field.

The concept of adaptive expertise (Hatano and Ignaki, 1986) provides an important model of successful learning. Adaptive experts are able to approach new situations flexibly and to learn throughout their lifetimes. They not only use what they have learned, they are metacognitive and continually question their current levels of expertise and attempt to move beyond them. They don't simply attempt to do the same things more efficiently; they attempt to do things better. A major challenge for theories of learning is to understand how particular kinds of learning experiences develop adaptive expertise or "virtuosos."

CONCLUSSION

Experts' abilities to reason and solve problems depend on well-organized knowledge that affects what they notice and how they represent problems. Experts are not simply "general problem solvers" who have learned a set of strategies that operate across all domains. The fact that experts are more likely than novices to recognize meaningful patterns of information applies in all domains, whether chess, electronics, mathematics, or classroom teaching. In deGroot's (1965) words, a "given" problem situation is not really a given. Because of their ability to see patterns of meaningful information, experts begin problem solving at "a higher place" (deGroot, 1965). An emphasis on the patterns perceived by experts suggests that pattern recognition is an important strategy for helping students develop confidence and

competence. These patterns provide triggering conditions for accessing knowledge that is relevant to a task.

Studies in areas such as physics, mathematics, and history also demonstrate that experts first seek to develop an understanding of problems, and this often involves thinking in terms of core concepts or big ideas, such as Newton's second law in physics. Novices' knowledge is much less likely to be organized around big ideas; they are more likely to approach problems by searching for correct formulas and pat answers that fit their everyday intuitions.

Curricula that emphasize breadth of knowledge may prevent effective organization of knowledge because there is not enough time to learn anything in depth. Instruction that enables students to see models of how experts organize and solve problems may be helpful. However, as discussed in more detail in later chapters, the level of complexity of the models must be tailored to the learners' current levels of knowledge and skills.

While experts possess a vast repertoire of knowledge, only a subset of it is relevant to any particular problem. Experts do not conduct an exhaustive search of everything they know; this would overwhelm their working memory (Miller, 1956). Instead, information that is relevant to a task tends to be selectively retrieved (e.g., Ericsson and Staszewski, 1989; deGroot, 1965).

The issue of retrieving relevant information provides clues about the nature of usable knowledge. Knowledge must be "conditionalized" in order to be retrieved when it is needed; otherwise, it remains inert (Whitehead, 1929). Many designs for curriculum instruction and assessment practices fail to emphasize the importance of conditionalized knowledge. For example, texts often present facts and formulas with little attention to helping students learn the conditions under which they are most useful. Many assessments measure only propositional (factual) knowledge and never ask whether students know when, where, and why to use that knowledge.

Another important characteristic of expertise is the ability to retrieve relevant knowledge in a manner that is relatively "effortless." This fluent retrieval does not mean that experts always accomplish tasks in less time than novices; often they take more time in order to fully understand a problem. But their ability to retrieve information effortlessly is extremely important because fluency places fewer demands on conscious attention, which is limited in capacity (Schneider and Shiffrin, 1977, 1985). Effortful retrieval, by contrast, places many demands on a learner's attention: attentional effort is being expended on remembering instead of learning. Instruction that focuses solely on accuracy does not necessarily help students develop fluency (e.g., Beck et al., 1989; Hasselbring et al., 1987; LaBerge and Samuels, 1974).

Expertise in an area does not guarantee that one can effectively teach others about that area. Expert teachers know the kinds of difficulties that students are likely to face, and they know how to tap into their students' existing knowledge in order to make new information meaningful plus assess their students' progress. In Shulman's (1986, 1987) terms, expert teachers have acquired pedagogical content knowledge and not just content knowledge. (This concept is explored more fully in Chapter 7.)

The concept of adaptive expertise raises the question of whether some ways of organizing knowledge lead to greater flexibility in problem solving than others (Hatano and Ignaki, 1986; Spiro et al., 1991). Differences between the "merely skilled" (artisans) and the "highly competent" (virtuosos) can be seen in fields as disparate as sushi making and information design. Virtuosos not only apply expertise to a given problem, they also consider whether the problem as presented is the best way to begin.

The ability to monitor one's approach to problem solving--to be metacognitive--is an important aspect of the expert's competence. Experts step back from their first, oversimplistic interpretation of a problem or situation and question their own knowledge that is relevant. People's mental models of what it means to be an expert can affect the degree to which they learn throughout their lifetimes. A model that assumes that experts know all the answers is very different from a model of the accomplished novice, who is proud of his or her achievements and yet also realizes that there is much more to learn.

We close this chapter with two important cautionary notes. First, the six principles of expertise need to be considered simultaneously, as parts of an overall system. We divided our discussion into six points in order to facilitate explanation, but each point interacts with the others; this interrelationship has important educational implications. For example, the idea of promoting fluent access to knowledge (principle 4) must be approached with an eye toward helping students develop an understanding of the subject matter (principle 2), learn when, where and why to use information (principle 3), and learn to recognize meaningful patterns of information (principle 1). Furthermore, all these need to be approached from the perspective of helping students develop adaptive expertise (principle 6), which includes helping them become metacognitive about their learning so that they can assess their own progress and continually identify and pursue new learning goals. An example in mathematics is getting students to recognize when a proof is needed. Metacognition can help students develop personally relevant pedagogical content knowledge, analogous to the pedagogical content knowledge available to effective teachers (principle 5). In short, students need to develop the ability to teach themselves.

The second cautionary note is that although the study of experts provides important information about learning and instruction, it can be misleading if applied inappropriately. For example, it would be a mistake simply to expose novices to expert models and assume that the novices will learn effectively; what they will learn depends on how much they know already. Discussions in the next chapters (3 and 4) show that effective instruction begins with the knowledge and skills that learners bring to the learning task.

3

Learning and Transfer

Processes of learning and the transfer of learning are central to understanding how people develop important competencies. Learning is important because no one is born with the ability to function competently as an adult in society. It is especially important to understand the kinds of learning experiences that lead to transfer, defined as the ability to extend what has been learned in one context to new contexts (e.g., Byrnes, 1996:74). Educators hope that students will transfer learning from one problem to another within a course, from one year in school to another, between school and home, and from school to workplace. Assumptions about transfer accompany the belief that it is better to broadly "educate" people than simply "train" them to perform particular tasks (e.g., Broudy, 1977).

Measures of transfer play an important role in assessing the quality of people's learning experiences. Different kinds of learning experiences can look equivalent when tests of learning focus solely on remembering (e.g., on the ability to repeat previously taught facts or procedures), but they can look quite different when tests of transfer are used. Some kinds of learning experiences result in effective memory but poor transfer; others produce effective memory plus positive transfer.

Thorndike and his colleagues were among the first to use transfer tests to examine assumptions about learning (e.g., Thorndike and Woodworth, 1901). One of their goals was to test the doctrine of "formal discipline" that was prevalent at the turn of the century. According to this doctrine, practice by learning Latin and other difficult subjects had broad-based effects, such as developing general skills of learning and attention. But these studies raised serious questions about the fruitfulness of designing educational experiences based on the assumption of formal discipline. Rather than developing some kind of "general skill" or "mental muscle" that affected a wide range of performances, people seemed to learn things that were more specific; see Box 3.1.

Early research on the transfer of learning was guided by theories that emphasized the similarity between conditions of learning and conditions of transfer. Thorndike (1913), for example, hypothesized that the degree of transfer between initial and later learning depends upon the match between *elements* across the two events. The essential elements were presumed to be specific facts and skills. By such an account, skills of writing letters of the alphabet are useful to writing words (vertical transfer). The theory posited that transfer from one school task and a highly similar task (near transfer), and from school subjects to nonschool settings (far transfer), could be facilitated by teaching knowledge and skills in school subjects that have elements *identical* to activities encountered in the transfer context (Klausmeier, 1985). Transfer could also be negative in the sense that experience with one set of events could hurt performance on related tasks (Luchins and Luchins, 1970); see Box 3.2.

The emphasis on identical elements of tasks excluded consideration of any learner characteristics, including when attention was directed, whether relevant principles were extrapolated, problem solving, or creativity and motivation. The primary emphasis was on drill and practice. Modern theories of learning and transfer retain the emphasis on practice, but they specify the kinds of practice that are important and take learner characteristics (e.g., existing knowledge and strategies) into account (e.g., Singley and Anderson, 1989).

In the discussion below we explore key characteristics of learning and transfer that have important implications for education:

- Initial learning is necessary for transfer, and a considerable amount is known about the kinds of learning experiences that support transfer.
- Knowledge that is overly contextualized can reduce transfer; abstract representations of knowledge can help promote transfer.
- Transfer is best viewed as an active, dynamic process rather than a passive end-product of a particular set of learning experiences.
- All new learning involves transfer based on previous learning, and this fact has important implications for the design of instruction that helps students learn.

ELEMENTS THAT PROMOTE INITIAL LEARNING

The first factor that influences successful transfer is degree of mastery of the original subject. Without an adequate level of initial learning, transfer cannot be expected. This point seems obvious, but it is often overlooked.

The importance of initial learning is illustrated by a series of studies designed to assess the effects of learning to program in the computer language LOGO. The hypothesis was that students who learned LOGO would transfer this knowledge to other areas that required thinking and problem solving (Papert, 1980). Yet in many cases, the studies found no differences on transfer tests between students who had been taught LOGO and those who had not (see Cognition and Technology Group at Vanderbilt, 1996; Mayer, 1988). However, many of these studies failed to assess the degree to which LOGO was learned in the first place (see Klahr and Carver, 1988; Littlefield et al., 1988). When initial learning was assessed, it was found that students often had not learned enough about LOGO to provide a basis for transfer. Subsequent studies began to pay more attention to student learning, and they did find transfer to related tasks (Klahr and Carver, 1988; Littlefield et al., 1988). Other research studies have shown that additional qualities of initial learning affect transfer and are reviewed next.

Understanding Versus Memorizing

Transfer is affected by the degree to which people learn with understanding rather than merely memorize sets of facts or follow a fixed set of procedures; see Boxes 3.3 and 3.4.

In Chapter 1, the advantages of learning with understanding were illustrated with an example from biology that involved learning about the physical properties of veins and arteries. We noted that the ability to remember properties of veins and arteries (e.g., that arteries are thicker than veins, more elastic, and carry blood from the heart) is not the same as understanding why they have particular properties. The ability to understand becomes important for transfer problems, such as: "Imagine trying to design an artificial artery. Would it have to be elastic? Why or why not?" Students who only memorize facts have little basis for approaching this kind of problem-solving task (Bransford and Stein, 1993; Bransford et al., 1983). The act of organizing facts about veins and arteries around more general principles such as "how structure is related to function" is consistent with the knowledge organization of experts discussed in Chapter 2.

Time to Learn

It is important to be realistic about the amount of time it takes to learn complex subject matter. It has been estimated that world-class chess masters require from 50,000 to 100,000 hours of practice to reach that level of expertise; they rely on a knowledge base containing some 50,000 familiar chess patterns to guide their selection of moves (Chase and Simon, 1973; Simon and Chase, 1973). Much of this time involves the development of pattern recognition skills that support the fluent identification of meaningful patterns of information plus knowledge of their implications for future outcomes (see Chapter 2). In all domains of learning, the development of expertise occurs only with major investments of time, and the amount of time it takes to learn material is roughly proportional to the amount of material being learned (Singley and Anderson, 1989); see Box 3.5. Although many people believe that "talent" plays a role in who becomes an expert in a particular area, even seemingly talented individuals require a great deal of practice in order to develop their expertise (Ericsson et al., 1993).

Learners, especially in school settings, are often faced with tasks that do not have apparent meaning or logic (Klausmeier, 1985). It can be difficult for them to learn with understanding at the start; they may need to take time to explore underlying concepts and to generate connections to other information they possess. Attempts to cover too many topics too quickly may hinder learning and subsequent transfer because students (a) learn only isolated sets of facts that are not organized and connected or (b) are introduced to organizing principles that they cannot grasp because they lack enough specific knowledge to make them meaningful. Providing students with opportunities to first grapple with specific information relevant to a topic has been shown to create a "time for telling" that enables them to learn much more from an organizing lecture (as measured by subsequent abilities to transfer) than students who did not first have these specific opportunities; see Box 3.6.

Providing students with time to learn also includes providing enough time for them to process information. Pezdek and Miceli (1982) found that on one particular task, it took 3rd graders 15 seconds to integrate pictorial and verbal information; when given only 8 seconds, they couldn't mentally integrate the information, probably due to short-term memory limitations. The implication is that learning cannot be rushed; the complex cognitive activity of information integration requires time.

Beyond "Time on Task"

It is clear that different ways of using one's time have different effects on learning and transfer. A considerable amount is known about variables that affect learning. For example, learning is most effective when people engage in "deliberate practice" that includes active monitoring of one's learning experiences (Ericsson et al., 1993). Monitoring involves attempts to seek and use feedback about one's progress. Feedback has long been identified as important for successful learning (see, e.g., Thorndike, 1913), but it should not be regarded as a unidimensional concept. For example, feedback that signals progress in memorizing facts and formulas is different from feedback that signals the state of the students' understanding (Chi et al., 1989, 1994). In addition, as noted in Chapter 2, students need feedback about the degree to which they know when, where, and how to use the knowledge they are learning. By inadvertently relying on clues--such as which chapter in a text the practice problems came from--students can erroneously think they have conditionalized their knowledge when, in fact, they have not (Bransford, 1979).

Understanding when, where, and why to use new knowledge can be enhanced through the use of "contrasting cases," a concept from the field of perceptual learning (see, e.g., Gagné and Gibson, 1947; Garner, 1974; Gibson and Gibson, 1955). Appropriately arranged contrasts can help people notice new features that previously escaped their attention and learn which features are relevant or irrelevant to a particular concept. The benefits of appropriately arranged contrasting cases apply not only to perceptual learning, but also to conceptual learning (Bransford et al., 1989; Schwartz et al., in press). For example, the concept of linear function becomes clearer when contrasted with nonlinear functions; the concept of recognition memory
becomes clearer when contrasted with measures such as free recall and cued recall.

A number of studies converge on the conclusion that transfer is enhanced by helping students see potential transfer implications of what they are learning (Anderson et al., 1996). In one of the studies on learning LOGO programming (Klahr and Carver, 1988), the goal was to help students learn to generate "bug-free" instructions for others to follow. The researchers first conducted a careful task analysis of the important skills underlying the ability to program in LOGO and focused especially on LOGO debugging skills--the process by which children find and correct errors in their programs. Part of the researchers' success in teaching LOGO depended on this task analysis. The researchers identified the four key aspects of debugging a

program as identifying the buggy behavior, representing the program, locating the bug in the program, and then correcting the bug. They highlighted these key abstract steps and signaled to the students that the steps would be relevant to the transfer task of writing debugging directions. Students who had LOGO training increased from 33 percent correct instructions to 55 percent correct instructions. They could have approached this task by memorizing the procedures for programming LOGO routines to "make a house," "make a polygon," and so forth. Simply memorizing the procedures, however, would not be expected to help students accomplish the transfer task of generating clear, bug-free instructions.

Motivation to Learn

Motivation affects the amount of time that people are willing to devote to learning. Humans are motivated to develop competence and to solve problems; they have, as White (1959) put it, "competence motivation." Although extrinsic rewards and punishments clearly affect behavior (see Chapter 1), people work hard for intrinsic reasons, as well.

Challenges, however, must be at the proper level of difficulty in order to be and to remain motivating: tasks that are too easy become boring; tasks that are too difficult cause frustration. In addition, learners' tendencies to persist in the face of difficulty are strongly affected by whether they are "performance oriented" or "learning oriented" (Dweck, 1989). Students who are learning oriented like new challenges; those who are performance oriented are more worried about making errors than about learning. Being learning oriented is similar to the concept of adaptive expertise discussed in Chapter 2. It is probable, but needs to be verified experimentally, that being "learning oriented" or "performance oriented" is not a stable trait of an individual but, instead, varies across disciplines (e.g., a person may be performance oriented in mathematics but learning oriented in science and social studies or vice versa).

Social opportunities also affect motivation. Feeling that one is contributing something to others appears to be especially motivating (Schwartz et al., in press). For example, young learners are highly motivated to write
stories and draw pictures that they can share with others. First graders in an inner-city school were so highly motivated to write books to be shared with others that the teachers had to make a rule: "No leaving recess early to go back to class to work on your book" (Cognition and Technology Group at Vanderbilt, 1998).

Learners of all ages are more motivated when they can see the usefulness of what they are learning and when they can use that information to do something that has an impact on others--especially their local community (McCombs, 1996; Pintrich and Schunk, 1996). Sixth graders in an inner-city school were asked to explain the highlights of their previous year in fifth grade to an anonymous interviewer, who asked them to describe anything that made them feel proud, successful, or creative (Barron et al., 1998). Students frequently mentioned projects that had strong social consequences, such as tutoring younger children, learning to make presentations to outside audiences, designing blueprints for playhouses that were to be built by professionals and then donated to preschool programs, and learning to work effectively in groups. Many of the activities mentioned by the students had involved a great deal of hard work on their part: for example, they had had to learn about geometry and architecture in order to get the chance to create blueprints for the playhouses, and they had had to explain their blueprints to a group of outside experts who held them to very high standards. (For other examples and discussions of highly motivating activities, see Pintrich and Schunk, 1996.)

OTHER FACTORS THAT INFLUENCE TRANSFER

Context

Transfer is also affected by the context of original learning; people can learn in one context, yet fail to transfer to other contexts. For example, a group of Orange County homemakers did very well at making supermarket best-buy calculations despite doing poorly on equivalent school-like paper-and-pencil mathematics problems (Lave, 1988). Similarly, some Brazilian street children could perform mathematics when making sales in the street but were unable to answer similar problems presented in a school context (Carraher, 1986; Carraher et al., 1985).

How tightly learning is tied to contexts depends on how the knowledge is acquired (Eich, 1985). Research has indicated that transfer across contexts is especially difficult when a subject is taught only in a single context rather than in multiple contexts (Bjork and Richardson-Klavhen, 1989). One frequently used teaching technique is to get learners to elaborate on the examples used during learning in order to facilitate retrieval at a later time. The practice, however, has the potential of actually making it more difficult to retrieve the lesson material in other contexts, because knowledge tends to be especially context-bound when learners elaborate the new material with details of the context in which the material is learned (Eich, 1985). When a subject is taught in multiple contexts, however, and includes examples that demonstrate wide application of what is being taught, people are more likely to abstract the relevant features of concepts and to develop a flexible representation of knowledge (Gick and Holyoak, 1983).

The problem of overly contextualized knowledge has been studied in instructional programs that use case-based and problem-based learning. In these programs, information is presented in a context of attempting to solve complex, realistic problems (e.g., Barrows, 1985; Cognition and Technology Group at Vanderbilt, 1997; Gragg, 1940; Hmelo, 1995; Williams, 1992). For example, fifth- and sixth-grade students may learn mathematical concepts of distance-rate-time in the context of solving a complex case involving planning for a boat trip. The findings indicate that if students learn only in this context, they often fail to transfer flexibly to new situations (Cognition and Technology Group at Vanderbilt, 1997). The issue is how to promote wide transfer of the learning.

One way to deal with lack of flexibility is to ask learners to solve a specific case and then provide them with an additional, similar case; the goal is to help them abstract general principles that lead to more flexible transfer (Gick and Holyoak, 1983); see Box 3.7. A second way to improve flexibility is to let students learn in a specific context and then help them engage in "what-if" problem solving designed to increase the flexibility of their understanding. They might be asked: "What if this part of the problem were changed, or this part?" (Cognition and Technology Group at Vanderbilt, 1997). A third way is to generalize the case so that learners are asked to create a solution that applies not simply to a single problem, but to a whole class of related problems. For example, instead of planning a single boat trip, students might run a trip planning company that has to advise people on travel times for different regions of the country. Learners are asked to adopt the goal of learning to "work smart" by creating mathematical models that characterize a variety of travel problems and using these models to create tools, ranging from simple tables and graphs to computer programs. Under these conditions, transfer to novel problems is enhanced (e.g., Bransford et al., 1998).

Problem Representation

Transfer is also enhanced by instruction that helps students represent problems at higher levels of abstraction. For example, students who create a specific business plan for a complex problem may not initially realize that their plan works well for "fixed-cost" situations but not for others. Helping students represent their solution strategies at a more general level can
help them increase the probability of positive transfer and decrease the degree to which a previous solution strategy is used inappropriately (negative transfer).

Advantages of abstract problem representations have been studied in the context of algebra word problems involving mixtures. Some students were trained with pictures of the mixtures and other students were trained with abstract tabular representations that highlighted the underlying mathematical relationships (Singley and Anderson, 1989). Students who were trained on specific task components without being provided with the principles underlying the problems could do the specific tasks well, but they could not apply their learning to new problems. By contrast, the students who received abstract training showed transfer to new problems that involved *analogous* mathematical relations. Research has also shown that developing a suite of representations enables learners to think flexibly about complex domains (Spiro et al., 1991).

Relationships Between Learning and Transfer Conditions

Transfer is always a function of relationships between what is learned and what is tested. Many theorists argue that the amount of transfer will be a function of the overlap between the original domain of learning and the novel one. Measuring overlap requires a theory of how knowledge is represented and conceptually mapped across domains. Examples of research studies on conceptual representation include Brown (1986), Bassok and Holyoak (1989a, b), and Singley and Anderson (1989). Whether students will transfer across domains--such as distance formulas from physics to formally equivalent biological growth problems, for example--depends on whether they conceive of the growth as occurring continuously (successful transfer) or in discrete steps (unsuccessful transfer) (Bassok and Olseth, 1995).

Singley and Anderson (1989) argue that transfer between tasks is a function of the degree to which the tasks share *cognitive* elements. This hypothesis was also put forth very early in the development of research on transfer of identical elements, mentioned previously (Thorndike and Woodworth, 1901; Woodworth, 1938), but it was hard to test experimentally until there was a way to identify task components. In addition, modern theorists include cognitive representations and strategies as "elements" that vary across tasks (Singley and Anderson, 1989).

Singley and Anderson taught students several text editors, one after another, and sought to predict transfer, defined as the savings in time of learning a new editor when it was not taught first. They found that students learned subsequent text editors more rapidly and that the number of procedural elements shared by two text editors predicted the amount of this transfer. In fact, there was large transfer across editors that were very

different in surface structures but that had common abstract structures. Singley and Anderson also found that similar principles govern transfer of mathematical competence across multiple domains when they considered transfer of declarative as well as procedural knowledge.

A study by Biederman and Shiffrar (1987) is a striking example of the benefits of abstract instruction. They studied a task that is typically difficult to learn in apprentice-like roles: how to examine day-old chicks to determine their sex. Biederman and Shiffrar found that twenty minutes of instruction on abstract principles helped the novices improve considerably (see also Anderson et al., 1996). Research studies generally provide strong support for the benefits of helping students represent their experiences at levels of abstraction that transcend the specificity of particular contexts and examples (National Research Council, 1994). Examples include algebra (Singley and Anderson, 1989), computer language tasks (Klahr and Carver, 1988), motor skills (e.g., dart throwing, Judd, 1908), analogical reasoning (Gick and Holyoak, 1983), and visual learning (e.g., sexing chicks, Biederman and Shiffrar, 1987).

Studies show that abstracted representations do not remain as isolated instances of events but become components of larger, related events, schemata (Holyoak, 1984; Novick and Holyoak, 1991). Knowledge representations are built up through many opportunities for observing similarities and differences across diverse events. Schemata are posited as particularly important guides to complex thinking, including analogical reasoning: "Successful analogical transfer leads to the induction of a general schema for the solved problems that can be applied to subsequent problems" (National Research Council, 1994:43). Memory retrieval and transfer are promoted by schemata because they derive from a broader scope of related instances than single learning experiences.

Active Versus Passive Approaches to Transfer

It is important to view transfer as a dynamic process that requires learners to actively choose and evaluate strategies, consider resources, and receive feedback. This active view of transfer is different from more static views, which assume that transfer is adequately reflected by learners' abilities to solve a set of transfer problems right after they have engaged in an initial learning task. These "one-shot" tests often seriously underestimate the amount of transfer that students display from one domain to another (Bransford and Schwartz, in press; Brown et al., 1983; Bruer, 1993).

Studies of transfer from learning one text editor to another illustrate the importance of viewing transfer from a dynamic rather than a static perspective. Researchers have found much greater transfer to a second text editor on the *second* day of transfer than the first (Singley and Anderson, 1989): this finding suggests that transfer should be viewed as increased speed in learning a new domain--not simply initial performance. Similarly, one educational goal for a course in calculus is how it facilitates learning of physics, but not necessarily its benefit on the first day of physics class.

Ideally, an individual spontaneously transfers appropriate knowledge without a need for prompting. Sometimes, however, prompting is necessary. With prompting, transfer can improve quite dramatically (e.g., Gick and Holyoak, 1980; Perfetto et al., 1983). "The amount of transfer depends on where attention is directed during learning or at transfer" (Anderson et al., 1996:8).

An especially sensitive way to assess the degree to which students' learning has prepared them for transfer is to use methods of dynamic assessment, such as "graduated prompting" (Campione and Brown, 1987; Newman et al., 1989). This method can be used to assess the amount of help needed for transfer by counting the number and types of prompts that are necessary before students are able to transfer. Some learners can transfer after receiving a general prompt such as "Can you think of something you did earlier that might be relevant?" Other learners need prompts that are much more specific. Tests of transfer that use graduated prompting provide more fine-grained analysis of learning and its effects on transfer than simple one-shot assessments of whether or not transfer occurs.

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Transfer and Metacognition

Transfer can be improved by helping students become more aware of themselves as learners who actively monitor their learning strategies and resources and assess their readiness for particular tests and performances. We briefly discussed the concept of metacognition in Chapters 1 and 3 (see Brown, 1975; Flavell, 1973). Metacognitive approaches to instruction have been shown to increase the degree to which students will transfer to new situations without the need for explicit prompting. The following examples illustrate research on teaching metacognitive skills across domains of reading, writing, and mathematics.

Reciprocal teaching to increase reading comprehension (Palincsar and Brown, 1984) is designed to help students acquire specific knowledge and also to learn a set of strategies for explicating, elaborating, and monitoring the understanding necessary for independent learning. The three major components of reciprocal teaching are instruction and practice with strategies that enable students to monitor their understanding; provision, initially by a teacher, of an expert model of metacognitive processes; and a social setting that enables joint negotiation for understanding. The knowledge-acquisition strategies the students learn in working on a specific text are not acquired as abstract memorized procedures, but as skills instrumental in achieving subject-area knowledge and understanding. The instructional procedure is reciprocal in the sense that a teacher and a group of students take turns in leading the group to discuss and use strategies for comprehending and remembering text content.

A program of procedural facilitation for teaching written composition (Scardamalia et al., 1984) shares many features with reciprocal teaching. The method prompts learners to adopt the metacognitive activities embedded in sophisticated writing strategies. The prompts help learners think about and reflect on the activities by getting them to identify goals, generate new ideas, improve and elaborate existing ideas, and strive for idea cohesion. Students in the procedural facilitation program take turns presenting their ideas to the group and detailing how they use prompts in planning to write. The teacher also models these procedures. Thus, the program involves modeling, scaffolding, and taking turns which are designed to help students externalize mental events in a collaborative context.

Alan Schoenfeld (1983, 1985, 1991) teaches heuristic methods for mathematical problem solving to college students. The methods are derived, to some extent, from the problem-solving heuristics of Polya (1957). Schoenfeld's program adopts methods similar to reciprocal teaching and procedural facilitation. He teaches and demonstrates control or managerial strategies and makes explicit such processes as generating alternative courses of action, evaluating which course one will be able to carry out and whether it can be managed in the time available, and assessing one's progress. Again, elements of modeling, coaching, and scaffolding, as well as collective problem solving and whole-class and small group discussions, are used. Gradually, students come to ask self-regulatory questions themselves as the teacher fades out. At the end of each of the problem-solving sessions, students and teacher alternate in characterizing major themes by analyzing what they did and why. The recapitulations highlight the generalizable features of the critical decisions and actions and focus on strategic levels rather than on the specific solutions (see also White and Frederickson, 1998).

An emphasis on metacognition can enhance many programs that use new technologies to introduce students to the inquiry methods and other tools that are used by professionals in the

workplace (see Chapter 8). The important role of metacognition for learning has been demonstrated in the context of a "thinker tools" program that lets students run simulations of physics experiments (White and Frederickson, 1998), as well as in adding a metacognitive component to a computer program designed to help college students learn biology (Lin and Bielaczyc, in press). The value of using video to model important metacognitive learning procedures has also been shown to help learners analyze and reflect on models (Bielaczyc et al., 1995). All of these strategies engage learners as active participants in their learning by focusing their attention on critical elements, encouraging abstraction of common themes or procedures (principles), and evaluating their own progress toward understanding.

LEARNING AS TRANSFER FROM PREVIOUS EXPERIENCES

When people think about transfer, it is common to think first about learning something and then assessing the learner's abilities to apply it to something else. But even the initial learning phase involves transfer because it is based on the knowledge that people bring to any learning situation; see Box 3.8. The principle that people learn by using what they know to construct new understandings (see Chapter 1) can be paraphrased as "all learning involves transfer from previous experiences." This principle has a number of important implications for educational practice. First, students may have knowledge that is relevant to a learning situation that is not activated. By helping activate this knowledge, teachers can build on students' strengths. Second, students may misinterpret new information because of previous knowledge they use to construct new understandings. Third, students may have difficulty with particular school teaching practices that conflict with practices in their community. This section discusses these three implications.

Building on Existing Knowledge

Children's early mathematics knowledge illustrates the benefits of helping students draw on relevant knowledge that can serve as a source of transfer. By the time children begin school, most have built a considerable knowledge store relevant to arithmetic. They have experiences of adding and subtracting numbers of items in their everyday play, although they lack the symbolic representations of addition and subtraction that are taught in school. If children's knowledge is tapped and built on as teachers attempt to teach them the formal operations of addition and subtraction, it is likely that children will acquire a more coherent and thorough understanding of these processes than if they taught them as isolated abstractions. Without specific guidance from teachers, students may fail to connect everyday knowledge to subjects taught in school.

Understanding Conceptual Change

Because learning involves transfer from previous experiences, one's existing knowledge can also make it difficult to learn new information. Sometimes new information will seem incomprehensible to students, but this feeling of confusion can at least let them identify the existence of a problem (see, e.g., Bransford and Johnson, 1972; Dooling and Lachman, 1971). A more problematic situation occurs when people construct a coherent (for them) representation of information while deeply misunderstanding the new information. Under these conditions, the learner doesn't realize that he or she is failing to understand. Two examples of this phenomenon are in Chapter 1: *Fish Is Fish* (Lionni, 1970), where the fish listens to the frog's descriptions of people and constructs its own idiosyncratic images, and attempts to help children learn that the earth is spherical (Vosniadou and Brewer, 1989). Children's interpretations of the new information are much different than what adults intend.

The *Fish Is Fish* scenario is relevant to many additional attempts to help students learn new information. For example, when high school or college physics students are asked to

identify the forces being exerted on a ball that is thrown vertically up in the air after it leaves the hand, many mention the "force of the hand" (Clement, 1982a, b). This force is exerted only so long as the ball is in contact with the hand, but is not present when the ball is in flight. Students claim that this force diminishes as the ball ascends and is used up by the time the ball reaches the top of its trajectory. As the ball descends, these students claim, it "acquires" increasing amounts of the gravitational force, which results in the ball picking up speed as it falls back down. This "motion requires a force" misconception is quite common among students and is akin to the medieval theory of "impetus" (Hestenes et al., 1992). These explanations fail to take account of the fact that the only forces being exerted on the ball while it is traveling through the air are the gravitational force caused by the earth and the drag force due to air resistance. (For similar examples, see Mestre, 1994.)

In biology, people's knowledge of human and animal needs for food provides an example of how existing knowledge can make it difficult to understand new information. A study of how plants make food was conducted with students from elementary school through college. It probed understanding of the role of soil and photosynthesis in plant growth and of the primary source of food in green plants (Wandersee, 1983). Although students in the higher grades displayed a better understanding, students from all levels displayed several misconceptions: soil is the plants' food; plants get their food from the roots and store it in the leaves; and chlorophyll is the plants' blood. Many of the students in this study, especially those in the higher grades, had already studied photosynthesis. Yet formal instruction had done little to overcome their erroneous prior beliefs. Clearly, presenting a sophisticated explanation in science class, without also probing for students' preconceptions on the subject, will leave many students with incorrect understanding (for a review of studies, see Mestre, 1994).

For young children, early concepts in mathematics guide students' attention and thinking (Gelman, 1967; we discuss this more in Chapter 4). Most children bring to their school mathematics lessons the idea that numbers are grounded in the counting principles (and related rules of addition and subtraction). This knowledge works well during the early years of schooling. However, once students are introduced to rational numbers, their assumptions about mathematics can hurt their abilities to learn.

Consider learning about fractions. The mathematical principles underlying the numberhood of fractions are not consistent with the principles of counting and children's ideas that numbers are sets of things that are counted and addition involves "putting together" two sets. One cannot count things to generate a fraction. Formally, a fraction is defined as the division of one cardinal number by another: this definition solves the problem that there is a lack of closure of the integers under division. To complicate matters, some number-counting principles do not apply to fractions. Rational numbers do not have unique successors; there is an infinite number of numbers between any two rational numbers. One cannot use counting-based algorithms for sequencing fractions: for example, 1/4 is not more than 1/2. Neither the nonverbal nor the verbal counting principle maps to a tripartite symbolic representations of fractions--two cardinal numbers X and Y separated by a line. Related mapping problems have been noted by others (e.g., Behr et al., 1992; Fishbein et al., 1985; Silver et al., 1993). Overall, early knowledge of numbers has the potential to serve as a barrier to learning about fractions--and for many learners it does.

The fact that learners construct new understandings based on their current knowledge highlights some of the dangers in "teaching by telling." Lectures and other forms of direct instruction can sometimes be very useful, but only under the right conditions (Schwartz and Bransford, in press). Often, students construct understandings like those noted above. To counteract these problems, teachers must strive to make students' thinking visible and find ways to help them reconceptualize faulty conceptions. (Strategies for such teaching are discussed in more detail in Chapters 6 and 7.)

Transfer and Cultural Practices

Prior knowledge is not simply the individual learning that students bring to the classroom, based on their personal and idiosyncratic experiences (e.g., some children will know many things because they have traveled widely or because their parents have particular kinds of jobs; some children may have suffered a traumatic experience). Prior knowledge is also not only a generic set of experiences attributable to developmental stages through which learners may have passed (i.e., believing that heaven is "up" or that milk comes from refrigerated cartons). Prior knowledge also includes the kind of knowledge that learners acquire because of their social roles, such as those connected with race, class, gender, and their culture and ethnic affiliations (Brice-Heath, 1981, 1983; Lave, 1988; Moll and Whitmore, 1993; Moll et al., 1993-1998; Rogoff, 1990, 1998; Saxe, 1990). This cultural knowledge can sometimes support and sometimes conflict with children's learning in schools (Greenfield and Suzuki, 1998); see Box 3.9.

School failure may be partly explained by the mismatch between what students have learned in their home cultures and what is required of them in school (see Allen and Boykin, 1992; Au and Jordan, 1981; Boykin and Tom, 1985; Erickson and Mohatt, 1982). Everyday family habits and rituals can either be reinforced or ignored in schools, and they can produce different responses from teachers (Heath, 1983). For example, if young learners are never asked questions at home that seem obvious to some families--such as "What color is the sky?" or "Where is your nose?"--teachers who ask such questions may find students reluctant or resistant to answer. How teachers interpret this reticence or resistance has consequences for how intelligent or academically capable they judge students and their instructional approaches toward them.

These differences have their roots in early adult-infant interactions (Blake, 1994). Whereas middle-class Anglo mothers tend to have frequent language interactions that are focused on didactic naming and pointing with their infants around objects ("Look at that red truck!"), African American mothers show comparable frequency levels of language interactions with their infants, but focused on affective dimensions of language ("Isn't that a pretty toy? Doesn't it make you feel happy?"). The language that children bring with them to school involves a broad set of skills rooted in the early context of adult-child interactions. What happens when the adults, peers, and contexts change (Suina, 1988; Suina and Smolkin, 1994)? This is an important question that relates to the transfer of learning.

The meanings that are attached to cultural knowledge are important in promoting transfer--that is, in encouraging people to use what they have learned. For example, story-telling is a language skill. Topic-associative oral styles have been observed among African American children (Michaels, 1981a,b; 1986). In contrast, white children use a more linear narrative style that more closely approximates the linear expository style of writing and speaking that schools teach (see Gee, 1989; Taylor and Lee, 1987; Cazden et al., 1985; Lee and Slaughter-Defoe, 1995). Judgments may be made by white and black teachers as they listen to these two language styles: white teachers find the topic-associative stories hard to follow and are much more likely to infer that the narrator is a low-achieving student; black teachers are more likely to positively evaluate the topic-associative style (Cazden, 1988:17). African American children who come to school speaking in a topic-associative style may be seen by many teachers as having less potential for learning. Teachers can be helped to view different cultural backgrounds as strengths to be built on, rather than as signs of "deficits."

TRANSFER BETWEEN SCHOOL AND EVERYDAY LIFE

We began this chapter by stressing that the ultimate goal of learning is to have access to information for a wide set of purposes--that the learning will in some way transfer to other

circumstances. In this sense, then, the ultimate goal of schooling is to help students transfer what they have learned in school to everyday settings of home, community, and workplace. Since transfer between tasks is a function of the similarity by transfer tasks and learning experiences, an important strategy for enhancing transfer from schools to other settings may be to better understand the nonschool environments in which students must function. Since these environments change rapidly, it is also important to explore ways to help students develop the characteristics of adaptive expertise (see Chapter 1).

The question of how people function in a number of practical settings has been examined by many scientists, including cognitive anthropologists, sociologists, and psychologists (e.g., Lave, 1988; Rogoff, 1990). One major contrast between everyday settings and school environments is that the latter place much more emphasis on individual work than most other environments (Resnick, 1987). A study of navigation on U.S. ships found that no individual can pilot the ship alone; people must work collaboratively and share their expertise. More recent studies of collaboration confirm its importance. For example, many scientific discoveries in several genetics laboratories involve in-depth collaboration (Dunbar, 1996). Similarly, decision making in hospital emergency rooms is distributed among many different members of the medical team (Patel et al., 1996).

A second major contrast between schools and everyday settings is the heavy use of tools to solve problems in everyday settings, compared with "mental work" in school settings (Resnick, 1987). The use of tools in practical environments helps people work almost error free (e.g., Cohen, 1983; Schliemann and Acioly, 1989; Simon, 1972; see also Norman, 1993). New technologies make it possible for students in schools to use tools very much like those used by professionals in workplaces (see Chapter 8). Proficiency with relevant tools may provide a way to enhance transfer across domains.

A third contrast between schools and everyday environments is that abstract reasoning is often emphasized in school, whereas contextualized reasoning is often used in everyday settings (Resnick, 1987). Reasoning can be improved when abstract logical arguments are embodied in concrete contexts (see Wason and Johnson-Laird, 1972). A well-known study of people in a Weight Watchers program provides similar insights into everyday problem solving (see Lave et al., 1984). One example is of a man who needed three-fourths of two-thirds of a cup of cottage cheese to create a dish he was cooking. He did not attempt to multiply the fractions as students would do in a school context. Instead, he measured two-thirds of a cup of cottage cheese, removed that amount from the measuring cup and then patted the cheese into a round shape, divided it into quarters, and used three of the quarters; see Box 3.10. Abstract arithmetic was never used. In similar examples of contextualized reasoning, dairy workers use knowledge, such as the size of milk cases, to make their computational work more efficient (Scribner, 1984); grocery store shoppers use nonschool mathematics under standard supermarket and simulated conditions (Lave, 1988); see Box 3.11.

There are potential problems with contextualized reasoning, which are similar to those associated with overly contextualized knowledge in general. The "pat it out" strategy used for cottage cheese works in only a narrow range of situations; the man would have difficulty if he were trying to measure molasses or other liquids rather than cottage cheese (Wineburg, 1989a, b; see also Bereiter, 1997). Could he generate a new strategy for molasses or other liquids? The answer to this question depends on the degree to which he can relate his procedure to more general sets of solution strategies.

Analyses of everyday environments have potential implications for education that are intriguing but need to be thought through and researched carefully. There are many appealing strengths to the idea that learning should be organized around authentic problems and projects that are frequently encountered in nonschool settings: in John Dewey's vision,

"School should be less about preparation for life and more like life itself." The use of problem-based learning in medical schools is an excellent example of the benefits of looking at what people need to do once they graduate and then crafting educational experiences that best prepare them for these competencies (Barrows, 1985). Opportunities to engage in problem-based learning during the first year of medical school lead to a greater ability to diagnose and understand medical problems than do opportunities to learn in typical lecture-based medical courses (Hmelo, 1995). Attempts to make schooling more relevant to the subsequent workplace have also guided the use of case-based learning in business schools, law schools, and schools that teach educational leadership (Hallinger et al., 1993; Williams, 1992).

The transfer literature also highlights some of the potential limitations of learning in particular contexts. Simply learning to perform procedures, and learning in only a single context, does not promote flexible transfer. The transfer literature suggests that the most effective transfer may come from a balance of specific examples and general principles, not from either one alone.

SUMARY AND CONCLUSION

A major goal of schooling is to prepare students for flexible adaptation to new problems and settings. The ability of students to transfer provides an important index of learning that can help teachers evaluate and improve their instruction. Many approaches to instruction look equivalent when the only measure of learning is memory for information that was specifically presented. Instructional differences become more apparent when evaluated from the perspective of how well the learning transfers to new problems and settings.

Several critical features of learning affect people's abilities to transfer what they have learned. The amount and kind of initial learning is a key determinant of the development of expertise and the ability to transfer knowledge. Students are motivated to spend the time needed to learn complex subjects and to solve problems that they find interesting. Opportunities to use knowledge to create products and benefits for others are particularly motivating for students.

While time on task is necessary for learning, it is not sufficient for effective learning. Time spent learning for understanding has different consequences for transfer than time spent simply memorizing facts or procedures from textbooks or lectures. In order for learners to gain insight into their learning and their understanding, frequent feedback is critical: students need to monitor their learning and actively evaluate their strategies and their current levels of understanding.

The context in which one learns is also important for promoting transfer. Knowledge that is taught in only a single context is less likely to support flexible transfer than knowledge that is taught in multiple contexts. With multiple contexts, students are more likely to abstract the relevant features of concepts and develop a more flexible representation of knowledge. The use of well-chosen contrasting cases can help students learn the conditions under which new knowledge is applicable. Abstract representations of problems can also facilitate transfer. Transfer between tasks is related to the degree to which they share common elements, although the concept of elements must be defined cognitively. In assessing learning, the key is increased speed of learning the concepts

underlying the new material, rather than early performance attempts in a new subject domain.

All new learning involves transfer. Previous knowledge can help or hinder the understanding of new information. For example, knowledge of everyday counting-based arithmetic can make it difficult to deal with rational numbers; assumptions based on everyday physical experiences (e.g., walking upright on a seemingly flat earth) can make it difficult for learners to understand concepts in astronomy and physics and so forth. Teachers can help students change their original conceptions by helping students make their thinking visible so that misconceptions can be corrected and so that students can be encouraged to think beyond the specific problem or to think about variations on the problem. One aspect of previous knowledge that is extremely important for understanding learning is cultural practices that support learners' prior knowledge. Effective teaching supports positive transfer by actively identifying the relevant knowledge and strengths that students bring to a learning situation and building on them.

Transfer from school to everyday environments is the ultimate purpose of school-based learning. An analysis of everyday environments provides opportunities to rethink school practices in order to bring them into alignment with the requirements of everyday environments. But it is important to avoid instruction that is overly dependent on context. Helping learners choose, adapt, and invent tools for solving problems is one way to facilitate transfer while also encouraging flexibility.

Finally, a metacognative approach to teaching can increase transfer by helping students learn about themselves as learners in the context of acquiring content knowledge. One characteristic of experts is an ability to monitor and regulate their own understanding in ways that allows them to keep learning adaptive expertise: this is an important model for students to emulate.

4

How Children Learn

Children differ from adult learners in many ways, but there are also surprising commonalities across learners of all ages. In this chapter we provide some insights into children as learners. A study of young children fulfills two purposes: it illustrates the strengths and weaknesses of the learners who populate the nation's schools, and it offers a window into the development of learning that cannot be seen if one considers only well-established learning patterns and expertise. In studying the development of children, an observer gets a dynamic picture of learning unfolding over time. A fresh understanding of infant cognition and of how young children from 2 to 5 years old build on that early start also sheds new light on how to ease their transition into formal school settings.

INFANTS' CAPABILITIES

Theoriesa

It was once commonly thought that infants lack the ability to form complex ideas. For much of this century, most psychologists accepted the traditional thesis that a newborn's mind is a blank slate (*tabula rasa*) on which the record of experience is gradually impressed. It was further thought that language is an obvious prerequisite for abstract thought and that, in its absence, a baby could not have knowledge. Since babies are born with a limited repertoire of behaviors and spend most of their early months asleep, they certainly appear passive and unknowing. Until recently, there was no obvious way for them to demonstrate otherwise.

But challenges to this view arose. It became clear that with carefully designed methods, one could find ways to pose rather complex questions about what infants and young children know and can do. Armed with new methodologies, psychologists began to accumulate a substantial body of data about the remarkable abilities that young children possess that stands in stark contrast to the older emphases on what they lacked. It is now known that very young children are competent, active agents of their own conceptual development. In short, the mind of the young child has come to life (Bruner, 1972, 1981a, b; Carey and Gelman, 1991; Gardner, 1991; Gelman and Brown, 1986; Wellman and Gelman, 1992).

A major move away from the *tabula rasa* view of the infant mind was taken by the Swiss psychologist Jean Piaget. Beginning in the 1920s, Piaget argued that the young human mind can best be described in terms of complex cognitive structures. From close observations of infants and careful questioning of children, he concluded that cognitive development proceeds through certain stages, each involving radically different cognitive schemes. While Piaget observed that infants actually seek environmental stimulation that promotes their intellectual development, he thought that their initial representations of objects, space, time, causality, and self are constructed only gradually during the first 2 years. He concluded that the world of young infants is an egocentric fusion of the internal and external worlds and that the development of an accurate representation of physical reality depends on the gradual coordination of schemes of looking, listening, and touching.

After Piaget, others studied how newborns begin to integrate sight and sound and explore their perceptual worlds. For perceptual learning theorists, learning was considered to proceed rapidly due to the initial availability of exploration patterns that infants use to obtain information about the objects and events of their perceptual worlds (Gibson, 1969). As information processing theories began to emerge, the metaphor of mind as computer, information processor, and problem solver came into wide usage (Newell et al., 1958) and was quickly applied to the study of cognitive development.

Although these theories differed in important ways, they shared an emphasis on considering children as active learners who are able to set goals, plan, and revise. Children are seen as learners who assemble and organize material. As such, cognitive development involves the acquisition of organized knowledge structures including, for example, biological concepts, early number sense, and early understanding of basic physics. In addition, cognitive development involves the gradual acquisition of strategies for remembering, understanding, and solving problems.

The active role of learners was also emphasized by Vygotsky (1978), who pointed to other supports for learning. Vygotsky was deeply interested in the role of the social environment, included tools and cultural objects, as well as people, as agents in developing thinking. Perhaps the most powerful idea from Vygotsky to influence developmental psychology was that of a *zone of proximal development* (Vygotsky, 1978), described in Box 4.1. It refers to a

bandwidth of competence (Brown and Reeve, 1987) that learners can navigate with aid from a supportive context, including the assistance of others. (For modern treatments of this concept, see Newman et al., 1989; Moll and Whitmore, 1993; Rogoff and Wertsch, 1984; from a different theoretical perspective, see Bidell and Fischer, 1997.) This line of work has drawn attention to the roles of more capable peers, parents, and other partners in challenging and extending children's efforts to understand. It has also contributed to an understanding of the relationship between formal and informal teaching and learning situations (Lave and Wenger, 1991) and cognition distributed across people and tools (Salomon, 1993).

As a result of these theoretical and methodological developments, great strides have been made in studying young children's learning capacities. To summarize an enormous body of research, there have been dramatic increases in knowledge in four major areas of research, illustrated in this chapter:

1. *Early predisposition to learn about some things but not others* No evidence exists that infants come into the world as "blank slates" capable only of registering the ambient events that impinge on their senses in an undisciplined way. Young children show positive biases to learn types of information readily and early in life. These forms of knowledge, referred to as *privileged domains*, center on broadly defined categories, notably physical and biological concepts, causality, number, and language (Carey and Gelman, 1991).

2. *Strategies and metacognition* Outside of these privileged domains children, like all learners, must depend on will, ingenuity, and effort to enhance their learning. It was previously thought that young children lacked the strategic competence and knowledge about learning (metacognition) to learn intentionally, but the last 30 years have witnessed a great deal of research that reveals hitherto unrecognized strategic and metacognitive competence in the young (Brown and DeLoache, 1978; DeLoache et al., 1998).

3. *Theories of mind* As they mature, children develop theories of what it means to learn and understand that profoundly influence how they situate themselves in settings that demand effortful and intentional learning (Bereiter and Scardamalia, 1989). Children entertain various theories of mind and intelligence (Dweck and Legget, 1988). Indeed, not all learners in schools come ready to learn in exactly the same way. Some theorists argue that there is more than one way to learn, more than one way to be "intelligent." Understanding that there are multiple intelligences (Gardner, 1983) may suggest ways of helping children learn by supporting their strengths and working with their weakenesses.

4. *Children and community* Although a great deal of children's learning is self-motivated and self-directed, other people play major roles as guides in fostering the development of learning in children. Such guides include other children as well as adults (caretakers, parents, teachers, coaches, etc.). But not only people can serve as guides; so, too, can powerful tools and cultural artifacts, notably television, books, videos, and technological devices of many kinds (Wright and Huston, 1995). A great deal of research on such assisted learning has been influenced by Vygotsky's notion of zones of proximal development and the increasing popularity of the concept of "communities of learners," be they face-to-face or through electronic media and technologies (see Chapters 8 and 9).

Methodological Advances

The large increase in the number of studies that address early learning came about as a result of methodological advances in the field of developmental psychology. Much of what is now known about the human mind comes from the study of how infants learn. This work demonstrates that the human mind is a biologically prepared organism (Carey

and Gelman, 1991). In order to study what babies know and can learn about readily, researchers needed to develop techniques of "asking" infants, who cannot speak, what they know. Because infants are so limited physically, experimenters interested in finding out how babies think had to find methods suitable to an infant's motor capabilities. New ways were developed for measuring what infants prefer to look at (Fantz, 1961) and detecting changes in events to which they are sensitive. Three such methods are non-nutritive sucking, habituation, and visual expectation.

Non-nutritive sucking is a way to use a physical capability that even the youngest infants have. In one experiment, the researchers (Kalnins and Bruner, 1973) showed 5- to 12-week-old infants a silent color film and gave the infants a pacifier to suck, the nipple of which was connected to a pressure switch that controlled the projector lens. The infants quickly learned to suck at a given rate to bring the movie into focus, showing not only that they were capable of and interested in learning how to control their own sensory environment, but also that they preferred a clear image to a blurry one.

The second method demonstrates an infant's thirst for novelty. The habituation paradigm involves presenting babies with an event (a stimulus)--a picture, sound, or series of sounds--to which the baby attends either by looking at it, turning to it, or doing something to keep the event continuing. Over a period of time infants stop responding to repeated presentations of the same event: that is, they *habituate*. They recover interest if a recognizably different event is presented. A combination of non-nutritive sucking and habituation was used in a study (Eimas et al., 1971) to show that 4-month-old infants will suck vigorously when first introduced to the phoneme (speech sound) "ba," then gradually lose interest and stop sucking. But when presented with a different phoneme, "pa," they resume sucking.

Because infants will look at things they find interesting, researchers developed the method of visual expectation to study infants' comprehension of events. It uses infants' gaze patterns to determine if they are comprehending patterns of visual events. For example, an experimenter establishes a pattern of flashing a picture two times on the left side of a screen and then three times on the right side. Once this alternating pattern has been established, the experimenter can watch an infant's gaze while the pictures continue to be flashed. If the baby continues to gaze at the left side of the screen after one flash, but then shifts its gaze to the right side after the second picture appears, then it is assumed that a distinction has been made between one, two, and three events. Using this procedure, infants as young as 5 months have shown that they can count up to three (Canfield and Smith, 1996).

Thus, using infants' capacities for looking, sucking, and interest in novelty, developmental psychologists devised methods for reliably studying early aspects of infant cognition. These studies have been refined for studying early infant memory development by using bodily actions, such as leg kicking and arm movements, for determining object recognition (Rovee-Collier, 1989).

Studies like these do more than simply show that infants actively select experiences; they also demonstrate what infants are capable of perceiving, knowing, and remembering. Recovery of interest in a novel speech sound could only occur if infants could recognize the rather subtle difference between "pa" and "ba." Discovering that very young infants can see, hear, smell, and be particular about what exactly they wish to explore led to an emboldened attitude about the kinds of experimental questions that could be asked. The answers about infant understanding of physical and biological causality, number, and language have been quite remarkable. These studies have profoundly altered scientific understanding of how and when humans begin to grasp the complexities of their worlds. In the next section, we present a few examples of infants' learning in these domains.

EARLY COMPETENCIES IN THE PRIVILEGED DOMAINS

Physical Concepts

How do infants learn about the physical world? Research studies have demonstrated that infants as early as 3-4 months of age have the beginnings of useful knowledge. Three examples from many: they understand that objects need support to prevent them from falling; that stationary objects are displaced when they come into contact with moving objects; and that inanimate objects need to be propelled into motion.

Consider the notion of support--that an object cannot be suspended in mid-air. In one study, infants are seated in front of a table that includes a platform. They see an experimenter's gloved hand reach out from a side window and put a box on top of the platform (possible event) and then withdraw her hand. Alternatively, when the experimenter reaches out from the side window, she places the box beyond the platform, leaving the impression that the box is suspended in mid-air when she withdraws her hand (impossible condition); see Figure 4.1.

Using the visual habituation methodology, studies have found that infants as young as 3 months old look reliably longer at the impossible events. This reaction indicates that infants *expect* that a box can be stable when a hand releases it onto a platform, but not when there is no supporting platform (Baillargeon et al., 1992; Needham and Baillargeon, 1993; Kolstad and Baillargeon, 1994); see Figure 4.2.

In a study of visual fixation on consistent and inconsistent events with light and heavy objects, Schilling and Clifton (1998) also showed that 9-month-old infants look longer at the physically inconsistent events than those that are consistent with their expectations; see Figure 4.3. Another well-documented example of infants' early understanding of physical causality is that stationary objects are displaced when hit by moving objects. Research studies have demonstrated that infants as young as 2-1/2 months understand this concept, though it is not until about 6-1/2 months of age that they relate the size of the moving object and the distance of displacement of the stationary objects. "When looking at collision events between a moving and a stationary object, infants first form an initial concept centered on an impact/no-impact decision. With further experience, infants begin to identify variables that influence this initial concept" (Baillargeon, 1995:193).

In the first year of life, infants can understand that inanimate objects need to be propelled into action, that the objects cannot move themselves. For example, Leslie (1994a,b) showed that 4- to 7-month-old infants expect a point of contact to be involved in physical displacement. In one study, the infant watches a film in which a hand approaches a stationary doll and either appears to pick it up (contact condition) and moves away or the doll moves in

tandem but without physical contact (no-contact condition). Using the habituation methodology, Leslie demonstrated that infants are highly sensitive to spatiotemporal discontinuities: they see the hand as an agent to cause movement in an inanimate object, but the no-contact conditions are seen as anomalous events--violations of causal principles.

The early understandings just described are soon reflected in children's spontaneous actions. In studies of his own young children's exploratory play, Piaget found that by 12 months of age they clearly understood the need for a point of contact to bring inanimate objects into range. For example, Jacqueline (9 months) discovers that she can bring a toy within reach by pulling a blanket (support) on which it is placed. During the weeks that follow, she frequently uses this "schema" (Piaget, 1952:285). Lucienne (12 months), once having witnessed the action of the support, rapidly generalized the schema to sheets, handkerchiefs, table cloths, pillows, boxes, books, and so on. Once the baby understood the notion of the support, this knowledge transferred rapidly to a variety of potential supports. The same learning is true of stick-like things (push schema) and string-like objects (pull schema), as "means for bringing" (Piaget, 1952:295). Each new acquisition brings with it its own realm of generalization.

A series of laboratory studies has reaffirmed and extended Piaget's original naturalistic observations and provided a fairly detailed description of development of the push/pull schema from 4 to 24 months of age. As noted above, Leslie showed that 7-month-olds are sensitive to the need for point of contact in a pushing scenario. Bates et al. (1980) looked at infants' ability to reach a toy using various tools. And Brown and Slattery (described in Brown, 1990) looked at children's ability to choose the correct tool (with adequate length, rigidity, and pushing or pulling head) from an array of available tools. It was not until 24 months of age that children immediately selected the adequate tool, but by 14 months children could do so with some practice. Across the age range of 10-24 months, children first used tools effectively that were physically attached (unbreakable contact) in contrast to tools that could be unattached at the contact point (breakable contact) or when the point of contact needed to be imagined (no contact). Children showed distress or surprise at trick events--when a tool appeared to be attached but wasn't or vice versa, thus violating their pulling schema (Brown, 1990).

These studies, taken together, paint an interesting developmental scenario. Although children in habituation paradigms seem to understand the need for point of contact early (5-7 months), they cannot at 10 months apply that knowledge to tool use tasks *unless* the contact between the tool and the goal is provided in the physical layout of the task: the tool touches the object; the solution is physically situated in the environment itself. Several months later, infants can learn, with a demonstration, to envision the point of contact that is not specified in the visual array, but is invited by the pulling features of the tools. They can see that a hook would work in getting the tool if it is rigid and long enough. By 24 months, children readily note the pulling potential of unattached tools and can make a choice between available tools on the basis of their adequacy. The research shows that young children have the requisite knowledge in some sense very early on, but they need help in the form of demonstrations to prompt the application of what they know.

Biological Causality

During the past 30 years, a great deal has been learned about primitive concepts of biological causality. We concentrate here on the differences between animate and inanimate objects.

Infants learn rapidly about the differences between inanimate and animate: as we have seen, they know that inanimate objects need to be pushed or propelled into motion. Infants as young as 6 months can distinguish animate versus inanimate movements as patterns of lights

attached to forces or people (Bertenthal, 1993). And Spelke (1990) has shown that if two people come close together and move away in tandem without touching, 7-months-olds show no surprise; but if two people-sized inanimate objects come together and move without a point of contact, they are perturbed (as measured by the habituation paradigm).

Young children show an early understanding that animate objects have the potential to move themselves because they are made of "biological stuff"--they obey what R. Gelman (1990) calls the "innards principle of mechanism." Inanimate objects, in contrast, obey the external-agent principle: they cannot move themselves, but must be propelled into action by an external force.

For example, Massey and Gelman (1988) reported that 3- and 4-year-old children correctly responded when asked if novel objects like an echidna and a statue can move themselves up and down a hill. Despite the fact that the echidna looked less like a familiar animal than did a statue, the children claimed that only the living object could move itself up and down a hill. Similarly, young children in this age range can give sensible answers to questions about the difference between the insides and outsides of animals, machines, and natural inanimate objects; see Figure 4.4.

These are only a handful of findings from a large body of research that goes a long way to challenge the idea that young children are incapable of considering non-perceptual data in scientific areas. Given that there is a mounting body of evidence showing that youngsters are busy constructing coherent accounts of their physical and biological worlds, one needs to ask to what extent these early competencies serve as a bridge for further learning when they enter school.

Early Number Concepts

An ever-increasing body of evidence shows that the human mind is endowed with an implicit mental ability that facilitates attention to and use of representations of the number of items in a visual array, sequence of drumbeats, jumps of a toy bunny, numerical values represented in arrays, etc. For example, Starkey et al. (1990) showed 6- to 8-month-old infants a series of photographic slides of either 2- or 3-item displays. Each successive picture showed different household items, including combs, pipes, lemons, scissors, and corkscrews that varied in color, shape, size, and texture and spatial position. Half of the infants saw a series of two-item displays while the other half were shown a series of three-item displays. When they became bored, their looking times dropped by 50 percent (they habituated). At this point, they were then shown displays that alternated between two and three items, and if the displays showed a different number of items from what they had seen before, the infants began to show interest by looking again. The only common characteristic within the two-item and three-item displays was their numerical value, so one can say the infants habituated to the set of two or three things and then recovered interest when they were shown a different number of things. The infants could have focused on perceptual attributes of the items such as their shapes, motion, textural complexity, and so on, but they did not. This is an important clue that they are able to process information that represents number at a rather abstract level.

Other researchers have shown that infants pay attention to the number of times a toy rabbit jumps up and down, so long as the number of jumping events they have to keep track of is kept between two and four jumps (Wynn, 1996). An especially interesting demonstration of infants' ability to notice abstract number information in the environment was reported by Canfield and Smith (1996). They found that 5-month-old infants used visual expectation (see previous section) to show that infants are able to distinguish three pictures presented in one location from two pictures in another.

Young infants and toddlers also respond correctly to the effects of the arithmetic operations of adding and subtracting. Through their surprise or search reactions, young children are able to tell us when an item is added or subtracted from what they expected (Wynn, 1990, 1992a, b; Starkey, 1992). For example, 5-month-old infants first saw two objects repeatedly; then a screen covered the objects and they watched as an experimenter proceeded to add another object or remove one from the hidden display. The screen was then removed, revealing one more or one less item than before. In both the less and more conditions, infants looked longer at the numerically "incorrect" display--that is, the unexpected value that did not correspond to their initial training; if they saw one added, they expected three, not one, and vice versa (Wynn, 1992a, b).

Experimental evidence of this kind implies a psychological process that relates the effect of adding or removing items to a *numerical representation* of the initial display. A similar line of evidence with preschool children indicates that very young children are actively engaged in using their implicit knowledge of number to attend to and make sense of novel examples of numerical data in their environments; see Box 4.2.

There are many other demonstrations of young children's interpreting sets of objects in terms of number. Together, the findings indicate that even young children can actively participate in their own learning and problem solving about number. This ability is why children often deal with novel conditions rather well, as when they tell puppets who are "just learning to count" if they are correct and if they are wrong or even invent counting solutions (Groen and Resnick, 1977; Siegler and Robinson, 1982; Starkey and Gelman, 1982; Sophian, 1994).

But just because children have some knowledge of numbers before they enter school is not to say that there is little need for careful learning later. Early understanding of numbers can guide their entry into school-based learning about number concepts. Successful programs based on developmental psychology already exist, notably the Right Start Program (Griffin and Case, 1997). Although making the entry levels easier, these early number concepts can also be problematic when it comes to the transitions to higher-level mathematics. Rational numbers (fractions) do not behave like whole numbers, and attempting to treat them as such leads to serious problems. It is therefore noteworthy that many children experience just these sorts of problems in mathematics when they encounter "fractions": They believe the larger number always represents a bigger quantity or larger unit.

Early Attention to Language

We introduced the idea that children come equipped with the means necessary for understanding their worlds when considering physical and biological concepts. It should not be surprising that infants also possess such mechanisms for learning language. They begin at an early age to develop knowledge of their linguistic environments, using a set of specific mechanisms that guide language development.

Infants have to be able to distinguish linguistic information from nonlinguistic stimuli: they attribute meaning and linguistic function to words and not to dog barks or telephone rings (Mehler and Christophe, 1995). By 4 months of age, infants clearly show a preference for listening to words over other sounds (Colombo and Bundy, 1983). And they can distinguish changes in language. For example, after being habituated to English sentences, infants detected the shift to a different language, such as Spanish; they did not register shifts to different English utterances (Bahrick and Pickens, 1988), which indicates that they noticed the novel Spanish utterances. Figure 4.5 illustrates that American-born infants, at 2 months of age, start reacting to English utterances significantly faster than they do to French utterances. Young infants learn to pay attention to the features of speech, such as intonation and rhythm,

that help them obtain critical information about language and meaning. As they get older, they concentrate on utterances that share a structure that corresponds to their maternal language, and they neglect utterances that do not.

By 6 months of age, infants distinguish some of the properties that characterize the language of their immediate environment (Kuhl et al., 1992). Around 8-10 months of age, infants stop treating speech as consisting of mere sounds and begin to represent only the linguistically *relevant* contrasts (Mehler and Christophe, 1995). For example, Kuhl et al. (1992) have shown that the contrasts "ra" and "la" can be learned by very young English and Japanese babies alike, but later on only the contrast relevant to the mother language is retained as the other one drops out (e.g., "la" drops out for Japanese infants). Such studies illustrate that the learning environment is critical for determining what is learned even when the basic learning mechanisms do not vary.

Young infants are also predisposed to attend to the language spoken by others around them. They are attracted to human faces, and look especially often at the lips of the person speaking. They appear to expect certain types of coordination between mouth movements and speech. When shown videos of people talking, infants can detect the differences between lip movements that are synchronized with the sounds and those that are not.

Young children also actively attempt to understand the meaning of the language that is spoken around them. Roger Brown (1958) discussed "The Original Word Game" that children play with parents. Successful participation involves the child's making inferences about what someone must mean by paying attention to the surrounding context. Parents of 1-year-olds report that their children understand much of what is said to them, although there is obviously a great deal of information that children really do not understand (Chapman, 1978). For example, Lewis and Freedle (1973) analyzed the comprehension abilities of a 13-month-old child. When handed an apple while she was in her high chair and told "Eat the apple," the child bit it. When handed an apple while playing in her playpen and told "Throw the apple," the child threw it. Lewis and Freedle performed an experiment in order to test whether the child really understood words such as "eat" and "throw." They handed the child an apple while she was in her high chair and asked her to "throw the apple." The child bit it. Later, when the child was in her playpen she was handed an apple and told "eat the apple." She threw it. The child's strategy was basically to assume that she should "do what you usually do in this situation." This sound strategy is frequently correct.

In everyday settings, young children have rich opportunities for learning because they can use context to figure out what someone must mean by various sentence structures and words. Unless she was being tested by tricky experimenters, for example, the child discussed above could determine the general meanings of "apple," "eat," and "throw." Similarly, if a mother says "Get your shirt" while pointing to the only loose object (a shirt) on the rug, the child begins to understand the meaning of "get" and "shirt." Language acquisition cannot take place in the absence of shared social and situational contexts because the latter provide information about the meanings of words and sentence structures (Chapman, 1978). The child uses meaning as a clue to language rather than language as a clue to meaning (MacNamara, 1972). Parents and other caregivers take into account both context and children's emerging abilities as they help them extend their competencies. The extremely important guiding role that caregivers have in children's cognitive development is discussed further below.

Language development studies illustrate that children's biological capacities are set into motion by their environments. The biological underpinnings enable children to become fluent in language by about age three, but if they are not in a language-using environment, they will not develop this capacity. Experience is important; but the opportunity to use the skills--practice--is also important. Janellen Huttenlocher, for example, has shown that language has

to be practiced as an ongoing and active process and not merely passively observed by watching television (Huttenlocher, cited in *Newsweek*, 1996).

STRATEGIES FOR LEARNING AND METACOGNITION

So far we have reviewed research that has tapped into infants' amazing competencies that biologically predispose them to learn. These predispositions help prepare human infants for the complex challenges of adaptive learning that come later in life. In order to thrive, children must still engage in self-directed and other-directed learning, even in areas of early competence. In this section we look at how children learn about things that they would not be predisposed to attend to, such as chess or the capital cities of countries. We discuss how children come to be able to learn almost anything through effort and will.

It has generally been assumed that in the arena of deliberate, intentional, mindful, and strategic learning, young children are woefully inadequate. But recent scientific studies have revealed hitherto unsuspected strategic competence and metacognitive knowledge in young children.

The Importance of Capacity, Strategies, Knowledge, and Metacognition

A traditional view of learning and development was that young children know and can do little, but with age (maturation) and experience (of any kind) they become increasingly competent. From this view, learning is development and development is learning. There is no need to postulate special forms of learning nor for learners to be particularly active (see Bijou and Baer, 1961; Skinner, 1950). Yet even in privileged domains, as described above, this passive view does not fully apply.

In addition, research in another major area began to show how learners process information, remember, and solve problems in nonprivileged domains. Known as information processing (Simon, 1972; Newell and Simon, 1972), this branch of psychology was quickly adopted to explain developments in children's learning. All human learners have limitations to their short-term memory for remembering and for solving problems. Simon (1972) and others (e.g., Chi, 1978; Siegler, 1978; Klahr and Wallace, 1973) argued that development means overcoming information-processing constraints, such as limited short-term memory capacity. The crucial argument for developmental psychologists is whether young learners are particularly hampered by memory limitations and whether, compared with adults, they are less able to overcome general limitations through the clever use of strategies or by lack of relevant knowledge factors.

One view of learning in children is that they have a less memory capacity than adults. While there is no doubt that, in general, children's learning and memory abilities increase with age, controversy surrounds the mechanisms that affect these changes. One view is that children's short-term memory capacity, or the amount of mental space they have (M-space), increases as children mature (Pascual-Leone, 1988). With more mental space, they can retain more information and perform more complex mental operations. A complementary view is that the mental operations of older children are more rapid, enabling them to make use of their limited capacity more effectively (Case, 1992). If one holds either of these positions, one would expect relatively uniform improvement in performance across domains of learning (Case, 1992; Piaget, 1970).

A second view is that children and adults have roughly the same mental capacity, but that with development children acquire knowledge and develop effective activities to use their

minds well. Such activities are often called strategies. There are a variety of well-known strategies that increase remembering, such as rehearsal (repeating items over and over), which tends to improve rote recall (Belmont and Butterfield, 1971); elaboration (Reder and Anderson, 1980), which improves retention of more meaningful units such as sentences; and summarization (Brown and Day, 1984), which increases retention and comprehension. These are just three of many strategies.

Perhaps the most pervasive strategy used to improve memory performance is clustering: organizing disparate pieces of information into meaningful units. Clustering is a strategy that depends on organizing knowledge. In a classic paper, Miller (1956) described the persistence of a phenomenon he called the "magical number 7 ± 2" in human mental processing. Given a list of numbers to remember, sounds (phonemes) to distinguish from one another, or a set of unrelated facts to recall, there is a critical change in performance at around seven items. Up to seven items (between five and nine, actually, hence Miller's title), people can readily handle a variety of tasks; with more than seven, they simply cannot process them handily. People have developed ways around this memory constraint by organizing information, such as grouping together or "chunking" disparate elements into sets of letters, numbers, or pictures that make sense to them.

Known as the chunking effect, this memory strategy improves the performance of children, as well as adults. A prototype experiment would involve, for example, presenting 4- to 10-year-olds with long lists of pictures to remember, far more than they could if they simply tried to remember them individually. Such a list might consist of pictures of a cat, rose, train, hat, airplane, horse, tulip, boat, coat, etc. Given a 20-item list, older children remember more than younger children, but the factor responsible for better recall is not age per se, but whether the child notices that the list consists of four *categories* (animals, plants, means of transportation, and articles of clothing). If the categories are noticed, young children often recall the entire list. In the absence of category recognition, performance is poorer and shows the age effect. Younger children employ categorization strategies less often than older ones. However, the skill is knowledge related, not age related; the more complex the categories, the older the child is before noticing the structure. One has to know a structure before one can use it.

These varying views of children's learning have different implications for what one expects from children. If one believes that learning differences are determined by gradual increases in capacity or speed of processing, one would expect relatively uniform increases in learning across most domains. But if one believes that strategies and knowledge are important, one would expect different levels of learning, depending on the children's conceptual knowledge and their control over strategies that organize that knowledge for learning. For example, in a comparison of college students' and third graders' abilities to recall 30 items that included the names of Saturday morning television shows, children's cartoon characters, etc., the third graders clustered more and subsequently recalled more (Linberg, 1980). Similarly, a group of 8- to 12-year-old "slow learners" performed much better than "normal" adults on a task of recalling large numbers of pop stars because of a clustering strategy (Brown and Lawton, 1977). An outstanding example of the intertwining of capacity, knowledge, and strategies in children's chess performance is provided in Box 2.1 (see Chapter 2).

Metacognition is another important aspect of children's learning (see Brown, 1978; Flavell and Wellman, 1977). The importance of prior knowledge in determining performance, crucial to adults as well as children, includes knowledge about learning, knowledge of their own learning strengths and weaknesses, and the demands of the learning task at hand. Metacognition also includes self-regulation--the ability to orchestrate one's learning: to plan, monitor success, and correct errors when appropriate--all necessary for effective intentional learning (Bereiter and Scardamalia, 1989).

Metacognition also refers to the ability to reflect on one's own performance. Whereas self-regulation may appear quite early, reflection appears to be late developing. If children lack insight to their own learning abilities, they can hardly be expected to plan or self-regulate efficiently. But metacognition does not emerge full-blown in late childhood in some "now you have it, now you don't" manner. The evidence suggests that, like other forms of learning, metacognition develops gradually and is as dependent on knowledge as experience. It is difficult to engage in self-regulation and reflection in areas that one does not understand. However, on topics that children know, primitive forms of self-regulation and reflection appear early (Brown and DeLoache, 1978).

Attempts at deliberate remembering in preschool children provide glimpses of the early emergence of the ability to plan, orchestrate, and apply strategies. In a famous example, 3- and 4-year-old children were asked to watch while a small toy dog was hidden under one of three cups. The children were instructed to remember where the dog was. The children were anything but passive as they waited alone during a delay interval (Wellman et al., 1975). Some children displayed various behaviors that resemble well-known mnemonic strategies, including clear attempts at retrieval practice, such as looking at the target cup and nodding yes, looking at the non-target cups and nodding no, and retrieval cueing, such as marking the correct cup by resting a hand on it or moving it to a salient position. Both of these strategies are precursors to more mature rehearsal activities. These efforts were rewarded: children who prepared actively for retrieval in these ways more often remembered the location of the hidden dog. Box 4.3 shows a glimmer of even earlier emergence of "rehearsal."

These attempts to aid remembering involve a dawning awareness of metacognition--that without some effort, forgetting would occur. And the strategies involved resemble the more mature forms of strategic intervention, such as rehearsal, used by older school-aged children. Between 5 and 10 years of age, children's understanding of the need to use strategic effort in order to learn becomes increasingly sophisticated, and their ability to talk about and reflect on learning continues to grow throughout the school years (Brown et al., 1983). By recognizing this dawning understanding in children, one can begin to design learning activities in the early school years that build on and strengthen their understanding of what it means to learn and remember.

Multiple Strategies, Strategy Choices

The strategies that children use to memorize, conceptualize, reason, and solve problems grow increasingly effective and flexible, and are applied more broadly, with age and experience. But different strategies are not solely related to age. To demonstrate the variety, we consider the specific case of the addition of single-digit numbers, which has been the subject of a great deal of cognitive research.

Given a problem such as 3 + 5, it was initially believed that preschool children add up from 1 (i.e., 1,2,3|4,5,6,7,8), that 6- to 8-year-olds add by counting from the larger number ("5, then 6, 7, 8,"), and that from 9 years on, children retrieve answers from memory because they know the answer (Ashcraft, 1985; Resnick and Ford, 1981). More recently, however, a more complex and interesting picture has emerged (Siegler, 1996). On a problem-by-problem basis, children of the same age often use a wide variety of strategies. This finding has emerged in domains as diverse as arithmetic (Cooney et al., 1988; Geary and Burlingham-Dubree, 1989; Goldman et al., 1988; Siegler and Robinson, 1982), causal and scientific reasoning (Lehrer and Schauble, 1996; Kuhn, 1995; Schauble, 1990; Shultz, 1982), spatial reasoning (Ohlsson, 1991); referential

communications (Kahan and Richards, 1986), recall from memory (Coyle and Bjorklund, 1997), reading and spelling (Jorm and Share, 1983), and judgments of plausibility (Kuhara-Kojima and Hatano, 1989). Even the same child presented the same problem on two successive days often uses different strategies (Siegler and McGilly, 1989). For example, when 5-year-olds add numbers, they sometimes count from 1, as noted above, but they also sometimes retrieve answers from memory, and sometimes they count from the larger number (Siegler, 1988).

The fact that children use diverse strategies is not a mere idiosyncrasy of human cognition. Good reasons exist for people to know and use multiple strategies. Strategies differ in their accuracy, in the amounts of time their execution requires, in their processing demands, and in the range of problems to which they apply. Strategy choices involve tradeoffs among these properties. The broader the range of strategies that children know and can appreciate where they apply, the more precisely they can shape their approaches to the demands of particular circumstances.

Even young children can capitalize on the strengths of different strategies and use each one for the problems for which its advantages are greatest. For example, for an easy addition problem such as 4+1, first graders are likely to retrieve the answer; for problems with large differences between the numbers, such as 2+9, they are likely to count from the larger number ("9,10,11"); for problems excluding both of these cases, such as 6+7, they are likely to count from one (Geary, 1994; Siegler, 1988). The adaptiveness of these strategy choices increases as children gain experience with the domain, though it is obvious even in early years (Lemaire and Siegler, 1995).

Once it is recognized that children know multiple strategies and choose among them, the question arises: How do they construct such strategies in the first place? This question is answered through studies in which individual children who do not yet know a strategy are given prolonged experiences (weeks or months) in the subject matter; in this way, researchers can study how children devise their various strategies (Kuhn, 1995; Siegler and Crowley, 1991; see also DeLoache et al., 1985a). These are referred to as "microgenetic" studies, meaning small-scale studies of the development of a concept. In this approach, one can identify when a new strategy is first used, which in turn allows examination of what the experience of discovery was like, what led to the discovery, and how the discovery was generalized beyond its initial use.

Three key findings have emerged from these studies: (1) discoveries are often made not in response to impasses or failures but rather in the context of successful performance; (2) short-lived transition strategies often precede more enduring approaches; and (3) generalization of new approaches often occurs very slowly, even when children can provide compelling rationales for their usefulness (Karmiloff-Smith, 1992; Kuhn, 1995; Siegler and Crowley, 1991). Children often generate useful new strategies without ever having generated conceptually flawed ones. They seem to seek conceptual understanding of the requisites of appropriate strategies in a domain. On such tasks as single-digit addition, multidigit subtraction, and the game of tic-tac-toe, children possess such understanding, which allows them to recognize the usefulness of new, more

advanced strategies before they generate them spontaneously (Hatano and Inagaki, 1996; Siegler and Crowley, 1994).

The new understanding of children's strategic development has led to instructional initiatives. A common feature of such innovations as reciprocal teaching (Palincsar and Brown, 1984), communities of learners (Brown and Campione, 1994, 1996; Cognition and Technology Group at Vanderbilt, 1994), the ideal student (Pressley et al., 1992), and Project Rightstart (Griffin et al., 1992) is that they recognize the importance of students' knowing and using diverse strategies. These programs differ, but all are aimed at helping students to understand how strategies can help them solve problems, to recognize when each strategy is likely to be most useful, and to transfer strategies to novel situations. The considerable success that these instructional programs have enjoyed, with young as well as older children and with low-income as well as middle-income children, attests to the fact that the development of a repertoire of flexible strategies has practical significance for learning.

Multiple Intelligences

Just as the concept of multiple strategies has improved understanding of children's learning and influenced approaches to education, so, too, has the growing interest in multiple forms of intelligence. In his theory of multiple intelligences, Gardner (1983, 1991) proposed the existence of seven relatively autonomous intelligences: linguistic, logical, musical, spatial, bodily kinesthetic, interpersonal, and intrapersonal. Recently, Gardner (1997) proposed an eighth intelligence, "naturalistic." The first two intelligences are those typically tapped on tests and most valued in schools.

The theory of multiple intelligences was developed as a psychological theory, but it sparked a great deal of interest among educators, in this country and abroad, in its implications for teaching and learning. The experimental educational programs based on the theory have focused generally in two ways. Some educators believe that all children should have each intelligence nurtured; on this basis, they have devised curricula that address each intelligence directly. Others educators have focused on the development of specific intelligences, like the personal ones, because they believe these intelligences receive short shrift in American education. There are strengths and weaknesses to each approach.

The application of multiple intelligences to education is a grass roots movement among teachers that is only just beginning. An interesting development is the attempt to modify traditional curricula: whether one is teaching history, science, or the arts, the theory of multiple intelligences offers a teacher a number of different approaches to the topic, several modes of representing key concepts, and a variety of ways in which students can demonstrate their understandings (Gardner, 1997).

CHILDREN'S VIEWS OF INTELLIGENCE AND THEIR LEARNING: MOTIVATION TO LEARN AND UNDERSTAND

Children, like their elders, have their own conceptions about their minds and those of others and how humans learn and are "intelligent" (see Wellman, 1990; Wellman and Hickey, 1994; Gelman, 1988; Gopnik, 1990). Children are said to have one of two main classes of beliefs: entity theories and incremental theories (Dweck, 1989; Dweck and Elliot, 1983; Dweck and Leggett, 1988). Children with entity theories believe that intelligence is a fixed property of individuals; children with incremental theories believe that intelligence is malleable (see also Resnick and Nelson-LeGall, 1998). Children who are entity theorists tend to hold performance goals in learning situations: they strive to perform well or appear to perform well, attain positive judgments of their competence, and avoid assessments. They avoid challenges that will reflect them in poor light. They show little persistence in the face of failure. Their aim is to perform well. In contrast, children who are incremental theorists have learning goals: they believe that intelligence can be improved by effort and will. They regard their own increasing competence as their goal. They seek challenges and show high persistence. It is clear that children's theories about learning affect how they learn and how they think about learning. Although most children probably fall on the continuum between the two theories and may simultaneously be incremental theorists in mathematics and entity theorists in art, the motivational factors affect their persistence, learning goals, sense of failure, and striving for success. Teachers can guide children to a more healthy conceptualization of their learning potential if they understand the beliefs that children bring to school.

Self-Directed and Other-Directed Learning

Just as children are often self-directed learners in privileged domains, such as those of language and physical causality, young children exhibit a strong desire to apply themselves in intentional learning situations. They also learn in situations where there is no external pressure to improve and no feedback or reward other than pure satisfaction--sometimes called achievement or competence motivation (White, 1959; Yarrow and Messer, 1983; Dichter-Blancher et al., 1997). Children are both problem solvers and problem generators; they not only attempt to solve problems presented to them, but they also seek and create novel challenges. An adult struggling to solve a crossword puzzle has much in common with a young child trying to assemble a jigsaw puzzle. Why do they bother? It seems that humans have a need to solve problems; see Box 4.4. One of the challenges of schools is to build on children's motivation to explore, succeed, understand (Piaget, 1978) and harness it in the service of learning.

GUIDING CHILDREN'S LEARNING

Along with children's natural curiosity and their persistence as self-motivated learners, what they learn during their first 4 or 5 years is not learned in isolation. Infants' activities are complemented by adult-child relationships that encourage the gradual involvement of children in the skilled and valued activities of the society in which they live. Research has shown that learning is strongly influenced by these social interactions. In fact, studies of interactions of drug-abusing mothers and their infants show how the absence of these critical learning interactions depresses 3- and 6-month-old infants' learning (Mayes et al., 1998).

Parents and others who care for children arrange their activities and facilitate learning by regulating the difficulty of the tasks and by modeling mature performance during joint participation in activities. A substantial body of observational research has provided detailed accounts of the learning interactions between mothers and their young children. As an illustration, watch a mother with a 1-year-old sitting on her knees in front of a collection of toys. A large part of her time is devoted to such quietly facilitative and scene-setting activities as holding a toy that seems to require three hands to manipulate, retrieving things that have

been pushed out of range, clearing away those things that are not at present being used in order to provide the child with a sharper focus for the main activity, turning toys so that they become more easily grasped, demonstrating their less obvious properties, and all along molding her body in such a way as to provide maximal physical support and access to the play materials (Schaffer, 1977:73).

In addition to the research showing how adults arrange the environment to promote children's learning, a great deal of research has also been conducted on how adults guide children's understanding of how to act in new situations through their emotional cues regarding the nature of the situation, nonverbal models of how to behave, verbal and nonverbal interpretations of events, and verbal labels to classify objects and events (Rogoff, 1990; Walden and Ogan, 1988). Parents frame their language and behavior in ways that facilitate learning by young children (Bruner, 1981a, b, 1983; Edwards, 1987; Hoff-Ginsberg and Shatz, 1982). For example, in the earliest months, the restrictions of parental baby talk to a small number of melodic contours may enable infants to abstract vocal prototypes (Papousek et al., 1985). Parental labeling of objects and categories may assist children in understanding category hierarchies and learning appropriate labels (Callanan, 1985; Mervis, 1984). Communication with caregivers to accomplish everyday goals is the groundwork for children's early learning of the language and other cognitive tools of their community; see Box 4.5.

An extremely important role of caregivers involves efforts to help children connect new situations to more familiar ones. In our discussion of competent performance and transfer (see Chapter 3), we noted that knowledge appropriate to a particular situation is not necessarily accessed despite being relevant. Effective teachers help people of all ages make connections among different aspects of their knowledge.

Caregivers attempt to build on what children know and extend their competencies by providing supporting structures or scaffolds for the child's performance (Wood et al., 1976). Scaffolding involves several activities and tasks, such as:

- interesting the child in the task;
- reducing the number of steps required to solve a problem by simplifying the task, so that a child can manage components of the process and recognize when a fit with task requirements is achieved;
- maintaining the pursuit of the goal, through motivation of the child and direction of the activity;
- marking critical features of discrepancies between what a child has produced and the ideal solution;
- controlling frustration and risk in problem solving; and
- demonstrating an idealized version of the act to be performed.

Scaffolding can be characterized as acting on a motto of "Where before there was a spectator, let there now be a participant" (Bruner, 1983:60).

Learning to Read and Tell Stories

The importance of adult support of children's learning can be demonstrated by considering the question: How is it that children, born with no language, can develop most of the rudiments of story telling in the first three years of life? (Engle, 1995). A variety of literacy experiences prepare children for this prowess. Providing children with practice at telling or "reading" stories is an impetus to the growth of language skills and is related to early

independent reading; see Box 4.6. For many years some parents and scholars have known about the importance of early reading, through picture book "reading" that is connected to personal experiences. Recently, the efficacy of this process has been scientifically validated--it has been shown to work (see National Research Council, 1998).

In the late nineteenth century, C. L. Dodgson--Lewis Carroll--prepared a nursery version of his famous *Alice in Wonderland/Through the Looking Glass* books. The majority of the book consisted of reprints of the famous Tenniel woodcut illustrations. The book was to stimulate "reading" in the sense that contemporary children's wordless picture books do. This was a first of its kind, and we quote Lewis Carroll (cited in Cohen, 1995:440).

> I have reason to believe that "Alice's Adventures in Wonderland" has been read by some hundreds of English Children, aged from Five to Fifteen: also by Children aged from Fifteen to Twenty-five: yet again by Children aged from Twenty-five to Thirty-five . . . And my ambition now (is it a vain one?) is that it will be read by Children aged from Nought to Five. To be read? Nay, not so! Say rather to be thumbed, to be cooed over, to be dogs'-eared, to be rumpled, to be kissed, by the illiterate, ungrammatical.

A preeminent educator, Dodgson had a pedagogical creed about how "Nursery Alice" should be approached. The subtext of the book is aimed at adults, almost in the fashion of a contemporary teacher's guide; they were asked to bring the book to life. The pictures were the primary focus; much of the original tale is left unspecified. For example, when looking at the famous Tenniel picture of Alice swimming with mouse in a pool of her own tears, Carroll tells the adult to read to the child as follows (cited in Cohen, 1995:441):

> Now look at the picture, and you'll soon guess what happened next. It looks just like the sea, doesn't it? But it really is the Pool of Tears--all made of Alice's tears, you know!
> And Alice has tumbled into the Pool: and the Mouse has tumbled in: and there they are swimming about together.
> Doesn't Alice look pretty, as she swims across the picture? You can just see her blue stockings, far away under the water.
> But Why is the Mouse swimming away from Alice is such a hurry? Well, the reason is, that Alice began talking about cats and dogs: and a Mouse always hates talking about cats and dogs!
> Suppose you were swimming about, in a Pool of your own Tears: and suppose somebody began talking to you about lesson-books and bottles of medicine, wouldn't you swim as hard as you could go?

Carroll, a natural teacher, guides caretakers through the task of concentrating the child's attention on the picture, prodding the child's curiosity by asking questions, and engaging the child in a dialogue--even if the child's contribution is initially limited. Carroll asks the adult to lead the child through literacy events by developing "habits of close observation." He cleverly suggests certain truths about human and animal nature, and he opens up a realm of fun and nonsense that the child can share with the adult reading the story (Cohen, 1995:442).

When caregivers engage in picture book "reading," they can structure children's developing narrative skills by asking questions to organize children's stories or accounts (Eisenberg, 1985; McNamee, 1980). If the child stops short or leaves out crucial information, adults may prompt, "What happened next?" or "Who else was there?" Such questions implicitly provide children with cues to the desired structure of narratives in their environment.

For example, one mother began reading with her child, Richard, when he was only 8 months old (Ninio and Bruner, 1978). The mother initially did all the "reading," but at the same time she was engaged in "teaching" Richard the ritual dialogue for picture book reading. At first she appeared to be content with any vocalization from the baby, but as soon as he produced actual words, she increased her demands and asked for a label with the query, "What's that?" The mother seemed to increase her level of expectation, first coaxing the child to substitute a vocalization for a nonvocal sign and later a well-formed word for a babbled vocalization. Initially, the mother did all the labeling because she assumed that the child could not; later, the mother labeled only when she believed that the child would not or could not

label for himself. Responsibility for labeling was thereby transferred from the mother to the child in response to his increasing store of knowledge, finely monitored by the mother. During the course of the study the mother constantly updated her inventory of the words the child had previously understood and repeatedly attempted to make contact with his growing knowledge base.

Middle-class children between 1-1/2 and 3 years often provide labels spontaneously. One group of children did such labeling as "There's a horsie" or asked the mothers for information "What's this?" (DeLoache, 1984). With the 3-year-olds, the mothers went far beyond labeling; they talked about the relation among the objects in the picture, related them to the children's experiences, and questioned the children about their outside experience. For example, "That's right, that's a beehive. Do you know what bees make? They make honey. They get nectar from flowers and use it to make honey, and then they put the honey in the beehive." The mothers use the situation and the material to provide the children with a great deal of background information. They continually elaborate and question information, which are comprehension-fostering activities that must later be applied to "real" reading tasks.

In these reading activities, mothers are attempting to function in what psychologists call a child's zone of proximal development--to stretch what the child can do with a little assistance (see Box 4.1 above). As the child advances, so does the level of collaboration demanded by the mother. The mother systematically shapes their joint experiences in such a way that the child will be drawn into taking more and more responsibility for their joint work. In so doing, she not only provides an excellent learning environment, she also models appropriate comprehension-fostering activities; crucial regulatory activities are thereby made overt and explicit.

Story telling is a powerful way to organize lived and listened-to experiences, and it provides an entry into the ability to construe narrative from text. By the time children are 3 or 4, they are beginning narrators; they can tell many kinds of stories, including relating autobiographical events, retelling fiction, and recalling stories they have heard. The everyday experiences of children foster this story telling. Children like to talk and learn about familiar activities, scripts or schemes, the "going to bed" script or the "going to McDonald's" script (Nelson, 1986; Mandler, 1996). Children like to listen to and retell personal experiences. These reminiscences are stepping stones to more mature narratives. As they get older, children increase their levels of participation by adding elements to the story and taking on greater pieces of the authorial responsibility. By 3 years of age, children in families in which joint story telling is common can take over the leadership role in constructing personal narratives.

Reminiscing also enables children to relate upsetting experiences; such narratives act as "cooling vessels" (Bruner, 1972), distancing the experience and confirming the safe haven of homes and other supportive environments. This early interest in sharing experience, joint picture book reading, and narrative, in general, have obvious implications for literary appreciation in preschool and early grades. Indeed, the KEEP (Au, 1981; Au and Jordan, 1981) program in Hawaii and the Reciprocal Teaching Program (Palinscar and Brown, 1984) in urban U.S. cities were both explicitly modeled after the natural interactions; they attempted to build on them and model the style. Connection-making and scaffolding by parents to support children's mathematical learning has also proved a successful intervention (Saxe et al., 1984; Byrnes, 1996) that has been mimicked in school settings.

Cultural Variations in Communication

There are great cultural variations in the ways in which adults and children communicate, and there are wide individual differences in communication styles within any cultural community.

All cultural variations provide strong supports for children's development. However, some variations are more likely than others to encourage development of the specific kinds of knowledge and interaction styles that are expected in typical U.S. school environments. It is extremely important for educators--and parents--to take these differences into account.

Conversing, Observing, or Eavesdropping

In some communities, children are seldom direct conversational partners with adults, but rather engage with adults by participating in adult activities. In such situations, children's learning occurs through observing adults and from the pointers and support provided by adults in the contexts of ongoing activities. Such engagements contrast sharply with patterns common in other communities, in which adults take the role of directly instructing young children in language and other skills through explicit lessons that are not embedded in the contexts of ongoing activities (Ochs and Schieffelin, 1984; Rogoff, 1990; Rogoff et al., 1993).

For example, Pueblo Indian children are provided access to many aspects of adult life and are free to choose how and with whom to participate (John-Steiner, 1984). Their reports of their own learning stress their role as "apprentices" to more experienced members of the community (Suina and Smolkin, 1994). Observation and verbal explanation occur in the contexts of involvement in the processes as they are being learned.

In an African-American community of Louisiana, in which children are expected to be "seen and not heard," language learning occurs by eavesdropping. "The silent absorption in community life, the participation in the daily commercial rituals, and the hours spent overhearing adults' conversations should not be underestimated in their impact on a child's language growth" (Ward, 1971:37). "Nothing is censored for children's ears; they go everywhere in the community except Saturday-night parties." Older children teach social and intellectual skills: "Alphabets, colors, numbers, rhymes, word games, pen and pencil games are learned . . . from older children. No child, even the firstborn, is without such tutelage, since cousins, aunts, and uncles of their own age and older are always on hand" (Ward, 1971:25).

In this community, small children are not conversational partners with adults, as in the sense of other people with whom one converses. If children have something important to say, parents will listen, and children had better listen when their parents speak to them. But for conversation, adults talk to adults. Questions between older children and adults involve straightforward requests for information, not questions asked for the sake of conversation or for parents to drill children on topics to which the parents already know the answers. Mothers' speech to children, while not taking the form of a dialogue, is carefully regularized, providing precise, workable models of the language used in the community (Ward, 1971).

Schooling and the Role of Questioning

Detailed ethnographic research studies have shown striking differences in how adults and children interact verbally. Because of the prevalence of the use of questions in classrooms, one particularly important difference is how people treat questions and answers. One classic study, a comparison between the questioning behavior of white middle-class teachers in their own homes and the home question interaction of their working-class African-American pupils, showed dramatic differences (Heath, 1981, 1983). The middle-class mothers began the questioning game almost from birth and well before a child could be expected to answer. For example, a mother questions her 8-week-old infant, "You want your teddy bear?" and responds for the child, "Yes, you want your bear" (see Box 4.6 above). These rituals set the stage for a general reliance on questioning and pseudo-questioning interactions that serve a variety of social functions. Children exposed to these interaction patterns seem compelled to

provide an answer and are quite happy to provide information that they know perfectly well an adult already possesses.

Such "known-answer" questions, where the interrogator has the information being requested, occur frequently in classroom dialogues (Mehan, 1979). Teachers routinely call on children to answer questions that serve to display and practice their knowledge, rather than to provide information that the teacher does not know. Similarly, in middle-class homes, known-answer questions predominate. For example, in one 48-hour period, almost half the utterances (48% of 215) addressed to 27-month-old Missy were questions; of these questions, almost half (46%) were known-answer questions (Heath, 1981, 1983).

In general, questions played a less central role in the home social interaction patterns of the African-American children; in particular, there was a notable lack of known-answer rituals (Heath, 1981, 1983). The verbal interactions served a different function, and they were embedded within different communicative and interpersonal contexts. Common questioning forms were analogy, story-starting, and accusatory; these forms rarely occurred in the white homes. For example, the African-American children were commonly asked to engage in the sophisticated use of metaphors by responding to questions that asked for analogical comparisons. The children were more likely to be asked "What's that like?" or "Who's he acting like?" rather than "What's that?" Such questions reflected the African-American adults' assumptions that preschool children are adept at noting likenesses between things, assumptions that are also revealed in speech forms other than questioning, such as frequent use of similes and metaphors. The adults were asked about and value metaphorical thinking and narrative exposition initiated by a story-telling question: one participant indicated a willingness to tell a story using the question form, "Did you see Maggie's dog yesterday?" The appropriate answer to such a query is not "yes" or "no," but another question, "No, what happened to Maggie's dog yesterday?" that sets the stage for the initiator's narrative. Both adults and older preschool children were totally familiar with these questioning rituals and played them enthusiastically.

These examples emphasize the systematic differences between the form and function of questioning behaviors in the working-class black and middle-class white communities that were studied. Neither approach is "deficient," but the match between the activities that predominate in classrooms at the early grades is much greater with middle-class homes than with working-class ones in that community. As the middle-class teachers practiced their familiar questioning routines with their pupils, it is not surprising that the middle-class pupils, who shared the teacher's background, successfully fulfilled the answerer role, while the working-class African-American children were often perplexed (Heath, 1981, 1983). Moreover, teachers were sometimes bewildered by what they regarded as the lack of responsible answering behavior on the part of their black pupils. They commented (Heath, 1981:108):

They don't seem to be able to answer even the simplest questions.
I would almost think some of them have a hearing problem; it is as though they don't hear me ask a question. I get blank stares to my question. When I am making statements or telling stories which interest them, they always seem to hear me.
The simplest questions are the ones they can't answer in the classroom; yet on the playground, they can explain a rule for a ballgame, etc. They can't be as dumb as they seem in my class.
I sometimes feel that when I look at them and ask a question I'm staring at a wall I can't break through.

However, as the teachers learned about the types of metaphoric and narrative question sequences with which the children are familiar, they were able to gradually introduce the unfamiliar known-answer routines. This is an excellent example of the "two-way path, from school to the community and from the community to school" (Heath, 1981:125) that is needed if the transition to formal schooling is to be made less traumatic for ethnically diverse groups. Not only can interventions be devised to help minority-culture parents prepare children for school, but the schools themselves can be sensitive to the problems of cultural

mismatches. The answer is not to concentrate exclusively on changing children or changing schools, but to encourage adaptive flexibility in both directions.

CONCLUSIONS

The concept of "development" is critical to understanding the changes in children's thinking, such as the development of language, causal reasoning, and rudimentary mathematical concepts.

Young children are actively engaged in making sense of their worlds. In some particular domains, such as biological and physical causality, number, and language, they have strong predispositions to learn rapidly and readily. These predispositions support and may even make possible early learning and pave the way for competence in early schooling. Yet even in these domains, children still have a great deal of learning to do.

Children's early understanding of the perceptual and physical world may jump-start the learning process, even making learning possible, but one should look with caution for ways in which early knowledge may impede later learning. For example, children who treat rational numbers as they had treated whole numbers will experience trouble ahead. Awareness of these roadblocks to learning could help teachers anticipate the difficulty.

Although children learn readily in some domains, they can learn practically anything by sheer will and effort. When required to learn about nonprivileged domains they need to develop strategies of intentional learning. In order to develop strategic competence in learning, children need to understand what it means to learn, who they are as learners, and how to go about planning, monitoring, revising, and reflecting upon their learning and that of others. Children lack knowledge and experience but not reasoning ability. Although young children are inexperienced, they reason facilely with the knowledge they have.

Children are both problem solvers and problem generators: children attempt to solve problems presented to them, and they also seek novel challenges. They refine and improve their problem-solving strategies not only in the face of failure, but also by building on prior success. They persist because success and understanding are motivating in their own right.

Adults help make connections between new situations and familiar ones for children. Children's curiosity and persistence are supported by adults who direct their attention, structure their experiences, support their learning attempts, and regulate the complexity and difficulty levels of information for them.

Children, thus, exhibit capacities that are shaped by environmental experiences and the individuals who care for them. Caregivers provide supports, such as directing children's attention to critical aspects of events, commenting on features that should be noticed, and in many other ways providing structure to the information. Structure is critical for learning and for moving toward understanding information. Development and learning are not two parallel processes. Early biological underpinnings enable certain

types of interactions, and through various environmental supports from caregivers and other cultural and social supports, a child's experiences for learning are expanded. Learning is promoted and regulated both by children's biology and ecology, and learning produces development.

5

Mind and Brain

As the popular press has discovered, people have a keen appetite for research information about how the brain works and how thought processes develop (*Newsweek*, 1996, 1997; *Time*, 1997a, b). Interest runs particularly high in stories about the neuro-development of babies and children and the effect of early experiences on learning. The fields of neuroscience and cognitive science are helping to satisfy this fundamental curiosity about how people think and learn.

In considering which findings from brain research are relevant to human learning or, by extension, to education, one must be careful to avoid adopting faddish concepts that have not been demonstrated to be of value in classroom practice. Among these is the concept that the left and right hemispheres of the brain should be taught separately to maximize the effectiveness of learning. Another is the notion that the brain grows in holistic "spurts," within or around which specific educational objectives should be arranged: as discussed in this chapter, there is significant evidence that brain regions develop asynchronously, although any specific educational implications of this remain to be determined. Another widely held misconception is that people use only 20 percent of their brains--with different percentage figures in different incarnations--and should be able to use more of it. This belief appears to have arisen from the early neuroscience finding that much of the cerebral cortex consists of "silent areas" that are not activated by sensory or motor activity. However, it is now known that these silent areas mediate higher cognitive functions that are not directly coupled to sensory or motor activity.

Advances in neuroscience are confirming theoretical positions advanced by developmental psychology for a number of years, such as the importance of early experience in development (Hunt, 1961). What is new, and therefore important for this volume, is the *convergence* of evidence from a number of scientific fields. As the sciences of developmental psychology, cognitive psychology, and neuroscience, to name but three, have contributed vast numbers of research studies, details about learning and development have converged to form a more complete picture of how intellectual development occurs. Clarification of some of the mechanisms of learning by neuroscience has been advanced, in part, by the advent of non-invasive imaging technologies, such as positron emission tomography (PET) and functional magnetic resonance imaging (FMRI). These technologies have allowed researchers to observe human learning processes directly.

This chapter reviews key findings from neuroscience and cognitive science that are expanding knowledge of the mechanisms of human learning. Three main points guide the discussion in this chapter:

1. Learning changes the physical structure of the brain.

2. These structural changes alter the functional organization of the brain; in other words, learning organizes and reorganizes the brain.

3. Different parts of the brain may be ready to learn at different times.

We first explain some basic concepts of neuroscience and new knowledge about brain development, including the effects of instruction and learning on the brain. We then look at language in learning as an example of the mind-brain connection. Lastly, we examine research on how memory is represented in the brain and its implications for learning.

From a neuroscience perspective, instruction and learning are very important parts of a child's brain development and psychological development processes. Brain development and psychological development involve continuous interactions between a child and the external environment--or, more accurately, a hierarchy of environments, extending from the level of the individual body cells to the most obvious boundary of the skin. Greater understanding of the nature of this interactive process renders moot such questions as how much depends on genes and how much on environment. As various developmental researchers have suggested, this question is much like asking which contributes most to the area of a rectangle, its height or its width (Eisenberg, 1995)?

THE BRAIN: FOUNDATION FOR LEARNING

Neuroscientists study the anatomy, physiology, chemistry, and molecular biology of the nervous system, with particular interest in how brain activity relates to behavior and learning. Several crucial questions about early learning particularly intrigue neuroscientists. How does the brain develop? Are there stages of brain development? Are there critical periods when certain things must happen for the brain to develop normally? How is information encoded in the developing and the adult nervous systems? And perhaps most important: How does experience affect the brain?

Some Basics

A nerve cell, or neuron, is a cell that receives information from other nerve cells or from the sensory organs and then projects that information to other nerve cells, while still other neurons project it back to the parts of the body that interact with the environment, such as the muscles. Nerve cells are equipped with a cell body--a sort of metabolic heart--and an enormous treelike structure called the dendritic field, which is the input side of the neuron. Information comes into the cell from projections called axons. Most of the excitatory information comes into the cell from the dendritic field, often through tiny dendritic projections called spines. The junctions through which information passes from one neuron to another are called synapses, which can be excitatory or inhibitory in nature. The neuron integrates the information it receives from all of its synapses and this determines its output.

During the development process, the "wiring diagram" of the brain is created through the formation of synapses. At birth, the human brain has in place only a relatively small proportion of the trillions of synapses it will eventually have; it gains about two-thirds of its adult size after birth. The rest of the synapses are formed after birth, and a portion of this process is guided by experience.

Synaptic connections are added to the brain in two basic ways. The first way is that synapses are overproduced, then selectively lost. Synapse overproduction and loss is a fundamental mechanism that the brain uses to incorporate information from experience. It tends to occur during the early periods of development. In the visual cortex--the area of the cerebral cortex of the brain that controls sight--a person has many more synapses at 6 months of age than at adulthood. This is because more and more synapses are formed in the early months of life, then they disappear, sometimes in prodigious numbers. The time required for this phenomenon to run its course varies in different parts of the brain, from 2 to 3 years in the human visual cortex to 8 to 10 years in some parts of the frontal cortex.

Some neuroscientists explain synapse formation by analogy to the art of sculpture. Classical artists working in marble created a sculpture by chiseling away unnecessary bits of stone until they achieved their final form. Animal studies suggest that the "pruning" that occurs during synapse overproduction and loss is similar to this act of carving a sculpture. The nervous system sets up a large number of connections; experience then plays on this network, selecting the appropriate connections and removing the inappropriate ones. What remains is a refined final form that constitutes the sensory and perhaps the cognitive bases for the later phases of development.

The second method of synapse formation is through the addition of new synapses--like the artist who creates a sculpture by adding things together until the form is complete. Unlike synapse overproduction and loss, the process of synapse addition operates throughout the entire human life span and is especially important in later life. This process is not only sensitive to experience, it is actually driven by experience. Synapse addition probably lies at the base of some, or even most, forms of memory. As discussed later in this chapter, the work of cognitive scientists and education researchers is contributing to our understanding of synapse addition.

Wiring the Brain

The role of experience in wiring the brain has been illuminated by research on the visual cortex in animals and humans. In adults, the inputs entering the brain from the two eyes terminate separately in adjacent regions of the visual cortex. Subsequently, the two inputs converge on the next set of neurons. People are not born with this neural pattern. But through the normal processes of seeing, the brain sorts things out.

Neuroscientists discovered this phenomenon by studying humans with visual abnormalities, such as a cataract or a muscle irregularity that deviates the eye. If the eye is deprived of the appropriate visual experience at an early stage of development (because of such abnormalities), it loses its ability to transmit visual information into the central nervous system. When the eye that was incapable of seeing at a very early age was corrected later, the correction alone did not help--the afflicted eye still could not see. When researchers looked at the brains of monkeys in which similar kinds of experimental manipulations had been made, they found that the normal eye had captured a larger than average amount of neurons, and the impeded eye had correspondingly lost those connections.

This phenomenon only occurs if an eye is prevented from experiencing normal vision very early in development. The period at which the eye is sensitive corresponds to the time of synapse overproduction and loss in the visual cortex. Out of the initial mix of overlapping inputs, the neural connections that belong to the eye that sees normally tend to survive, while the connections that belong to the abnormal eye wither away. When both eyes see normally, each eye loses some of the overlapping connections, but both keep a normal number.

In the case of deprivation from birth, one eye completely takes over. The later the deprivation occurs after birth, the less effect it has. By about 6 months of age, closing one eye for weeks on end will produce no effect whatsoever. The critical period has passed; the connections have already sorted themselves out, and the overlapping connections have been eliminated.

This anomaly has helped scientists gain insights into normal visual development. In normal development, the pathway for each eye is sculpted (or "pruned") down to the right number of connections, and those connections are sculpted in other ways, for example, to allow one to see patterns. By overproducing synapses then selecting the right connections, the brain develops an organized wiring diagram that functions optimally. The brain development process actually uses visual information entering from outside to become more precisely organized than it could with intrinsic molecular mechanisms alone. This external information is even more important for later cognitive development. The more a person interacts with the world, the more a person needs information from the world incorporated into the brain structures.

Synapse overproduction and selection may progress at different rates in different parts of the brain (Huttenlocher and Dabholkar, 1997). In the primary visual cortex, a peak in synapse density occurs relatively quickly. In the medial frontal cortex, a region clearly associated with higher cognitive functions, the process is more protracted: synapse production starts before birth and synapse density continues to increase until 5 or 6 years of age. The selection process, which corresponds conceptually to the main organization of patterns, continues during the next 4-5 years and ends around early adolescence. This lack of synchrony among cortical regions may also occur upon individual cortical neurons where different inputs may mature at different rates (see Juraska, 1982, on animal studies).

After the cycle of synapse overproduction and selection has run its course, additional changes occur in the brain. They appear to include both the modification of existing synapses and the addition of entirely new synapses to the brain. Research evidence (described in the next section) suggests that activity in the nervous system associated with learning experiences somehow causes nerve cells to create new synapses. Unlike the process of synapse overproduction and loss, synapse addition and modification are life-long processes, driven by experience. In essence, the quality of information to which one is exposed and the amount of information one acquires is reflected throughout one's life in the structure of the brain. This process is probably not the only way that information is

stored in the brain, but it is a very important way that provides insight into how people learn.

EXPERIENCES AND ENVIRONMENTS FOR BRAIN DEVELOPMENT

Alterations in the brain that occur during learning seem to make the nerve cells more efficient or powerful. Animals raised in complex environments have a greater volume of capillaries per nerve cell--and therefore a greater supply of blood to the brain--than the caged animals, regardless of whether the caged animal lived alone or with companions (Black et al., 1987). (Capillaries are the tiny blood vessels that supply oxygen and other nutrients to the brain.) In this way experience increases the overall quality of functioning of the brain. Using astrocytes (cells that support neuron functioning by providing nutrients and removing waste) as the index, there are higher amounts of astrocyte per neuron in the complex-environment animals than in the caged groups. Overall, these studies depict an orchestrated pattern of increased capacity in the brain that depends on experience.

Other studies of animals show other changes in the brain through learning; see Box 5.1. The weight and thickness of the cerebral cortex can be measurably altered in rats that are reared from weaning, or placed as adults, in a large cage enriched by the presence both of a changing set of objects for play and exploration and of other rats to induce play and exploration (Rosenzweig and Bennett, 1978). These animals also perform better on a variety of problem-solving tasks than rats reared in standard laboratory cages. Interestingly, both the interactive presence of a social group and direct physical contact with the environment are important factors: animals placed in the enriched environment alone showed relatively little benefit; neither did animals placed in small cages within the larger environment (Ferchmin et al., 1978; Rosenzweig and Bennett, 1972). Thus, the gross structure of the cerebral cortex was altered both by exposure to opportunities for learning and by learning in a social context.

Does Mere Neural Activity Change the Brain or Is Learning Required?

Are the changes in the brain due to actual learning or to variations in aggregate levels of neural activity? Animals in a complex environment not only learn from experiences, but they also run, play, and exercise, which activates the brain. The question is whether activation alone can produce brain changes without the subjects actually learning anything, just as activation of muscles by exercise can cause them to grow. To answer this question, a group of animals that learned challenging motor skills but had relatively little brain activity was compared with groups that had high levels of brain activity but did relatively little learning (Black et al., 1990). There were four groups in all. One group of rats was taught to traverse an elevated obstacle course; these "acrobats" became very good at the task over a month or so of practice. A second group of "mandatory exercisers" was put on a treadmill once a day, where they ran for 30 minutes, rested for 10 minutes, then ran another 30 minutes. A third group of "voluntary exercisers" had free access to an activity wheel attached directly to their cage, which they used often. A control group of "cage potato" rats had no exercise.

What happened to the volume of blood vessels and number of synapses per neuron in the rats? Both the mandatory exercisers and the voluntary exercisers showed higher densities of blood vessels than either the cage potato rats or the acrobats, who learned skills that did not involve significant amounts of activity. But when the number of synapses per nerve cell was measured, the acrobats were the standout group. Learning

adds synapses; exercise does not. Thus, different kinds of experience condition the brain in different ways. Synapse formation and blood vessel formation (vascularization) are two important forms of brain adaptation, but they are driven by different physiological mechanisms and by different behavioral events.

Localized Changes

Learning specific tasks brings about localized changes in the areas of the brain appropriate to the task. For example, when young adult animals were taught a maze, structural changes occurred in the visual area of the cerebral cortex (Greenough et al., 1979). When they learned the maze with one eye blocked with an opaque contact lens, only the brain regions connected to the open eye were altered (Chang and Greenough, 1982). When they learned a set of complex motor skills, structural changes occurred in the motor region of the cerebral cortex and in the cerebellum, a hindbrain structure that coordinates motor activity (Black et al., 1990; Kleim et al., 1996).

These changes in brain structure underlie changes in the functional organization of the brain. That is, learning imposes new patterns of organization on the brain, and this phenomenon has been confirmed by electrophysiological recordings of the activity of nerve cells (Beaulieu and Cynader, 1990). Studies of brain development provide a model of the learning process at a cellular level: the changes first observed in rats have also proved to be true in mice, cats, monkeys, and birds, and they almost certainly occur in humans.

ROLE OF INSTRUCTION IN BRAIN DEVELOPMENT

Clearly, the brain can store information, but what kinds of information? The neuroscientist does not address these questions. Answering them is the job of cognitive scientists, education researchers, and others who study the effects of experiences on human behavior and human potential. Several examples illustrate how instruction in specific kinds of information can influence natural development processes. This section discusses a case involving language development.

Language and Brain Development

Brain development is often timed to take advantage of particular experiences, such that information from the environment helps to organize the brain. The development of language in humans is an example of a natural process that is guided by a timetable with certain limiting conditions. Like the development of the visual system, parallel processes occur in human language development for the capacity to perceive phonemes, the "atoms" of speech. A phoneme is defined as the smallest meaningful unit of speech sound. Human beings discriminate the "b" sound from the "p" sound largely by perceiving the time of the onset of the voice relative to the time the lips part; there is a boundary that separates "b" from "p" that helps to distinguish "bet" from "pet." Boundaries of this sort exist among closely related phonemes, and in adults these boundaries reflect language experience. Very young children discriminate many more phonemic boundaries than adults, but they lose their discriminatory powers when certain

boundaries are not supported by experience with spoken language (Kuhl, 1993). Native Japanese speakers, for example, typically do not discriminate the "r" from the "l" sounds that are evident to English speakers, and this ability is lost in early childhood because it is not in the speech that they hear. It is not known whether synapse overproduction and elimination underlies this process, but it certainly seems plausible.

The process of synapse elimination occurs relatively slowly in the cerebral cortical regions that are involved in aspects of language and other higher cognitive functions (Huttenlocher and Dabholkar, 1997). Different brain systems appear to develop according to different time frames, driven in part by experience and in part by intrinsic forces. This process suggests that children's brains may be more ready to learn different things at different times. But, as noted above, learning continues to affect the structure of the brain long after synapse overproduction and loss are completed. New synapses are added that would never have existed without learning, and the wiring diagram of the brain continues to be reorganized throughout one's life. There may be other changes in the brain involved in the encoding of learning, but most scientists agree that synapse addition and modification are the ones that are most certain.

Examples of Effects of Instruction on Brain Development

Detailed knowledge of the brain processes that underlie language has emerged in recent years. For example, there appear to be separate brain areas that specialize in subtasks such as hearing words (spoken language of others), seeing words (reading), speaking words (speech), and generating words (thinking with language). Whether these patterns of brain organization for oral, written, and listening skills require separate exercises to promote the component skills of language and literacy remains to be determined. If these closely related skills have somewhat independent brain representation, then coordinated practice of skills may be a better way to encourage learners to move seamlessly among speaking, writing, and listening.

Language provides a particularly striking example of how instructional processes may contribute to organizing brain functions. The example is interesting because language processes are usually more closely associated with the left side of the brain. As the following discussion points out, specific kinds of experiences can contribute to other areas of the brain taking over some of the language functions. For example, deaf people who learn a sign language are learning to communicate using the visual system in place of the auditory system. Manual sign languages have grammatical structures, with affixes and morphology, but they are not translations of spoken languages. Each particular sign language (such as American Sign Language) has a unique organization, influenced by the fact that it is perceived visually. The perception of sign language depends on parallel visual perception of shape, relative spatial location, and movement of the hands--a very different type of perception than the auditory perception of spoken language (Bellugi, 1980).

In the nervous system of a hearing person, auditory system pathways appear to be closely connected to the brain regions that process the features of spoken language, while visual pathways appear to go through several stages of processing before features of written language are extracted (Blakemore, 1977; Friedman and Cocking, 1986). When a deaf individual learns to communicate with manual signs, different nervous system processes have replaced the ones normally used for language--a significant achievement.

Neuroscientists have investigated how the visual-spatial and language processing areas each come together in a different hemisphere of the brain, while developing certain new functions as a result of the visual language experiences. In the brains of all deaf people, some cortical areas that normally process auditory information become organized to process visual information. Yet there are also demonstrable differences among the brains of deaf people who use sign language and deaf people who do not use sign language, presumably because they have had different language experiences (Neville, 1984, 1995). Among other things, major differences exist in the electrical activities of the brains of deaf individuals who use sign language and those who do not know sign language (Friedman and Cocking, 1986; Neville, 1984). Also, there are similarities between sign language users with normal hearing and sign language users who are deaf that result from their common experiences of engaging in language activities. In other words, specific types of instruction can modify the brain, enabling it to use alternative sensory input to accomplish adaptive functions, in this case, communication.

Another demonstration that the human brain can be functionally reorganized by instruction comes from research on individuals who have suffered strokes or had portions of the brain removed (Bach-y-Rita, 1980, 1981; Crill and Raichle, 1982). Since spontaneous recovery is generally unlikely, the best way to help these individuals regain their lost functions is to provide them with instruction and long periods of practice. Although this kind of learning typically takes a long time, it can lead to partial or total recovery of functions when based on sound principles of instruction. Studies of animals with similar impairments have clearly shown the formation of new brain connections and other adjustments, not unlike those that occur when adults learn (e.g., Jones and Schallert, 1994; Kolb, 1995). Thus, guided learning and learning from individual experiences both play important roles in the functional reorganization of the brain.

MEMORY AND BRAIN PROCESSES

Research into memory processes has progressed in recent years through the combined efforts of neuroscientists and cognitive scientists, aided by positron emission tomography and functional magnetic resonance imaging (Schacter, 1997). Most of the research advances in memory that help scientists understand learning come from two major groups of studies: studies that show that memory is not a unitary construct and studies that relate features of learning to later effectiveness in recall.

Memory is neither a single entity nor a phenomenon that occurs in a single area of the brain. There are two basic memory processes: declarative memory, or memory for facts and events which occurs primarily in brain systems involving the hippocampus; and procedural or nondeclarative memory, which is memory for skills and other cognitive operations, or memory

that cannot be represented in declarative sentences, which occurs principally in the brain systems involving the neostriatum (Squire, 1997).

Different features of learning contribute to the durability or fragility of memory. For example, comparisons of people's memories for words with their memories for pictures of the same objects show a superiority effect for pictures. The superiority effect of pictures is also true if words and pictures are combined during learning (Roediger, 1997). Obviously, this finding has direct relevance for improving the long-term learning of certain kinds of information.

Research has also indicated that the mind is not just a passive recorder of events, rather, it is actively at work both in storing and in recalling information. There is research demonstrating that when a series of events are presented in a random sequence, people reorder them into sequences that make sense when they try to recall them (Lichtenstein and Brewer, 1980). The phenomenon of the active brain is dramatically illustrated further by the fact that the mind can "remember" things that actually did not happen. In one example (Roediger, 1997), people are first given lists of words: sour-candy-sugar-bitter-good-taste-tooth-knife-honey-photo-chocolate-heart-cake-tart-pie. During the later recognition phase, subjects are asked to respond "yes" or "no" to questions of whether a particular word was on the list. With high frequency and high reliability, subjects report that the word "sweet" was on the list. That is, they "remember" something that is not correct. The finding illustrates the active mind at work using inferencing processes to relate events. People "remember" words that are implied but not stated with the same probability as learned words. In an act of efficiency and "cognitive economy" (Gibson, 1969), the mind creates categories for processing information. Thus, it is a feature of learning that memory processes make relational links to other information.

In view of the fact that experience alters brain structures and that specific experiences have specific effects on the brain, the nature of "experience" becomes an interesting question in relation to memory processes. For example, when children are asked if a false event has ever occurred (as verified by their parents), they will correctly say that it never happened to them (Ceci, 1997). However, after repeated discussions around the same false events spread over time, the children begin to identify these false events as true occurrences. After about 12 weeks of such discussions, children give fully elaborated accounts of these fictitious events, involving parents, siblings, and a whole host of supporting "evidence." Repeating lists of words with adults similarly reveals that recalling non-experienced events activates the same regions of the brain as events or words that were directly experienced (Schacter, 1997). Magnetic resonance imaging also shows that the same brain areas are activated during questions and answers about both true and false events. This may explain why false memories can seem so compelling to the individual reporting the events.

In sum, classes of words, pictures, and other categories of information that involve complex cognitive processing on a repeated basis activate the brain. Activation sets into motion the events that are encoded as part of long-term memory. Memory processes treat both true and false memory events similarly and, as shown by imaging technologies, activate the same brain regions, regardless of the validity of what is being remembered. Experience is important for the development of brain structures, and what is registered in the brain as memories of experiences can include one's own mental activities.

These points about memory are important for understanding learning and can explain a good deal about why experiences are remembered well or poorly. Particularly important is the finding that the mind imposes structure on the information available from experience. This parallels descriptions of the organization of information in skilled performance discussed in Chapter 3: one of the primary differences between the novice and the expert is the manner in

which information is organized and utilized. From the perspective of teaching, it again suggests the importance of an appropriate overall framework within which learning occurs most efficiently and effectively (see evidence discussed in Chapters 3 and 4).

Overall, neuroscience research confirms the important role that experience plays in building the structure of the mind by modifying the structures of the brain: development is not solely the unfolding of preprogrammed patterns. Moreover, there is a convergence of many kinds of research on some of the rules that govern learning. One of the simplest rules is that practice increases learning; in the brain, there is a similar relationship between the amount of experience in a complex environment and the amount of structural change.

In summary, neuroscience is beginning to provide some insights, if not final answers, to questions of great interest to educators. There is growing evidence that both the developing and the mature brain are structurally altered when learning occurs. Thus, these structural changes are believed to encode the learning in the brain. Studies have found alterations in the weight and thickness of the cerebral cortex of rats that had direct contact with a stimulating physical environment and an interactive social group. Subsequent work has revealed underlying changes in the structure of nerve cells and of the tissues that support their function. The nerve cells have a greater number of the synapses through which they communicate with each other. The structure of the nerve cells themselves is correspondingly altered. Under at least some conditions, both astrocytes that provide support to the neurons and the capillaries that supply blood may also be altered. The learning of specific tasks appears to alter the specific regions of the brain involved in the task. These findings suggest that the brain is a dynamic organ, shaped to a great extent by experience--by what a living being does, and has done.

CONCLUSION

It is often popularly argued that advances in the understanding of brain development and mechanisms of learning have substantial implications for education and the learning sciences. In addition, certain brain scientists have offered advice, often with a tenuous scientific basis, that has been incorporated into publications designed for educators (see, e.g., Sylwester, 1995:Ch. 7). Neuroscience has advanced to the point where it is time to think critically about the form in which research information is made available to educators so that it is interpreted appropriately for practice--identifying which research findings are ready for implementation and which are not.

This chapter reviews the evidence for the effects of experience on brain development, the adaptability of the brain for alternative pathways to learning, and the impact of experience on memory. Several findings about the brain and the mind are clear and lead to the next research topics:

1. The functional organization of the brain and the mind depends on and benefits positively from experience.

2. Development is not merely a biologically driven unfolding process, but also an active process that derives essential information from experience.

3. Research has shown that some experiences have the most powerful effects during specific sensitive periods, while others can affect the brain over a much longer time span.

4. An important issue that needs to be determined in relation to education is which things are tied to critical periods (e.g., some aspects of phonemic perception and language learning) and for which things is the time of exposure less critical.

From these findings, it is clear that there are qualitative differences among kinds of learning opportunities. In addition, the brain "creates" informational experiences through mental activities such as inferencing, category formation, and so forth. These are types of learning opportunities that can be facilitated. By contrast, it is a bridge too far, to paraphrase John Bruer (1997), to suggest that specific activities lead to neural branching (Cardellichio and Field, 1997), as some interpreters of neuroscience have implied.

6

The Design of Learning Environments

In this chapter we discuss implications of new knowledge about learning for the design of learning environments, especially schools. Learning theory does not provide a simple recipe for designing effective learning environments; similarly, physics constrains but does not dictate how to build a bridge (e.g., Simon, 1969). Nevertheless, new developments in the science of learning raise important questions about the design of learning environments--questions that suggest the value of rethinking what is taught, how it is taught, and how it is assessed. The focus in this chapter is on general characteristics of learning environments that need to be examined in light of new developments in the science of learning; Chapter 7 provides specific examples of instruction in the areas of mathematics, science, and history--examples that make the arguments in the present chapter more concrete.

We begin our discussion of learning environments by revisiting a point made in Chapter 1--that the learning goals for schools have undergone major changes during the past century. Everyone expects much more from today's schools than was expected 100 years ago. A fundamental tenet of modern learning theory is that different kinds of learning goals require different approaches to instruction (Chapter 3); new goals for education require changes in opportunities to learn. After discussing changes in goals, we explore the design of learning environments from four perspectives that appear to be particularly important given current data about human learning, namely, the degree to which learning environments are learner centered, knowledge centered, assessment centered, and community centered. Later, we define these perspectives and explain how they relate to the preceding discussions in Chapters 1-4.

CHANGES IN EDUCATIONAL GOALS

As discussed in Chapter 1, educational goals for the twenty-first century are very different from the goals of earlier times. This shift is important to keep in mind when considering claims that schools are "getting worse." In many cases, schools seem to be functioning as well as ever, but the challenges and expectations have changed quite dramatically (e.g., Bruer, 1993; Resnick, 1987).

Consider the goals of schooling in the early 1800s. Instruction in writing focused on the mechanics of making notation as dictated by the teacher, transforming oral messages into written ones. It was not until the mid to late 1800s that writing began to be taught on a mass level in most European countries, and school children began to be asked to compose their own written texts. Even then, writing instruction was largely aimed at giving children the capacity to closely imitate very simple text forms. It was not until the 1930s that the idea emerged of primary school students expressing themselves in writing (Alcorta, 1994; Schneuwly, 1994). As in writing, it was not until relatively recently that analysis and interpretation of what is read became an expectation of skilled reading by all school children. Overall, the definition of functional literacy changed from being able to sign one's name to word decoding to reading for new information (Resnick and Resnick, 1977); see Box 6.1.

In the early 1900s, the challenge of providing mass education was seen by many as analogous to mass production in factories. School administrators were eager to make use of the "scientific" organization of factories to structure efficient classrooms. Children were regarded as raw materials to be efficiently processed by technical workers (the teachers) to reach the end product (Bennett and LeCompte, 1990; Callahan, 1962; Kliebard, 1975). This approach attempted to sort the raw materials (the children) so that they could be treated somewhat as an assembly line. Teachers were viewed as workers whose job was to carry out directives from their superiors--the efficiency experts of schooling (administrators and researchers).

The emulation of factory efficiency fostered the development of standardized tests for measurement of the "product," of clerical work by teachers to keep records of costs and progress (often at the expense of teaching), and of "management" of teaching by central district authorities who had little knowledge of educational practice or philosophy (Callahan, 1962). In short, the factory model affected the design of curriculum, instruction, and assessment in schools.

Today, students need to understand the current state of their knowledge and to build on it, improve it, and make decisions in the face of uncertainty (Talbert and McLaughlin, 1993). These two notions of knowledge were identified by John Dewey (1916) as "records" of previous cultural accomplishments and engagement in active processes as represented by the phrase "to do." For example, doing mathematics involves solving problems, abstracting, inventing, proving (see, e.g., Romberg, 1983). Doing history involves the construction and evaluation of historical documents (see, e.g., Wineberg, 1996). Doing science includes such activities as testing theories through experimentation and observation (e.g., Lehrer and Schauble, 1996a, b; Linn, 1992, 1994; Schwab, 1978). Society envisions graduates of school systems who can identify and solve problems and make contributions to society throughout their lifetime--who display the qualities of "adaptive expertise" discussed in Chapter 3. To achieve this vision requires rethinking what is taught, how teachers teach, and how what students learn is assessed.

The remainder of this chapter is organized around Figure 6.1, which illustrates four perspectives on learning environments that seem particularly important given the principles of learning discussed in earlier chapters. Although we discuss these perspectives separately, they need to be conceptualized as a system of interconnected components that mutually support one another (e.g., Brown and Campione, 1996); we first discuss each perspective separately and then describe how they interrelate.

LEARNER-CENTERED ENVIRONMENTS

We use the term "learner centered" to refer to environments that pay careful attention to the knowledge, skills, attitudes, and beliefs that learners bring to the educational setting. This

term includes teaching practices that have been called "culturally responsive," "culturally appropriate," "culturally compatible," and "culturally relevant" (Ladson-Billings, 1995). The term also fits the concept of "diagnostic teaching" (Bell et al., 1980): attempting to discover what students think in relation to the problems on hand, discussing their misconceptions sensitively, and giving them situations to go on thinking about which will enable them to readjust their ideas (Bell, 1982a:7). Teachers who are learner centered recognize the importance of building on the conceptual and cultural knowledge that students bring with them to the classroom (see Chapters 3 and 4).

Diagnostic teaching provides an example of starting from the structure of a child's knowledge. The information on which to base a diagnosis may be acquired through observation, questioning and conversation, and reflection on the products of student activity. A key strategy is to prompt children to explain and develop their knowledge structures by asking them to make predictions about various situations and explain the reasons for their predictions. By selecting critical tasks that embody known misconceptions, teachers can help students test their thinking and see how and why various ideas might need to change (Bell, 1982a, b, 1985; Bell et al., 1986; Bell and Purdy, 1985). The model is one of engaging students in cognitive conflict and then having discussions about conflicting viewpoints (see Piaget, 1973; Festinger, 1957). "To promote learning, it is important to focus on controlled changes of structure in a fixed context . . . or on deliberate transfer of a structure from one context to another" (Bell, 1985:72; see Chapter 7).

Learner-centered instruction also includes a sensitivity to the cultural practices of students and the effect of those practices on classroom learning. In a study of the Kamehameha School in Hawaii, teachers were deliberate in learning about students' home and community cultural practices and language use and incorporated them in classroom literacy instruction (Au and Jordan, 1981). After using the native Hawaiian "talk-story" (jointly produced student narratives), shifting the focus of instruction from decoding to comprehending, and including students' home experiences as a part of the discussion of reading materials, students demonstrated significant improvement in standardized test performance in reading.

Learner-centered teachers also respect the language practices of their students because they provide a basis for further learning. In science, one standard way of talking in both school and professional science is impersonal and expository, without any reference to personal or social intentions or experiences (Lemke, 1990; Wertsch, 1991). This way, which predominates in schools, privileges middle-class, mainstream ways of knowing and constitutes a barrier for students from other backgrounds who do not come to school already practiced in "school talk" (Heath, 1983). Everyday and scientific discourses need to be coordinated to assist students' scientific understanding.

In science discourse as it develops in most classrooms, students' talk frequently expresses multiple intentions or voices (see Ballenger, 1997; Bakhtin, 1984; Warren and Rosebery, 1996; Wertsch, 1991). In their narratives and arguments, students express both scientific and social intentions: scientific in that the students present evidence in support of a scientific argument; social in that they also talk about themselves as certain types of people (e.g., virtuous, honest, trustworthy). If the responses of other students and the teacher to these multivoiced narratives are always keyed to the scientific point, it helps to shape the meaning that is taken from them and relates them back to the context of the unfolding scientific argument (Ballenger, 1997). In standard science lessons, the scientific point in the talk of many students, particularly those whose discourse is not mainstream, is often missed, and the social intention is often devalued (Lemke, 1990; Michaels and Bruce, 1989; Wertsch, 1991; see Chapter 7).

In another example of connecting everyday talk and school talk, African American high school students were shown that many of their forms of everyday speech were examples of a very high form of literacy that was taught in school, but never before connected with their everyday experience (Lee, 1991, 1992). Like Proust who discovered he had been speaking prose all of his life, the students discovered that they were fluent in a set of competencies that were considered academically advanced.

Overall, learner-centered environments include teachers who are aware that learners construct their own meanings, beginning with the beliefs, understandings, and cultural practices they bring to the classroom. If teaching is conceived as constructing a bridge between the subject matter and the student, learner-centered teachers keep a constant eye on both ends of the bridge. The teachers attempt to get a sense of what students know and can do as well as their interests and passions--what each student knows, cares about, is able to do, and wants to do. Accomplished teachers "give learners reason," by respecting and understanding learners' prior experiences and understandings, assuming that these can serve as a foundation on which to build bridges to new understandings (Duckworth, 1987). Chapter 7 illustrates how these bridges can be built.

KNOWLEDGE-CENTERED ENVIRONMENTS

Environments that are solely learner centered would not necessarily help students acquire the knowledge and skills necessary to function effectively in society. As noted in Chapter 2, the ability of experts to think and solve problems is not simply due to a generic set of "thinking skills" or strategies but, instead, requires well-organized bodies of knowledge that support planning and strategic thinking. Knowledge-centered environments take seriously the need to help students become knowledgeable (Bruner, 1981) by learning in ways that lead to understanding and subsequent transfer. Current knowledge on learning and transfer (Chapter 3) and development (Chapter 4) provide important guidelines for achieving these goals. Standards in areas such as mathematics and science help define the knowledge and competencies that students need to acquire (e.g., American Association for the Advancement of Science, 1989; National Council of Teachers of Mathematics, 1989; National Research Council, 1996).

Knowledge-centered environments intersect with learner-centered environments when instruction begins with a concern for students' initial preconceptions about the subject matter. The story *Fish Is Fish* (Chapter 1) illustrates how people construct new knowledge based on their current knowledge. Without carefully considering the knowledge that students' bring to the learning situation, it is difficult to predict what they will understand about new information that is presented to them (see Chapters 3 and 4).

Knowledge-centered environments also focus on the kinds of information and activities that help students develop an understanding of disciplines (e.g., Prawat et al., 1992). This focus requires a critical examination of existing curricula. In history, a widely used history text on the American Revolution left out crucial information necessary to understand rather than merely memorize (Beck et al., 1989, 1991). In science, existing curricula tend to overemphasize facts and underemphasize "doing science" to explore and test big ideas (American Association for the Advancement of Science, 1989; National Research Council, 1996). As noted in Chapter 2, the Third International Mathematics and Science Study (Schmidt et al., 1997) characterized American curricula in mathematics and science as being "a mile wide and an inch deep." (Examples of teaching for depth rather than breadth are illustrated in Chapter 7.)

As discussed in the first part of this book, knowledge-centered environments also include an emphasis on sense-making--on helping students become metacognitive by expecting new

information to make sense and asking for clarification when it doesn't (e.g., Palincsar and Brown, 1984; Schoenfeld, 1983, 1985, 1991). A concern with sense-making raises questions about many existing curricula. For example, it has been argued that many mathematics curricula emphasize

> . . . not so much a form of thinking as a substitute for thinking. The process of calculation or computation only involves the deployment of a set routine with no room for ingenuity or flair, no place for guess work or surprise, no chance for discovery, no need for the human being, in fact (Scheffler, 1975:184).

The argument here is not that students should never learn to compute, but that they should also learn other things about mathematics, especially the fact that it is possible for them to make sense of mathematics and to think mathematically (e.g., Cobb et al., 1992).

There are interesting new approaches to the development of curricula that support learning with understanding and encourage sense making. One is "progressive formalization," which begins with the informal ideas that students bring to school and gradually helps them see how these ideas can be transformed and formalized. Instructional units encourage students to build on their informal ideas in a gradual but structured manner so that they acquire the concepts and procedures of a discipline.

The idea of progressive formalization is exemplified by the algebra strand for middle school students using *Mathematics in Context* (National Center for Research in Mathematical Sciences Education and Freudenthal Institute, 1997). It begins by having students use their own words, pictures, or diagrams to describe mathematical situations to organize their own knowledge and work and to explain their strategies. In later units, students gradually begin to use symbols to describe situations, organize their mathematical work, or express their strategies. At this level, students devise their own symbols or learn some nonconventional notation. Their representations of problem situations and explanations of their work are a mixture of words and symbols. Later, students learn and use standard conventional algebraic notation for writing expressions and equations, for manipulating algebraic expressions and solving equations, and for graphing equations. Movement along this continuum is not necessarily smooth, nor all in one direction. Although students are actually doing algebra less formally in the earlier grades, they are not forced to generalize their knowledge to a more formal level, nor to operate at a more formal level, before they have had sufficient experience with the underlying concepts. Thus, students may move back and forth among levels of formality depending on the problem situation or on the mathematics involved.

Central to curriculum frameworks such as "progressive formalization" are questions about what is developmentally appropriate to teach at various ages. Such questions represent another example of overlap between learner-centered and knowledge-centered perspectives. Older views that young children are incapable of complex reasoning have been replaced by evidence that children are capable of sophisticated levels of thinking and reasoning when they have the knowledge necessary to support these activities (see Chapter 4). An impressive body of research shows the potential benefit of early access by students to important conceptual ideas. In classrooms using a form of "cognitively guided" instruction in geometry, second-grade children's skills for representing and visualizing three-dimensional forms exceeded those of comparison groups of undergraduate students at a leading university (Lehrer and Chazan, 1998). Young children have also demonstrated powerful forms of early algebraic generalization (Lehrer and Chazan, 1998). Forms of generalization in science, such as experimentation, can be introduced before the secondary school years through a developmental approach to important mathematical and scientific ideas (Schauble et al., 1995; Warren and Rosebery, 1996). Such an approach entails becoming cognizant of the early origins of students' thinking and then identifying how those ideas can be fostered and elaborated (Brown and Campione, 1994).

Attempts to create environments that are knowledge centered also raise important questions about how to foster an integrated understanding of a discipline. Many models of curriculum design seem to produce knowledge and skills that are disconnected rather than organized into coherent wholes. The National Research Council (1990:4) notes that "To the Romans, a curriculum was a rutted course that guided the path of two-wheeled chariots." This rutted path metaphor is an appropriate description of the curriculum for many school subjects:

> Vast numbers of learning objectives, each associated with pedagogical strategies, serve as mile posts along the trail mapped by texts from kindergarten to twelfth grade. . . . Problems are solved not by observing and responding to the natural landscape through which the mathematics curriculum passes, but by mastering time tested routines, conveniently placed along the path (National Research Council, 1990:4).

An alternative to a "rutted path" curriculum is one of "learning the landscape" (Greeno, 1991). In this metaphor, learning is analogous to learning to live in an environment: learning your way around, learning what resources are available, and learning how to use those resources in conducting your activities productively and enjoyably (Greeno, 1991:175). The progressive formalization framework discussed above is consistent with this metaphor. Knowing where one is in a landscape requires a network of connections that link one's present location to the larger space.

Traditional curricula often fail to help students "learn their way around" a discipline. The curricula include the familiar scope and sequence charts that specify procedural objectives to be mastered by students at each grade: though an individual objective might be reasonable, it is not seen as part of a larger network. Yet it is the network, the connections among objectives, that is important. This is the kind of knowledge that characterizes expertise (see Chapter 2). Stress on isolated parts can train students in a series of routines without educating them to understand an overall picture that will ensure the development of integrated knowledge structures and information about conditions of applicability.

An alternative to simply progressing through a series of exercises that derive from a scope and sequence chart is to expose students to the major features of a subject domain as they arise naturally in problem situations. Activities can be structured so that students are able to explore, explain, extend, and evaluate their progress. Ideas are best introduced when students see a need or a reason for their use--this helps them see relevant uses of knowledge to make sense of what they are learning. Problem situations used to engage students may include the historic reasons for the development of the domain, the relationship of that domain to other domains, or the uses of ideas in that domain (see Webb and Romberg, 1992). In Chapter 7 we present examples from history, science, and mathematics instruction that emphasize the importance of introducing ideas and concepts in ways that promote deep understanding.

A challenge for the design of knowledge-centered environments is to strike the appropriate balance between activities designed to promote understanding and those designed to promote the automaticity of skills necessary to function effectively without being overwhelmed by attentional requirements. Students for whom it is effortful to read, write, and calculate can encounter serious difficulties learning. The importance of automaticity has been demonstrated in a number of areas (e.g., Beck et al., 1989, 1991; Hasselbring et al., 1987; LaBerge and Samuels, 1974; see Chapter 2).

ASSESSMENT-CENTERED ENVIRONMENTS

In addition to being learner centered and knowledge centered, effectively designed learning environments must also be assessment centered. The key principles of assessment are that they should provide opportunities for feedback and revision and that what is assessed must be congruent with one's learning goals.

It is important to distinguish between two major uses of assessment. The first, formative assessment, involves the use of assessments (usually administered in the context of the classroom) as sources of feedback to improve teaching and learning. The second, summative assessment, measures what students have learned at the end of some set of learning activities. Examples of formative assessments include teachers' comments on work in progress, such as drafts of papers or preparations for presentations. Examples of summative assessments include teacher-made tests given at the end of a unit of study and state and national achievement tests that students take at the end of a year. Ideally, teachers' formative and summative assessments are aligned with the state and national assessments that students take at the end of the year; often, however, this is not the case. Issues of summative assessment for purposes of national, state, and district accountability are beyond the scope of this report; our discussion focuses on classroom-based formative and summative assessments.

Formative Assessments and Feedback

Studies of adaptive expertise, learning, transfer, and early development show that feedback is extremely important (see Chapters 2, 3, and 4). Students' thinking must be made visible (through discussions, papers, or tests), and feedback must be provided. Given the goal of learning with understanding, assessments and feedback must focus on understanding, and not only on memory for procedures or facts (although these can be valuable, too). Assessments that emphasize understanding do not necessarily require elaborate or complicated assessment procedures. Even multiple-choice tests can be organized in ways that assess understanding (see below).

Opportunities for feedback should occur continuously, but not intrusively, as a part of instruction. Effective teachers continually attempt to learn about their students' thinking and understanding. They do a great deal of on-line monitoring of both group work and individual performances, and they attempt to assess students' abilities to link their current activities to other parts of the curriculum and their lives. The feedback they give to students can be formal or informal. Effective teachers also help students build skills of self-assessment. Students learn to assess their own work, as well as the work of their peers, in order to help everyone learn more effectively (see, e.g., Vye et al., 1998, in press). Such self-assessment is an important part of the metacognitive approach to instruction (discussed in Chapters 3, 4, and 7).

In many classrooms, opportunities for feedback appear to occur relatively infrequently. Most teacher feedback--grades on tests, papers, worksheets, homework, and on report cards--represent summative assessments that are intended to measure the results of learning. After receiving grades, students typically move on to a new topic and work for another set of grades. Feedback is most valuable when students have the opportunity to use it to revise their thinking as they are working on a unit or project. The addition of opportunities for formative assessment increases students' learning and transfer, and they learn to value opportunities to revise (Barron et al., 1998; Black and William, 1998; Vye et al., 1998b). Opportunities to work collaboratively in groups can also increase the quality of the feedback available to students (Barron, 1991; Bereiter and Scardamalia, 1989; Fuchs et al., 1992; Johnson and Johnson, 1975; Slavin, 1987; Vye et al., 1998a), although many students must be helped to learn how to work collaboratively. New technologies provide opportunities to increase feedback by allowing students, teachers, and content experts to interact both synchronously and asynchronously (see Chapter 9).

A challenge of implementing good assessment practices involves the need to change many teachers', parents', and students' models of what effective learning looks like. Many assessments developed by teachers overly emphasize memory for procedures and facts (Porter et al., 1993). In addition, many standardized tests that are used for accountability still overemphasize memory for isolated facts and procedures, yet teachers are often judged by how well their students do on such tests. One mathematics teacher consistently produced students who scored high on statewide examinations by helping students memorize a number of mathematical procedures (e.g., proofs) that typically appeared on the examinations, but the students did not really understand what they were doing, and often could not answer questions that required an understanding of mathematics (Schoenfeld, 1988).

Appropriately designed assessments can help teachers realize the need to rethink their teaching practices. Many physics teachers have been surprised at their students' inabilities to answer seemingly obvious (to the expert) questions that assessed their students' understanding, and this outcome has motivated them to revise their instructional practices (Redish, 1996). Similarly, visually based assessments of "number sense" (see Case and Moss, 1996) have helped teachers discover the need to help their students develop important aspects of mathematical understanding (Cognition and Technology Group at Vanderbilt, in press b). Innovative assessments that reveal students' understanding of important concepts in science and mathematics have also been developed (Lehrer and Schauble, 1996a,b).

Formats for Assessing Understanding

Teachers have limited time to assess students' performances and provide feedback, but new advances in technology can help solve this problem (see Chapter 9). Even without technology, however, advances have been made in devising simple assessments that measure understanding rather than memorization. In the area of physics, assessments like those used in Chapter 2 to compare experts and novices have been revised for use in classrooms. One task presents students with two problems and asks them to state whether both would be solved using a similar approach and state the reason for the decision:

1. A 2.5-kilogram ball with a radius of 4 centimeters is traveling at 7 meters/second on a rough horizontal surface, but not spinning. At some later time, the ball is rolling without slipping 5 meters/second. How much work was done by friction?

2. A 0.5-kilogram ball with a radius of 15 centimeters is initially sliding at 10 meters/second without spinning. The ball travels on a horizontal surface and eventually rolls without slipping. Find the ball's final velocity.

Novices typically state that these two problems are solved similarly because they match on surface features--both involve a ball sliding and rolling on a horizontal surface. Students who are learning with understanding state that the problems are solved differently: the first can be solved by applying the work-energy theorem; the second can be solved by applying conservation of angular momentum (Hardiman et al., 1989); see Box 6.2. These kinds of assessment items can be used during the course of instruction to monitor the depth of conceptual understanding.

Portfolio assessments are another method of formative assessment. They provide a format for keeping records of students' work as they progress throughout the year and, most importantly, for allowing students to discuss their achievements and difficulties with their teachers, parents, and fellow students (e.g., Wiske, 1997; Wolf, 1988). They take time to implement and they are often implemented poorly--portfolios often become simply another place to store student work but no discussion of the work takes place--but used properly, they provide students and others with valuable information about their learning progress over time.

Theoretical Frameworks for Assessment

A challenge for the learning sciences is to provide a theoretical framework that links assessment practices to learning theory. An important step in this direction is represented by the work of Baxter and Glaser (1997), who provide a framework for integrating cognition and context in assessing achievement in science. In their report, performance is described in terms of the content and process task demands of the subject matter and the nature and extent of cognitive activity likely to be observed in a particular assessment situation. The framework provides a basis for examining how developers' intentions are realized in performance assessments that purport to measure reasoning, understanding, and complex problem solving.

Characterizing assessments in terms of components of competence and the content-process demands of the subject matter brings specificity to generic assessment objectives such as "higher level thinking and deep understanding." Characterizing student performance in terms of cognitive activities focuses attention on the differences in competence and subject-matter achievement that can be observed in learning and assessment situations. The kind and quality of cognitive activities in an assessment is a function of the content and process demands of the task involved. For example, consider the content-process framework for science assessment shown in Figure 6.2 (Baxter and Glaser, 1997). In this figure, task demands for content knowledge are conceptualized on a continuum from rich to lean (y axis). At one extreme are knowledge-rich tasks, tasks that require in-depth understanding of subject matter for their completion. At the other extreme are tasks that are not dependent on prior knowledge or related experiences; rather, performance is primarily dependent on the information given in the assessment situation. The task demands for process skills are conceptualized as a continuum from constrained to open (x axis). In open situations, explicit directions are minimized; students are expected to generate and carry out appropriate process skills for problem solution. In process-constrained situations, directions can be of two types: step-by-step, subject-specific procedures given as part of the task, or directions to explain the process skills that are necessary for task completion. In this situation, students are asked to generate explanations, an activity that does not require using the process skills. Assessment tasks can involve many possible combinations of content knowledge and process skills; Table 6.1 illustrates the relationship between the structure of knowledge and the organized cognitive activities.

TABLE 6.1 Cognitive Activity and Structure of Knowledge

	Structure of Knowledge	
Organized Cognitive Activity	Fragmented	Meaningful
Problem Representation	Surface features and shallow understanding	Underlying principles and relevant concepts
Strategy Use	Undirected trial-and-error problem solving	Efficient, informative, and goal oriented
Self-Monitoring	Minimal and sporadic	Ongoing and flexible

Explanation	Single statement of fact of description of superficial factors	Principled and coherent

COMMUNITY-CENTERED ENVIRONMENTS

New developments in the science of learning suggest that the degree to which environments are community centered is also important for learning. Especially important are norms for people learning from one another and continually attempting to improve. We use the term community centered to refer to several aspects of community, including the classroom as a community, the school as a community, and the degree to which students, teachers, and administers feel connected to the larger community of homes, businesses, states, the nation, and even the world.

Classroom and School Communities

At the level of classrooms and schools, learning seems to be enhanced by social norms that value the search for understanding and allow students (and teachers) the freedom to make mistakes in order to learn (e.g., Brown and Campione, 1994; Cobb et al., 1992). Different classrooms and schools reflect different sets of norms and expectations. For example, an unwritten norm that operates in some classrooms is never to get caught making a mistake or not knowing an answer (see, e.g., Holt, 1964). This norm can hinder students' willingness to ask questions when they do not understand the material or to explore new questions and hypotheses. Some norms and expectations are more subject specific. For example, the norms in a mathematics class may be that mathematics is knowing how to compute answers; a much better norm would be that the goal of inquiry is mathematical understanding. Different norms and practices have major effects on what is taught and how it is assessed (e.g., Cobb et al., 1992). Sometimes there are different sets of expectations for different students. Teachers may convey expectations for school success to some students and expectations for school failure to others (MacCorquodale, 1988). For example, girls are sometimes discouraged from participating in higher level mathematics and science. Students, too, may share and convey cultural expectations that proscribe the participation of girls in some classes (Schofield et al., 1990).

Classroom norms can also encourage modes of participation that may be unfamiliar to some students. For example, some groups rely on learning by observation and listening and then becoming involved in ongoing activities; school-like forms of talking may be unfamiliar for the children whose community has only recently included schools (Rogoff et al., 1993); see Box 6.3.

The sense of community in classrooms is also affected by grading practices, and these can have positive or negative effects depending on the students. For example, Navajo high school students do not treat tests and grades as competitive events the way that Anglo students do (Deyhle and Margonis, 1995). An Anglo high school counselor reported that Navajo parents complained about their children being singled out when the counselor started a "high achiever" bulletin board and wanted to put up the pictures of students with B averages or better. The counselor "compromised" by putting up happy stickers with the students' names on them. A

Navajo student, staring at the board, said "The board embarrasses us, to be stuck out like that" (Deyhle and Margonis, 1995:28).

More broadly, competition among students for teacher attention, approval, and grades is a commonly used motivator in U.S. schools. And in some situations, competition may create situations that impede learning. This is especially so if individual competition is at odds with a community ethic of individuals' contributing their strengths to the community (Suina and Smolkin, 1994).

An emphasis on community is also imortant when attempting to borrow successful educational practices from other countries. For example, Japanese teachers spend considerable time working with the whole class, and they frequently ask students who have made errors to share their thinking with the rest of the class. This can be very valuable because it leads to discussions that deepen the understanding of everyone in the class. However, this practice works only because Japanese teachers have developed a classroom culture in which students are skilled at learning from one another and respect the fact that an analysis of errors is fruitful for learning (Hatano and Inagaki, 1996). Japanese students value listening, so they learn from large class discussions even if they do not have many chances to participate. The culture of American classrooms is often very different--many emphasize the importance of being right and contributing by talking. Teaching and learning must be viewed from the perspective of the overall culture of the society and its relationship to the norms of the classrooms. To simply attempt to import one or two Japanese teaching techniques into American classrooms may not produce the desired results.

The sense of community in a school also appears to be strongly affected by the adults who work in that environment. As Barth (1988) states:

> The relationship among adults who live in a school has more to do with the character and quality of the school and with the accomplishments of the students than any other factor.

Studies by Bray (1998) and Talbert and McLaughlin (1993) emphasize the importance of teacher learning communities. We say more about this in Chapter 8.

Connections to the Broader Community

An analysis of learning environments from the perspective of community also includes a concern for connections between the school environment and the broader community, including homes, community centers, after-school programs, and businesses. Chapters 3, 4, and 5 showed that learning takes time; ideally, what is learned in school can be connected to out-of-school learning and vice versa. Often, however, this ideal is not reached. As John Dewey (1916) noted long ago:

> From the standpoint of the child, the great waste in school comes from his inability to utilize the experience he gets outside . . . while on the other hand, he is unable to apply in daily life what he is learning in school. That is the isolation of the school--its isolation from life.

The importance of connecting the school with outside learning activities can be appreciated by considering Figure 6.3, which shows the percentage of time during a typical school year that students spend in school, sleeping, and engaged in other activities (see Cognition and Technology Group at Vanderbilt, in press a). The percentage of time spent in school is comparatively small. If students spend one-third of their nonsleeping time outside of school watching television, this means that they spend more time watching television in a year than they spend in school. (We say more about television and learning in the next section.)

A key environment for learning is the family. Even when family members do not focus consciously on instructional roles, they provide resources for children's learning, activities in which learning occurs, and connections to community (Moll, 1986a, b, 1990). Children also learn from the attitudes of family members toward skills and values of schooling.

The success of the family as a learning environment, especially in children's early years (see Chapter 4), has provided inspiration and guidance for some of the changes recommended in schools. The phenomenal development of children from birth to age 4 or 5 is generally supported by family interactions in which children learn by engaging with and observing others in shared endeavors. Conversations and other interactions that occur around events of interest with trusted and skilled adult and child companions are especially powerful environments for children's learning. Many of the recommendations for changes in schools can be seen as extensions of the learning activities that occur within families. In addition, recommendations to include families in classroom activities and planning hold promise of bringing together two powerful systems for supporting children's learning.

Children participate in many other institutions outside their homes that can foster learning. Some of these institutions have learning as part of their goals, including many after-school programs, organizations such as Boy and Girl Scouts and 4-H Clubs, museums, and religious groups. Others make learning more incidental, but learning takes place nevertheless (see McLaughlin, 1990, on youth clubs; Griffin and Cole, 1984, on the Fifth Dimension Program).

Connections to experts outside of school can also have a positive influence on in-school learning because they provide opportunities for students to interact with parents and other people who take an interest in what students are doing. It can be very motivating both to students and teachers to have opportunities to share their work with others. Opportunities to prepare for these events helps teachers raise standards because the consequences go beyond mere scores on a test (e.g., Brown and Campione, 1994, 1996; Cognition and Technology Group at Vanderbilt, in press b).

The idea of outside audiences who present challenges (complete with deadlines) has been incorporated into a number of instructional programs (e.g., Cognition and Technology Group at Vanderbilt, 1997; Wiske, 1997). Working to prepare for outsiders provides motivation that helps teachers maintain student interest. In addition, teachers and students develop a better sense of community as they prepare to face a common challenge. Students are also motivated to prepare for outside audiences who do not come to the classroom but will see their projects. Preparing exhibits for museums represents an excellent example (see Collins et al., 1991). New technologies that enhance the ability to connect classrooms to others in the school, to parents, business leaders, college students, content area experts, and others around the world are discussed in Chapter 9.

TELEVISION

For better or for worse, most children spent a considerable amount of time watching television; it has played an increasingly prominent role in children's development over the past 50 years. Children watch a great deal of television before entering school, and television viewing continues throughout life. In fact, many students spend more hours watching television than attending school. Parents want their children to learn from television; at the same time they are concerned about what they are learning from the programs they watch (Greenfield, 1984).

Watching Different Kinds of Programs

Television programming for children ranges from educational to purely entertaining (see Wright and Huston, 1995). And there are different ways of watching programs--a child may

watch in isolation or with an adult. Furthermore, just as in domains like chess, physics, or teaching (see Chapter 2), people's existing knowledge and beliefs affect what they notice, understand, and remember from viewing television (Newcomb and Collins, 1979). The same program can have different effects depending on who is watching and whether the viewing is a solo activity or part of an interactive group. An important distinction is whether the program is intended to be educational or not.

One group of preschoolers aged 2-4 and first-grade students aged 6-7 watched about 7-8 hours of noneducational programming per week; the preschool children also watched an average of 2 hours of educational programming per week, and the older students watched 1 hour. Despite the low ratio of educational to noneducational viewing, the educational programs seemed to have positive benefits. The 2- to 4-year-old preschoolers performed better than non-viewers of educational programs on tests of school readiness, reading, mathematics, and vocabulary as much as 3 years later (Wright and Huston, 1995). Specifically, viewing educational programs was a positive predictor of letter-word knowledge, vocabulary size, and school readiness on standardized achievement tests. For the older students, the viewing of educational programs was related to better performance on tests of reading comprehension and teachers' judgments of school adjustment in first and second grades, compared with children who were infrequent viewers. Overall, the effects of television viewing were not as widespread for the older students, and there were fewer significant effects for the older children than for the preschoolers. It is important to note that the effects of watching educational programs were evident "even when initial language skills, family education, income, and the quality of the home environment are taken into account" (Wright and Huston, 1995:22).

Effects on Beliefs and Attitudes

Television also provides images and role models that can affect how children view themselves, how they see others, attitudes about what academic subjects they should be interested in, and other topics related to person perception. These images can have both positive and negative effects. For example, when 8- to 14-year-olds watched programs designed to show positive attributes of children around the world, they were less likely to say that children from their own country were more interesting or more intelligent (O'Brien, 1981), and they began to see more similarities among people around the world (Greenfield, 1984). And children who watched episodes of Sesame Street featuring handicapped children had more positive feelings toward children with disabilities.

However, children can also misinterpret programs about people from different cultures, depending on what they already know (Newcomb and Collins, 1979). Stereotyping represents a powerful effect of watching television that is potentially negative. Children bring sex role stereotypes with them to school that derive from television programs and commercials (Dorr, 1982).

As a powerful visual medium, television creates stereotypes even when there is no intent to sell an image. But experimental studies indicate that such stereotyping effects decrease with children as young as 5 if adults offer critiques of the stereotypic portrayals as the children watch programs (Dorr, 1982). Thus, entertainment programs can educate in positive ways and learned information can be extended through adult guidance and commentary.

In sum, television has an impact on children's learning that must be taken seriously. But the medium is neither inherently beneficial nor harmful. The content that students watch, and how they watch it, has important effects on what they learn. Especially significant is the fact that informative or educational programming has been shown to have beneficial effects on school achievement and that a preponderance of non-educational, entertainment viewing can have negative effects. Furthermore, the benefits of informative viewing occur despite the fact that the ratio of young children's viewing tends to be 7:1 in favor of entertainment television. These findings support the wisdom of continued attempts to develop and study television programs that can help students acquire the kinds of knowledge, skills, and attitudes that support their learning in school.

THE IMPORTANCE OF ALIGNMENT

In the beginning of this chapter we noted that the four perspectives on learning environments (the degree to which they are learner, knowledge, assessment, and community centered) would be discussed separately but ultimately needed to be aligned in ways that mutually support one another. Alignment is as important for schools as for organizations in general (e.g., Covey, 1990). A key aspect of task analysis (see Chapter 2) is the idea of aligning goals for learning with what is taught, how it is taught, and how it is assessed (both formatively and summatively). Without this alignment, it is difficult to know what is being learned. Students may be learning valuable information, but one cannot tell unless there is alignment between what they are learning and the assessment of that learning. Similarly, students may be learning things that others don't value unless curricula and assessments are aligned with the broad learning goals of communities (Lehrer and Shumow, 1997).

A systems approach to promote coordination among activities is needed to design effective learning environments (Brown and Campione, 1996). Many schools have checklists of innovative practices, such as the use of collaborative learning, teaching for understanding and problem solving, and using formative assessment. Often, however, these activities are not coordinated with one another. Teaching for understanding and problem solving may be "what we do on Fridays"; collaborative learning may be used to promote memorization of fact-based tests; and formative assessments may focus on skills that are totally disconnected from the rest of the students' curriculum. In addition, students may be given opportunities to study collaboratively for tests yet be graded on a curve so that they compete with one another rather than trying to meet particular performance standards. In these situations, activities in the classroom are not aligned.

Activities *within* a particular classroom may be aligned yet fail to fit with the rest of the school. And a school as a whole needs to have a consistent alignment. Some schools communicate a consistent policy about norms and expectations for conduct and achievement. Others send mixed messages. For example, teachers may send behavior problems to the principal, who may inadvertently undermine the teacher by making light of the students' behavior. Similarly, schedules may or may not be made flexible in order to accommodate in-depth inquiry, and schools may or may not be adjusted to minimize disruptions, including nonacademic "pullout" programs and even the number of classroom interruptions made by a principal's overzealous use of the classroom intercom. Overall, different activities within a school may or may not compete with one another and impede overall progress. When principals and teachers work together to define a common vision for their entire school, learning can improve (e.g., Barth, 1988, 1991; Peterson et al., 1995).

Activities within schools must also be aligned with the goals and assessment practices of the community. Ideally, teachers' goals for learning fit with the curriculum they teach and the

school's goals, which in turn fit the goals implicit in the tests of accountability used by the school system. Often these factors are out of alignment. Effective change requires a simultaneous consideration of all these factors (e.g., Cognition and Technology Group at Vanderbilt, in press b). The new scientific findings about learning provide a framework for guiding systemic change.

CONCLUSION

The goals and expectations for schooling have changed quite dramatically during the past century, and new goals suggest the need to rethink such questions as what is taught, how it is taught, and how students are assessed. We emphasized that research on learning does not provide a recipe for designing effective learning environments, but it does support the value of asking certain kinds of questions about the design of learning environments.

Four perspectives on the design of learning environments--the degree to which they are student centered, knowledge centered, assessment centered, and community centered--are important in designing these environments.

A focus on the degree to which environments are learner centered is consistent with the strong body of evidence suggesting that learners' use their current knowledge to construct new knowledge and that what they know and believe at the moment affects how they interpret new information. Sometimes learners' current knowledge supports new learning, sometimes it hampers learning: effective instruction begins with what learners bring to the setting; this includes cultural practices and beliefs as well as knowledge of academic content.

Learner-centered environments attempt to help students make connections between their previous knowledge and their current academic tasks. Parents are especially good at helping their children make connections. Teachers have a harder time because they do not share the life experiences of each of their students. Nevertheless, there are ways to systematically become familiar with each student's special interests and strengths.

Effective environments must also be knowledge centered. It is not sufficient only to attempt to teach general problem solving and thinking skills; the ability to think and solve problems requires well-organized knowledge that is accessible in appropriate contexts. An emphasis on being knowledge centered raises a number of questions, such as the degree to which instruction begins with students' current knowledge and skills, rather than simply presents new facts about the subject matter. While young students are capable of grasping more complex concepts than was believed previously, those concepts must be presented in ways that are developmentally appropriate. A knowledge-centered perspective on learning environments also highlights the importance of thinking about designs for curricula. To what extent do they help students learn with understanding versus promote the acquisition of disconnected sets of facts and skills? Curricula that emphasize an excessively broad range of subjects run the risk of developing disconnected rather than connected knowledge; they fit well with the idea of a curriculum as being a well-worn path in a road. An alternative metaphor for curriculum is to help students

develop interconnected pathways within a discipline so that they "learn their away around in it" and not lose sight of where they are.

Issues of assessment also represent an important perspective for viewing the design of learning environments. Feedback is fundamental to learning, but opportunities to receive it are often scarce in classrooms. Students may receive grades on tests and essays, but these are summative assessments that occur at the end of projects; also needed are formative assessments that provide students opportunities to revise and hence improve the quality of their thinking and learning. Assessments must reflect the learning goals that define various environments. If the goal is to enhance understanding, it is not sufficient to provide assessments that focus primarily on memory for facts and formulas. Many instructors have changed their approach to teaching after seeing how their students failed to understand seemingly obvious (to the expert) ideas.

The fourth perspective on learning environments involves the degree to which they promote a sense of community. Ideally, students, teachers, and other interested participants share norms that value learning and high standards. Norms such as these increase people's opportunities to interact, receive feedback, and learn. There are several aspects of community, including the community of the classroom, the school, and the connections between the school and the larger community, including the home. The importance of connected communities becomes clear when one examines the relatively small amount of time spent in school compared to other settings. Activities in homes, community centers, and after-school clubs can have important effects on students' academic achievement.

Finally, there needs to be alignment among the four perspectives of learning environments. They all have the potential to overlap and mutually influence one another. Issues of alignment appear to be very important for accelerating learning both within and outside of schools.

7

Effective Teaching: Examples in History, Mathematics, and Science

The preceding chapter explored implications of research on learning for general issues relevant to the design of effective learning environments. We now move to a more detailed exploration of teaching and learning in three disciplines: history, mathematics, and science. We chose these three areas in order to focus on the similarities and differences of disciplines that use different methods of inquiry and

analysis. A major goal of our discussion is to explore the knowledge required to teach effectively in a diversity of disciplines.

We noted in Chapter 2 that expertise in particular areas involves more than a set of general problem-solving skills; it also requires well-organized knowledge of concepts and inquiry procedures. Different disciplines are organized differently and have different approaches to inquiry. For example, the evidence needed to support a set of historical claims is different from the evidence needed to prove a mathematical conjecture, and both of these differ from the evidence needed to test a scientific theory. Discussion in Chapter 2 also differentiated between expertise in a discipline and the ability to help others learn about that discipline. To use Shulman's (1987) language, effective teachers need pedagogical content knowledge (knowledge about how to teach in particular disciplines) rather than only knowledge of a particular subject matter.

Pedagogical content knowledge is different from knowledge of general teaching methods. Expert teachers know the structure of their disciplines, and this knowledge provides them with cognitive roadmaps that guide the assignments they give students, the assessments they use to gauge students' progress, and the questions they ask in the give and take of classroom life. In short, their knowledge of the discipline and their knowledge of pedagogy interact. But knowledge of the discipline structure does not in itself guide the teacher. For example, expert teachers are sensitive to those aspects of the discipline that are especially hard or easy for new students to master. This means that new teachers must develop the ability to "understand in a pedagogically reflective way; they must not only know their own way around a discipline, but must know the 'conceptual barriers' likely to hinder others" (McDonald and Naso, 1986:8). These conceptual barriers differ from discipline to discipline.

An emphasis on interactions between disciplinary knowledge and pedagogical knowledge directly contradicts common misconceptions about what teachers need to know in order to design effective learning environments for their students. The misconceptions are that teaching consists only of a set of general methods, that a good teacher can teach any subject, or that content knowledge alone is sufficient.

Some teachers *are* able to teach in ways that involve a variety of disciplines. However, their ability to do so requires more than a set of general teaching skills. Consider the case of Barb Johnson, who has been a sixth- grade teacher for 12 years at Monroe Middle School. By conventional standards Monroe is a good school. Standardized test scores are about average, class size is small, the building facilities are well maintained, the administrator is a strong instructional leader, and there is little faculty and staff turnover. However, every year parents sending their fifth-grade students from the local elementary schools to Monroe jockey to get their children assigned to Barb Johnson's classes. What happens in her classroom that gives it the reputation of being the best of the best?

During the first week of school Barb Johnson asks her sixth graders two questions: "What questions do you have about yourself?" and "What questions do you have about the world?" The students begin enumerating their questions, "Can they be about silly, little things?" asks one student. "If they're your questions that you really want answered, they're neither silly nor little," replies the teacher. After the students list their individual questions, Barb organizes the students into small groups where they share lists and search for questions they have in common. After much discussion each group comes up with a priority list of questions, rank-ordering the questions about themselves and those about the world.

Back together in a whole group session, Barb Johnson solicits the groups' priorities and works toward consensus for the class's combined lists of questions. These questions become the basis for guiding the curriculum in Barb's class. One question, "Will I live to be 100 years old?" spawned educational investigations into genetics, family and oral history, actuarial science, statistics and probability, heart disease, cancer, and hypertension. The students had the opportunity to seek out information from family members, friends, experts in various fields, on-line computer services, and books, as well as from the teacher. She describes what they had to do as becoming part of a "learning community." According to Barb Johnson, "We decide what are the most compelling intellectual issues, devise ways to investigate those issues and start off on a learning journey. Sometimes we fall short of our goal. Sometimes we reach our goal, but most times we exceed these goals--we learn more than we initially expected" (personal communication).

At the end of an investigation, Barb Johnson works with the students to help them see how their investigations relate to conventional subject-matter areas. They create a chart on which they tally experiences in language and literacy, mathematics, science, social studies and history, music, and art. Students often are surprised at how much and how varied their learning is. Says one student, "I just thought we were having fun. I didn't realize we were learning, too!"

Barb Johnson's teaching is extraordinary. It requires a wide range of disciplinary knowledge because she begins with students' questions rather than with a fixed curriculum. Because of her extensive knowledge, she can map students' questions onto important principles of relevant disciplines. It would not work to simply arm new teachers with general strategies that mirror how she teaches and encourage them to use this approach in their classrooms. Unless they have the relevant disciplinary knowledge, the teachers and the classes would quickly become lost. At the same time, disciplinary knowledge without knowledge about how students learn (i.e., principles consistent with developmental and learning psychology) and how to lead the processes of learning (i.e., pedagogical knowledge) would not yield the kind of learning seen in Barb Johnson's classes (Anderson and Smith, 1987).

In the remainder of this chapter, we present illustrations and discussions of exemplary teaching in history, mathematics, and science. The three examples of history, mathematics, and science are designed to convey a sense of the pedagogical knowledge and content knowledge (Shulman, 1987) that underlie expert teaching. They should help to clarify why effective teaching requires much more than a set of "general teaching skills."

HISTORY

Most people have had quite similar experiences with history courses: they learned the facts and dates that the teacher and the text deemed relevant. This view of history is radically different from the way that historians see their work. Students who think that history is about facts and dates miss exciting opportunities to understand how history is a discipline that is guided by particular rules of evidence and how particular analytical skills can be relevant for understanding events in their lives (see Ravitch and Finn, 1987). Unfortunately, many teachers do not present an exciting approach to history, perhaps because they, too, were taught in the dates-facts method.

Beyond Facts

In Chapter 2, we discussed a study of experts in the field of history and learned that they regard the available evidence as more than lists of facts (Wineburg, 1991). The study contrasted a group of gifted high school seniors with a group of working historians. Both groups were given a test of facts about the American Revolution taken from the chapter review section of a popular United States history textbook. The historians who had backgrounds in American history knew most of the items, while historians whose specialties lay elsewhere knew only a third of the test facts. Several students scored higher than some historians on the factual pretest. In addition to the test of facts, however, the historians and students were presented with a set of historical documents and asked to sort out competing claims and to formulate reasoned interpretations. The historians excelled at this task. Most students, on the other hand, were stymied. Despite the volume of historical information the students possessed, they had little sense of how to use it productively for forming interpretations of events or for reaching conclusions.

Different Views of History by Different Teachers

Different views of history affect how teachers teach history. For example, Wilson and Wineburg (1993) asked two teachers of American history to read a set of student essays on the causes of the American Revolution not as an unbiased or complete and definitive accounts of people and events, but to develop plans for the students' "remediation or enrichment." Teachers were provided with a set of essays on the question, "Evaluate the causes of the American Revolution," written by eleventh-graders for a timed, 45-minute test. Consider the different types of feedback that Mr. Barnes and Ms. Kelsey gave a student paper; see Box 7.1.

Mr. Barnes' comments on the actual content of the essays concentrated on the factual level. Ms. Kelsey's comments addressed broader images of the nature of the domain, without neglecting important errors of fact. Overall, Mr. Barnes saw the papers as an indication of the bell-shaped distribution of abilities; Ms. Kelsey saw them as representing the misconception that history is about memorizing a mass of information and recounting a series of facts. These two teachers had very different ideas about the nature of learning history. Those ideas affected how they taught and what they wanted their students to achieve.

Studies of Outstanding History Teachers

For expert history teachers, their knowledge of the discipline and beliefs about its structure interact with their teaching strategies. Rather than simply introduce students to sets of facts to be learned, these teachers help people to understand the problematic nature of historical interpretation and analysis and to appreciate the relevance of history for their everyday lives.

One example of outstanding history teaching comes form the classroom of Bob Bain, a public school teacher in Beechwood, Ohio. Historians, he notes, are cursed with an abundance of data--the traces of the past threaten to overwhelm them unless they find some way of separating what is important from what is peripheral. The assumptions that historians hold about significance shape how they write their

histories, the data they select, and the narrative they compose, as well as the larger schemes they bring to organize and periodize the past. Often these assumptions about historical significance remain unarticulated in the classroom. This contributes to students' beliefs that their textbooks are *the* history rather than *a* history.

Bob Bain begins his ninth-grade high school class by having all the students create a time capsule of what they think are the most important artifacts from the past. The students' task, then, is to put down on paper why they chose the items they did. In this way, the students explicitly articulate their underlying assumptions of what constitutes historical significance. Students' responses are pooled, and he writes them on a large poster that he hangs on the classroom wall. This poster, which Bob Bain calls "Rules for Determining Historical Significance," becomes a lightening rod for class discussions throughout the year, undergoing revisions and elaborations as students become better able to articulate their ideas.

At first, students apply the rules rigidly and algorithmically, with little understanding that just as they made the rules, they can also change them. But as students become more practiced in plying their judgments of significance, they come to see the rules as tools for assaying the arguments of different historians, which allows them to begin to understand why historians disagree. In this instance, the students' growing ability to understand the interpretative nature of history is aided by their teacher's deep understanding of a fundamental principle of the discipline.

Leinhardt and Greeno (1991, 1994) spent 2 years studying a highly accomplished teacher of advanced placement history in an urban high school in Pittsburgh. The teacher, Ms. Sterling, a veteran of over 20 years, began her school year by having her students ponder the meaning of the statement, "Every true history is contemporary history." In the first week of the semester, Sterling thrust her students into the kinds of epistemological issues that one might find in a graduate seminar: "What is history?" "How do we know the past?" "What is the difference between someone who sits down to 'write history' and the artifacts that are produced as part of ordinary experience?" The goal of this extended exercise is to help students understand history as an *evidentiary* form of knowledge, not as clusters of fixed names and dates.

One might wonder about the advisability of spending 5 days "defining history" in a curriculum with so much to cover. But it is precisely Sterling's framework of subject-matter knowledge--her overarching understanding of the discipline as a whole--that permits students entry into the advanced world of historical sense-making. By the end of the course, students moved from being passive spectators of the past to enfranchised agents who could participate in the forms of thinking, reasoning, and engagement that are the hallmark of skilled historical cognition. For example, early in the school year, Ms. Sterling asked her students a question about the Constitutional Convention and "what were men able to do." Paul took the question literally: "Uh, I think one of the biggest things that they did, that we talked about yesterday, was the establishment of the first settlements in the Northwest area states." But after 2 months of educating students into a way of thinking about history, Paul began to catch on. By January his responses to questions about the fall of the cotton-based economy in the South were linked to British trade policy and colonial ventures in Asia, as well as to the failure of Southern leaders to read public opinion accurately in Great Britain. Ms. Sterling's own understanding of history allowed her to create a classroom in which students not only mastered concepts and

facts, but also used them in authentic ways to craft historical explanations.

Debating the Evidence

Elizabeth Jensen prepares her group of eleventh graders to debate the following resolution:

Resolved: The British government possesses the legitimate authority to tax the American colonies.

As her students enter the classroom they arrange their desks into three groups--on the left of the room a group of "rebels," on the right, a group of "loyalists," and in the front, a group of "judges." Off to the side with a spiral notebook on her lap sits Jensen, a short woman in her late 30s with a booming voice. But today that voice is silent as her students take up the question of the legitimacy of British taxation in the American colonies.

The rebels' first speaker, a 16-year-old girl with a Grateful Dead T-shirt and one dangling earring, takes a paper from her notebook and begins:

England says she keeps troops here for our own protection. On face value, this seems reasonable enough, but there is really no substance to their claims. First of all, who do they think they are protecting us from? The French? Quoting from our friend Mr. Bailey on page 54, 'By the settlement in Paris in 1763, French power was thrown completely off the continent of North America.' Clearly not the French then. Maybe they need to protect us from the Spanish? Yet the same war also subdued the Spanish, so they are no real worry either. In fact, the only threat to our order is the Indians . . . but . . . we have a decent militia of our own. . . . So why are they putting troops here? The only possible reason is to keep us in line. With more and more troops coming over, soon every freedom we hold dear will be stripped away. The great irony is that Britain expects us to pay for these vicious troops, these British squelchers of colonial justice.

A loyalist responds:

We moved here, we are paying less taxes than we did for two generations in England, and you complain? Let's look at why we are being taxed--the main reason is probably because England has a debt of £140,000,000.
. . . This sounds a little greedy, I mean what right do they have to take our money simply because they have the power over us. But did you know that over one-half of their war debt was caused by defending us in the French and Indian War. . . . Taxation without representation isn't fair. Indeed, it's tyranny. Yet virtual representation makes this whining of yours an untruth. Every British citizen, whether he had a right to vote or not, is represented in Parliament. Why does this representation not extend to America?

A rebel questions the loyalist about this:

Rebel: What benefits do we get out of paying taxes to the crown?

Loyalist: We benefit from the protection.

Rebel: (cutting in) Is that the only benefit you claim, protection?

Loyalist: Yes--and all the rights of an Englishman.

Rebel: Okay, then what about the Intolerable Acts . . . denying us rights of British subjects. What about the rights we are denied?

Loyalist: The Sons of Liberty tarred and feather people, pillaged homes--they were definitely deserving of some sort of punishment.

Rebel: So should all the colonies be punished for the acts of a few colonies?

For a moment, the room is a cacophony of charges and countercharges. "It's the same as in Birmingham," shouts a loyalist. A rebel snorts disparagingly, "Virtual representation is bull." Thirty-two students seem to be talking at once, while the presiding judge, a wiry student with horn-rimmed glasses, bangs his gavel to no avail. The teacher, still in the corner, still with spiral notebook in lap, issues her only command of the day. "Hold still!" she thunders. Order is restored and the loyalists continue their opening argument (from Wineburg and Wilson, 1991).

Another example of Elizabeth Jensen's teaching involves her efforts to help her high school students understand the debates between Federalists and anti-Federalists. She knows that her 15- and 16-year-olds cannot begin to grasp the complexities of the debates without first understanding that these disagreements were rooted in fundamentally different conceptions of human nature--a point glossed over in two paragraphs in her history textbook. Rather than beginning the year with a unit on European discovery and exploration, as her text dictates, she begins with a conference on the nature of man. Students in her eleventh-grade history class read excerpts from the writings of philosophers (Hume, Locke, Plato, and Aristotle), leaders of state and revolutionaries (Jefferson, Lenin, Gandhi), and tyrants (Hitler, Mussolini), presenting and advocating these views before their classmates. Six weeks later, when it is time to study the ratification of the Constitution, these now-familiar figures--Plato, Aristotle, and others--are reconvened to be courted by impassioned groups of Federalists and anti-Federalists. It is Elizabeth Jensen's understanding of what she wants to teach and what adolescents already know that allows her to craft an activity that helps students get a feel for the domain that awaits them: decisions about rebellion, the Constitution, federalism, slavery, and the nature of a government.

Conclusion

These examples provide glimpses of outstanding teaching in the discipline of history. The examples do not come from "gifted teachers" who know how to teach anything: they demonstrate, instead, that expert teachers have a deep understanding of the structure and epistemologies of their disciplines, combined with knowledge of the kinds of teaching activities that will help students come to understand the discipline for themselves. As we previously noted, this point sharply contradicts one of the popular--and dangerous--myths about teaching: teaching is a generic skill and a good teacher can teach any subject. Numerous studies

demonstrate that any curriculum--including a textbook--is mediated by a teacher's understanding of the subject domain (for history, see Wineburg and Wilson, 1988; for math, see Ball, 1993; for English, see Grossman et al., 1989). The uniqueness of the content knowledge and pedagogical knowledge necessary to teach history becomes clearer as one explores outstanding teaching in other disciplines.

As is the case in history, most people believe that they know what mathematics is about--computation. Most people are familiar with only the computational aspects of mathematics and so are likely to argue for its place in the school curriculum and for traditional methods of instructing children in computation. In contrast, mathematicians see computation as merely a tool in the real stuff of mathematics, which includes problem solving, and characterizing and understanding structure and patterns. The current debate concerning what students should learn in mathematics seems to set proponents of teaching computational skills against the advocates of fostering conceptual understanding and reflects the wide range of beliefs about what aspects of mathematics are important to know. A growing body of research provides convincing evidence that what teachers know and believe about mathematics is closely linked to their instructional decisions and actions (Brown, 1985; National Council of Teachers of Mathematics, 1989; Wilson, 1990a, b; Brophy, 1990; Thompson, 1992).

Teachers' ideas about mathematics, mathematics teaching, and mathematics learning directly influence their notions about what to teach and how to teach it--an interdependence of beliefs and knowledge about pedagogy and subject matter (e.g., Gamoran, 1994; Stein et al., 1990). It shows that teachers' goals for instruction are, to a large extent, a reflection of what they think is important in mathematics and how they think students best learn it. Thus, as we examine mathematics instruction, we need to pay attention to the subject-matter knowledge of teachers, their pedagogical knowledge (general and content specific), and their knowledge of children as learners of mathematics. Paying attention to these domains of knowledge also leads us to examine teachers' goals for instruction.

If students in mathematics classes are to learn mathematics with understanding--a goal that is accepted by almost everyone in the current debate over the role of computational skills in mathematics classrooms--then it is important to examine examples of teaching for understanding and to analyze the roles of the teacher and the knowledge that underlies the teacher's enactments of those roles. In this section, we examine three cases of mathematics instruction that are viewed as being close to the current vision of exemplary instruction and discuss the knowledge base on which the teacher is drawing, as well as the beliefs and goals which guide his or her instructional decisions.

Multiplication with Meaning

For teaching multidigit multiplication, teacher-researcher Magdelene Lampert created a series of lessons in which she taught a heterogeneous group of 28 fourth-grade students. The students ranged in computational skill from beginning to learn the single-digit multiplication facts to being able to accurately solve n-digit by n-

digit multiplications. The lessons were intended to give children experiences in which the important mathematical principles of additive and multiplicative composition, associativity, commutativity, and the distributive property of multiplication over addition were all evident in the steps of the procedures used to arrive at an answer (Lampert, 1986:316). It is clear from her description of her instruction that both her deep understanding of multiplicative structures and her knowledge of a wide range of representations and problem situations related to multiplication were brought to bear as she planned and taught these lessons. It is also clear that her goals for the lessons included not only those related to students' understanding of mathematics, but also those related to students' development as independent, thoughtful problem solvers. Lampert (1986:339) described her role as follows:

> My role was to bring students' ideas about how to solve or analyze problems into the public forum of the classroom, to referee arguments about whether those ideas were reasonable, and to sanction students' intuitive use of mathematical principles as legitimate. I also taught new information in the form of symbolic structures and emphasized the connection between symbols and operations on quantities, but I made it a classroom requirement that students use their own ways of deciding whether something was mathematically reasonable in doing the work. If one conceives of the teacher's role in this way, it is difficult to separate instruction in mathematics content from building a culture of sense-making in the classroom, wherein teacher and students have a view of themselves as responsible for ascertaining the legitimacy of procedures by reference to known mathematical principles. On the part of the teacher, the principles might be known as a more formal abstract system, whereas on the part of the learners, they are known in relation to familiar experiential contexts. But what seems most important is that teachers and students together are disposed toward a particular way of viewing and doing mathematics in the classroom.

Magdelene Lampert set out to connect what students already knew about multidigit multiplication with principled conceptual knowledge. She did so in three sets of lessons. The first set used coin problems, such as "Using only two kinds of coins, make $1.00 using 19 coins," which encouraged children to draw on their familiarity with coins and mathematical principles that coin trading requires. Another set of lessons used simple stories and drawings to illustrate the ways in which large quantities could be grouped for easier counting. Finally, the third set of lessons used only numbers and arithmetic symbols to represent problems. Throughout the lessons, students were challenged to explain their answers and to rely on their arguments, rather than to rely on the teacher or book for verification of correctness. An example serves to highlight this approach; see Box 7.2.

Lampert (1986:337) concludes:

> . . . students used principled knowledge that was tied to the language of groups to explain what they were seeing. They were able to talk meaningfully about place value and order of operations to give legitimacy to procedures and to reason about their outcomes, even though they did not use technical terms to do so. I took their experimentations and arguments as evidence that they had come to see mathematics as more than a set of procedures for finding answers.

Clearly, her own deep understanding of mathematics comes into play as she teaches these lessons. It is worth noting that her goal of helping students see what is mathematically legitimate shapes the way in which she designs lessons to develop students' understanding of two-digit multiplication.

Understanding Negative Numbers

Helping third-grade students extend their understanding of numbers from the natural numbers to the integers is a challenge undertaken by another teacher-researcher. Deborah Ball's work provides another snapshot of teaching that draws on extensive subject content and pedagogical content knowledge. Her goals in instruction include "developing a practice that respects the integrity both of mathematics as a discipline *and* of children as mathematical thinkers" (Ball, 1993). That is, she not only takes into account what the important mathematical ideas are, but also how children think about the particular area of mathematics on which she is focusing. She draws on both her understanding of the integers as mathematical entities (subject-matter knowledge) and her extensive pedagogical content knowledge specifically about integers. Like Lampert, Ball's goals go beyond the boundaries of what is typically considered mathematics and include developing a culture in which students conjecture, experiment, build arguments, and frame and solve problems--the work of mathematicians.

Deborah Ball's description of work highlights the importance and difficulty of figuring out powerful and effective ways to represent key mathematical ideas to children (see Ball, 1993). A wealth of possible models for negative numbers exists and she reviewed a number of them--magic peanuts, money, game scoring, a frog on a number line, buildings with floors above and below ground. She decided to use the building model first and money later: she was acutely aware of the strengths and limitations of each model as a way for representing the key properties of numbers, particularly those of magnitude and direction. Reading Deborah Ball's description of her deliberations, one is struck by the complexity of selecting appropriate models for particular mathematical ideas and processes. She hoped that the positional aspects of the building model would help children recognize that negative numbers were not equivalent to zero, a common misconception. She was aware that the building model would be difficult to use for modeling subtraction of negative numbers.

Deborah Ball begins her work with the students, using the building model by labeling its floors. Students readily labeled the underground floors and accepted them as "below zero." They then explored what happened as little paper people entered an elevator at some floor and rode to another floor. This was used to introduce the conventions of writing addition and subtraction problems involving integers 4 — 6 = —2 and —2 + 5 = 3. Students were presented with increasingly difficult problems. For example, "How many ways are there for a person to get to the second floor?" Working with the building model allowed students to generate a number of observations. For example, one student noticed that "any number below zero plus that same number above zero equals zero" (Ball, 1993:381). However, the model failed to allow for explorations for such problems 5 + (—6) and Ball was concerned that students were not developing a sense that —5 was less than —2--it was lower, but not necessarily less. Ball then used a model of money as a second representational context for exploring negative numbers, noting that it, too, has limitations.

Clearly, Deborah Ball's knowledge of the possible representations of integers (pedagogical content knowledge) and her understanding of the important mathematical properties of integers were foundational to her planning and her instruction. Again, her goals related to developing students' mathematical authority, and a sense of community also came into play. Like Lampert, Ball wanted her students to accept the responsibility of deciding when a solution is reasonable and likely to be correct, rather than depending on text or teacher for confirmation of

correctness.

Guided Discussion

The work of Lampert and Ball highlights the role of a teacher's knowledge of content and pedagogical content knowledge in planning and teaching mathematics lessons. It also suggests the importance of the teacher's understanding of children as learners. The concept of cognitively guided instruction helps illustrate another important characteristic of effective mathematics instruction: that teachers not only need knowledge of a particular topic within mathematics and knowledge of how learners think about the particular topic, but also need to develop knowledge about how the individual children in their classrooms think about the topic (Carpenter and Fennema, 1992; Carpenter et al., 1996; Fennema et al., 1996). Teachers, it is claimed, will use their knowledge to make appropriate instructional decisions to assist students to construct their mathematical knowledge. In this approach, the idea of domains of knowledge for teaching (Shulman, 1986) is extended to include teachers' knowledge of individual learners in their classrooms.

Cognitively guided instruction is used by Annie Keith, who teaches a combination first- and second-grade class in an elementary school in Madison Wisconsin (Hiebert et al., 1997). Her instructional practices are an example of what is possible when a teacher understands children's thinking and uses that understanding to guide her teaching. A portrait of Ms. Keith's classroom reveals also how her knowledge of mathematics and pedagogy influence her instructional decisions.

Word problems form the basis for almost all instruction in Annie Keith's classroom. Students spend a great deal of time discussing alternative strategies with each other, in groups, and as a whole class. The teacher often participates in these discussions but almost never demonstrates the solution to problems. Important ideas in mathematics are developed as students explore solutions to problems, rather than being a focus of instruction per se. For example, place-value concepts are developed as students use base-10 materials, such as base-10 blocks and counting frames, to solve word problems involving multidigit numbers.

Mathematics instruction in Annie Keith's class takes place in a number of different settings. Everyday first-grade and second-grade activities, such as sharing snacks, lunch count, and attendance, regularly serve as contexts for problem-solving tasks. Mathematics lessons frequently make use of math centers in which the students do a variety of activities. On any given day, children at one center may solve word problems presented by the teacher while at another center children write word problems to present to the class later or play a math game.

She continually challenges her students to think and to try to make sense of what they are doing in math. She uses the activities as opportunities for her to learn what individual students know and understand about mathematics. As students work in groups to solve problems, she observes the various solutions and mentally makes notes about which students should present their work: she wants a variety of solutions presented so that students will have an opportunity to learn from each other. Her knowledge of the important ideas in mathematics serves as one framework for the selection process, but her understanding of how children think about the mathematical ideas they are using also affects her decisions about who should present. She might select a solution that is actually incorrect to be

presented so that she can initiate a discussion of a common misconception. Or she may select a solution that is more sophisticated than most students have used in order to provide an opportunity for students to see the benefits of such a strategy. Both the presentations of solutions and the class discussions that follow provide her with information about what her students know and what problems she should use with them next.

Annie Keith's strong belief that children need to construct their understanding of mathematical ideas by building on what they already know guides her instructional decisions. She forms hypotheses about what her students understand and selects instructional activities based on these hypotheses. She modifies her instruction as she gathers additional information about her students and compares it with the mathematics she wants them to learn. Her instructional decisions give her clear diagnoses of individual students' current state of understanding. Her approach is not a free-for-all without teacher guidance: rather, it is instruction that builds on students' understandings and is carefully orchestrated by the teacher, who is aware of what is mathematically important and also what is important to the learner's progress.

Model-Based Reasoning

Some attempts to revitalize mathematics instruction have emphasized the importance of modeling phenomena. Work on modeling can be done from kindergarten through twelth grade (K-12). Modeling involves cycles of model construction, model evaluation, and model revision. It is central to professional practice in many disciplines, such as mathematics and science, but it is largely missing from school instruction. Modeling practices are ubiquitous and diverse, ranging from the construction of physical models, such as a planetarium or a model of the human vascular system, to the development of abstract symbol systems, exemplified by the mathematics of algebra, geometry, and calculus. The ubiquity and diversity of models in these disciplines suggest that modeling can help students develop understanding about a wide range of important ideas. Modeling practices can and should be fostered at every age and grade level (Clement, 1989; Hestenes, 1992; Lehrer and Romberg, 1996a, b; Schauble et al., 1995; see Box 7.3).

Taking a model-based approach to a problem entails inventing (or selecting) a model, exploring the qualities of the model, and then applying the model to answer a question of interest. For example, the geometry of triangles has an internal logic and also has predictive power for phenomena ranging from optics to wayfinding (as in navigational systems) to laying floor tile. Modeling emphasizes a need for forms of mathematics that are typically underrepresented in the standard curriculum, such as spatial visualization and geometry, data structure, measurement, and uncertainty. For example, the scientific study of animal behavior, like bird foraging, is severely limited unless one also has access to such mathematical concepts as variability and uncertainty. Hence, the practice of modeling introduces the further explorations of important "big ideas" in disciplines.

Conclusion

Increasingly, approaches to early mathematics teaching incorporate the

premises that all learning involves extending understanding to new situations, that young children come to school with many ideas about mathematics, that knowledge relevant to a new setting is not always accessed spontaneously, and that learning can be enhanced by respecting and encouraging children to try out the ideas and strategies that they bring to school-based learning in classrooms. Rather than beginning mathematics instruction by focusing solely on computational algorithms, such as addition and subtraction, students are encouraged to invent their own strategies for solving problems and to discuss why those strategies work. Teachers may also explicitly prompt students to think about aspects of their everyday life that are potentially relevant for further learning. For example, everyday experiences of walking and related ideas about position and direction can serve as a springboard for developing corresponding mathematics about the structure of large-scale space, position, and direction (Lehrer and Romberg, 1996b).

As research continues to provide good examples of instruction that help children learn important mathematics, there will be better understanding of the roles that teachers' knowledge, beliefs, and goals play in their instructional thinking and actions. The examples we have provided here make it clear that the selection of tasks and the guidance of students' thinking as they work through tasks is highly dependent on teachers' knowledge of mathematics, pedagogical content knowledge, and knowledge of students in general.

Two recent examples in physics illustrate how research findings can be used to design instructional strategies that promote the sort of problem-solving behavior observed in experts. Undergraduates who had finished an introductory physics course were asked to spend a total of 10 hours, spread over several weeks, solving physics problems using a computer-based tool that constrained them to perform a conceptual analysis of the problems based on a hierarchy of principles and procedures that could be applied to solve them (Dufresne et al., 1996). This approach was motivated by research on expertise (discussed in Chapter 2). The reader will recall that, when asked to state an approach to solving a problem, physicists generally discuss principles and procedures. Novices, in contrast, tend to discuss specific equations that could be used to manipulate variables given in the problem (Chi et al., 1981). When compared with a group of students who solved the same problems on their own, the students who used the computer to carry out the hierarchical analyses performed noticeably better in subsequent measures of expertise. For example, in problem solving, those who performed the hierarchical analyses outperformed those who did not, whether measured in terms of overall problem-solving performance, ability to arrive at the correct answer, or ability to apply appropriate principles to solve the problems; see Figure 7.1. Furthermore, similar differences emerged in problem categorization: students who performed the hierarchical analyses considered principles (as opposed to surface features) more often in deciding whether or not two problems would be solved similarly; see Figure 7.2. (See Chapter 6 for an example of the type of item used in the categorization task of Figure 7.2.) It is also worth noting that both Figures 7.1 and 7.2 illustrate two other issues that we have discussed in this volume, namely that time on task is a major indicator for learning and that deliberate practice is an efficient way to promote expertise. In both cases, the control group made significant improvements simply as a result of practice (time on task), but the experimental group showed

more improvements for the same amount of training time (deliberate practice).

Introductory physics courses have also been taught successfully with an approach for problem solving that begins with a qualitative hierarchical analysis of the problems (Leonard et al., 1996). Undergraduate engineering students were instructed to write qualitative strategies for solving problems before attempting to solve them (based on Chi et al., 1981). The strategies consisted of a coherent verbal description of how a problem could be solved and contained three components: the major principle to be applied; the justification for why the principle was applicable; and the procedures for applying the principle. That is, the what, why, and how of solving the problem were explicitly delineated; see Box 7.4. Compared with students who took a traditional course, students in the strategy-based course performed significantly better in their ability to categorize problems according to the relevant principles that could be applied to solve them; see Figure 7.3.

Hierarchical structures are useful strategies for helping novices both recall knowledge and solve problems. For example, physics novices who had completed and received good grades in an introductory college physics course were trained to generate a problem analysis called a theoretical problem description (Heller and Reif, 1984). The analysis consists of describing force problems in terms of concepts, principles, and heuristics. With such an approach, novices substantially improved in their ability to solve problems, even though the type of theoretical problem description used in the study was not a natural one for novices. Novices untrained in the theoretical descriptions were generally unable to generate appropriate descriptions on their own--even given fairly routine problems. Skills, such as the ability to describe a problem in detail before attempting a solution, the ability to determine what relevant information should enter the analysis of a problem, and the ability to decide which procedures can be used to generate problem descriptions and analyses, are tacitly used by experts but rarely taught explicitly in physics courses.

Another approach helps students organize knowledge by imposing a hierarchical organization on the performance of different tasks in physics (Eylon and Reif, 1984). Students who received a particular physics argument that was organized in hierarchical form performed various recall and problem-solving tasks better than subjects who received the same argument non-hierarchically. Similarly, students who received a hierarchical organization of problem-solving strategies performed much better than subjects who received the same strategies organized non-hierarchically. Thus, helping students to organize their knowledge is as important as the knowledge itself, since knowledge organization is likely to affect students' intellectual performance.

These examples demonstrate the importance of deliberate practice and of having a "coach" who provides feedback for ways of optimizing performance (see Chapter 3). If students had simply been given problems to solve on their own (an instructional practice used in all the sciences), it is highly unlikely that they would have spent time efficiently. Students might get stuck for minutes, or even hours, in attempting a solution to a problem and either give up or waste lots of time. In Chapter 3, we discussed ways in which learners profit from errors and that making mistakes is not always time wasted. However, it is not efficient if a student spends most of the problem-solving time rehearsing procedures that are not optimal for promoting skilled performance, such as finding and manipulating equations to solve

the problem, rather than identifying the underlying principle and procedures that apply to the problem and then constructing the specific equations needed. In deliberate practice, a student works under a tutor (human or computer based) to rehearse appropriate practices that enhance performance. Through deliberate practice, computer-based tutoring environments have been designed that reduce the time it takes individuals to reach real-world performance criteria from 4 years to 25 hours (see Chapter 9)!

Conceptual Change

Before students can really learn new scientific concepts, they often need to re-conceptualize deeply rooted misconceptions that interfere with the learning. As reviewed above (see Chapters 3 and 4), people spend considerable time and effort constructing a view of the physical world through experiences and observations, and they may cling tenaciously to those views--however much they conflict with scientific concepts--because they help them explain phenomena and make predictions about the world (e.g., why a rock falls faster than a leaf).

One instructional strategy, termed "bridging," has been successful in helping students overcome persistent misconceptions (Brown, 1992; Brown and Clement, 1989; Clement, 1993). The bridging strategy attempts to bridge from students' correct beliefs (called anchoring conceptions) to their misconceptions through a series of intermediate analogous situations. Starting with the anchoring intuition that a spring exerts an upward force on the book resting on it, the student might be asked if a book resting on the middle of a long, "springy" board supported at its two ends experiences an upward force from the board. The fact that the bent board looks as if it is serving the same function as the spring helps many students agree that both the spring and the board exert upward forces on the book. For a student who may not agree that the bent board exerts an upward force on the book, the instructor may ask a student to place her hand on top of a vertical spring and push down and to place her hand on the middle of the springy board and push down. She would then be asked if she experienced an upward force that resisted her push in both cases. Through this type of dynamic probing of students' beliefs, and by helping them come up with ways to resolve conflicting views, students can be guided into constructing a coherent view that is applicable across a wide range of contexts.

Another effective strategy for helping students overcome persistent erroneous beliefs are interactive lecture demonstrations (Sokoloff and Thornton, 1997; Thornton and Sokoloff, 1997). This strategy, which has been used very effectively in large introductory college physics classes, begins with an introduction to a demonstration that the instructor is about to perform, such as a collision between two air carts on an air track, one a stationary light cart, the other a heavy cart moving toward the stationary cart. Each cart has an electronic "force probe" connected to it which displays on a large screen and in real-time the force acting on it during the collision. The teacher first asks the students to discuss the situation with their neighbors and then record a prediction as to whether one of the carts would exert a bigger force on the other during impact or whether the carts would exert equal forces.

The vast majority of students incorrectly predict that the heavier, moving cart exerts a larger force on the lighter, stationary cart. Again, this prediction seems

quite reasonable based on experience--students know that a moving Mack truck colliding with a stationary Volkswagen beetle will result in much more damage done to the Volkswagen, and this is interpreted to mean that the Mack truck must have exerted a larger force on the Volkswagen. Yet, notwithstanding the major damage to the Volkswagen, Newton's Third Law states that two interacting bodies exert equal and opposite forces on each other.

After the students make and record their predictions, the instructor performs the demonstration, and the students see on the screen that the force probes record forces of equal magnitude but oppositely directed during the collision. Several other situations are discussed in the same way: What if the two carts had been moving toward each other at the same speed? What if the situation is reversed so that the heavy cart is stationary and the light cart is moving toward it? Students make predictions and then see the actual forces between the carts displayed as they collide. In all cases, students see that the carts exert equal and opposite forces on each other, and with the help of a discussion moderated by the instructor, the students begin to build a consistent view of Newton's Third Law that incorporates their observations and experiences.

Consistent with the research on providing feedback (see Chapter 3), there is other research that suggests that students' witnessing the force displayed in real-time as the two carts collide helps them overcome their misconceptions; delays of as little as 20-30 minutes in displaying graphic data of an event occurring in real-time significantly inhibits the learning of the underlying concept (Brasell, 1987).

Both bridging and the interactive demonstration strategies have been shown to be effective at helping students permanently overcome misconceptions. This finding is a major breakthrough in teaching science, since so much research indicates that students often can parrot back correct answers on a test that might be erroneously interpreted as displaying the eradication of a misconception, but the same misconception often resurfaces when students are probed weeks or months later (see Mestre, 1994, for a review).

Teaching as Coaching

One of the best examples of translating research into practice is Minstrell's (1982, 1989, 1992) work with high school physics students. Minstrell uses many research-based instructional techniques (e.g., bridging, making students' thinking visible, facilitating students' ability to restructure their own knowledge) to teach physics for understanding. He does this through classroom discussions in which students construct understanding by making sense of physics concepts, with Minstrell playing a coaching role. The following quote exemplifies his innovative and effective instructional strategies (Minstrell, 1989:130-131):

> Students' initial ideas about mechanics are like strands of yarn, some unconnected, some loosely interwoven. The act of instruction can be viewed as helping the students unravel individual strands of belief, label them, and then weave them into a fabric of more complete understanding. An important point is that later understanding can be constructed, to a considerable extent, from earlier beliefs. Sometimes new strands of belief are introduced, but rarely is an earlier belief pulled out and replaced. Rather than denying the relevancy of a belief, teachers might do better by helping students differentiate their present ideas from and integrate them into conceptual beliefs more like those of scientists.

Describing a lesson on force, Minstrell (1989:130-131) begins by introducing the topic in general terms:

Today we are going to try to explain some rather ordinary events that you might see any day. You will find that you already have many good ideas that will help explain those events. We will find that some of our ideas are similar to those of the scientist, but in other cases our ideas might be different. When we are finished with this unit, I expect that we will have a much clearer idea of how scientists explain those events, and I know that you will feel more comfortable about your explanations . . . A key idea we are going to use is the idea of force. What does the idea of force mean to you?

Many views emerge from the ensuing classroom discussion, from the typical "push or pull" to descriptions that include sophisticated terms, such as energy and momentum. At some point Minstrell guides the discussion to a specific example: he drops a rock and asks students how the event can be explained using their ideas about force. He asks students to individually formulate their ideas and to draw a diagram showing the major forces on the rock as arrows, with labels to denote the cause of each force. A lengthy discussion follows in which students present their views, views that contain many irrelevant (e.g., nuclear forces) or fictitious forces (e.g., the spin of the earth, air). In his coaching, Minstrell asks students to justify their choices by asking questions, such as "How do you know?" "How did you decide?" "Why do you believe that?"

With this approach, Minstrell has been able to identify many erroneous beliefs of students that stand in the way of conceptual understanding. One example is the belief that only active agents (e.g., people) can exert forces, that passive agents (e.g., a table) cannot. Minstrell (1992) has developed a framework that helps both to make sense of students' reasoning and to design instructional strategies. (For a related theoretical framework for classifying and explaining student reasoning, see the discussion of "phenomenological primitives" in DiSessa, 1988, 1993.) Minstrell describes identifiable pieces of students' knowledge as "facets," a facet being a convenient unit of thought, a piece of knowledge, or a strategy seemingly used by the student in addressing a particular situation. Facets may relate to conceptual knowledge (e.g., passive objects do not exert force), to strategic knowledge (e.g., average velocity can be determined by adding the initial and final velocities and dividing by two), or generic reasoning (e.g., the more the X, the more the Y). Identifying students' facets, what cues them in different contexts, and how students use them in reasoning are all helpful in devising instructional strategies.

Interactive Instruction in Large Classes

One of the obstacles to instructional innovation in large introductory science courses at the college level is the sheer number of students who are taught at one time. How does an instructor provide an active learning experience, provide feedback, accommodate different learning styles, make students' thinking visible, and provide scaffolding and tailored instruction to meet specific student needs when facing more than 100 students at a time? Classroom communication systems can help the instructor of a large class accomplish these objectives. One such system, called Classtalk, consists of both hardware and software that allows up to four students to share an input device (e.g., a fairly inexpensive graphing calculator) to "sign on" to a classroom communication network that permits the instructor to send questions for students to work on and permits students to enter answers through their input device. Answers can then be displayed anonymously in histogram form

to the class, and a permanent record of each student's response is recorded to help evaluate progress as well as the effectiveness of instruction.

This technology has been used successfully at the University of Massachusetts-Amherst to teach physics to a range of students, from non-science majors to engineering and science majors (Dufresne et al., 1996; Wenk et al., 1997; Mestre et al., 1997). The technology creates an interactive learning environment in the lectures: students work collaboratively on conceptual questions, and the histogram of students' answers is used as a visual springboard for classwide discussions when students defend the reasoning they used to arrive at their answers. This technology makes students' thinking visible and promotes critical listening, evaluation, and argumentation in the class. The teacher is a coach, providing scaffolding where needed, tailoring "mini-lectures" to clear up points of confusion, or, if things are going well, simply moderating the discussion and allowing students to figure out things and reach consensus on their own. The technology is also a natural mechanism to support formative assessment during instruction, providing both the teacher and students with feedback on how well the class is grasping the concepts under study. The approach accommodates a wider variety of learning styles than is possible by lectures and helps to foster a community of learners focused on common objectives and goals.

Science for All Children

The examples above present some effective strategies for teaching and learning science for high school and college students. We drew some general principles of learning from these examples and stressed that the findings consistently point to the strong effect of knowledge structures on learning. These studies also emphasize the importance of class discussions for developing a language for talking about scientific ideas, for making students' thinking explicit to the teacher and to the rest of the class, and for learning to develop a line of argumentation that uses what one has learned to solve problems and explain phenomena and observations.

The question that immediately occurs is how to teach science to younger children or to students who are considered to be educationally "at risk." One approach that has been especially useful in science teaching was developed with language-minority grade-school children: Chèche Konnen, which in Haitian Creole means search for knowledge (Rosebery et al., 1992). The approach stresses how discourse is a primary means for the search for knowledge and scientific sense-making. It also illustrates how scientific ideas are constructed. In this way it mirrors science, in the words of Nobel Laureate Sir Peter Medawar (1982:111):

> Like other exploratory processes, [the scientific method] can be resolved into a dialogue between fact and fancy, the actual and the possible; between what could be true and what is in fact the case. The purpose of scientific enquiry is not to compile an inventory of factual information, nor to build up a totalitarian world picture of Natural Laws in which every event that is not compulsory is forbidden. We should think of it rather as a logically articulated structure of justifiable beliefs about a Possible World--a story which we invent and criticize and modify as we go along, so that it ends by being, as nearly as we can make it, a story about real life.

The Chèche Konnen approach to teaching began by creating "communities of scientific practice" in language-minority classrooms in a few Boston and Cambridge, MA public schools. "Curriculum" emerges in these classrooms from the students'

questions and beliefs and is shaped in ongoing interactions that include both the teacher and students. Students explore their own questions, much as we described above in Barb Johnson's class. In addition, students design studies, collect information, analyze data and construct evidence, and they then debate the conclusions that *they* derive from their evidence. In effect, the students build and argue about theories; see Box 7.5.

Students constructed scientific understandings through an iterative process of theory building, criticism, and refinement based on their own questions, hypotheses, and data analysis activities. Question posing, theorizing, and argumentation formed the structure of the students' scientific activity. Within this structure, students explored the implications of the theories they held, examined underlying assumptions, formulated and tested hypotheses, developed evidence, negotiated conflicts in belief and evidence, argued alternative interpretations, provided warrants for conclusions, and so forth. The process as a whole provided a richer, more scientifically grounded experience than the conventional focus on textbooks or laboratory demonstrations.

The emphasis on establishing communities of scientific practice builds on the fact that robust knowledge and understandings are socially constructed through talk, activity, and interaction around meaningful problems and tools (Vygotsky, 1978). The teacher guides and supports students as they explore problems and define questions that are of interest to them. A community of practice also provides direct cognitive and social support for the efforts of the group's individual members. Students share the responsibility for thinking and doing: they distribute their intellectual activity so that the burden of managing the whole process does not fall to any one individual. In addition, a community of practice can be a powerful context for constructing scientific meanings. In challenging one another's thoughts and beliefs, students must be explicit about their meanings; they must negotiate conflicts in belief or evidence; and they must share and synthesize their knowledge to achieve understanding (Brown and Palincsar, 1989; Inagaki and Hatano, 1987).

What do students learn from participating in a scientific sense-making community? Individual interviews with students before and after the water taste test investigation (see Box 7.4), first in September and again the following June, showed how the students' knowledge and reasoning changed. In the interviews (conducted in Haitian Creole), the students were asked to think aloud about two open-ended real-world problems--pollution in the Boston Harbor and a sudden illness in an elementary school. The researchers were interested in changes in students' conceptual knowledge about aquatic ecosystems and in students' uses of hypotheses, experiments, and explanations to organize their reasoning (for a complete discussion, see Rosebery et al., 1992).

Conceptual Knowledge

Not surprisingly, the students knew more about water pollution and aquatic ecosystems in June than they did in September. They were also able to use this knowledge generatively. One student explained how she would clean the water in Boston Harbor (Rosebery et al., 1992:86).

Like you look for the things, take the garbage out of the water, you put a screen to block all the paper and stuff, then you clean the water; you put chemical products in it to clean the water, and you'd take all the microscopic life out. Chlorine and alum, you put in the water. They'd gather the little stuff, the little stuff would stick to the chemical products, and they would clean

the water.

Note that this explanation contains misconceptions. By confusing the cleaning of drinking water with the cleaning of sea water, the student suggests adding chemicals to take all microscopic life from the water (good for drinking water, but bad for the ecosystem of Boston Harbor). This example illustrates the difficulties in transferring knowledge appropriately from one context to another (see Chapter 3). Despite these shortcomings, it is clear that this student is starting on the path to scientific thinking, leaving behind the more superficial "I'd take all the bad stuff out of the water" type of explanation. It is also clear that by making the student's thinking visible, the teacher is in an excellent position to refine her (and perhaps the class's) understanding.

Scientific Thinking

Striking changes appeared in students' scientific reasoning. In September, there were three ways in which the students showed little familiarity with scientific forms of reasoning. First, the students did not understand the function of hypotheses or experiments in scientific inquiry. When asked for their ideas about what could be making the children sick, the students tended, with few exceptions, to respond with short, unelaborated, often untestable "hypotheses" that simply restated the phenomena described in the problem: "That's a thing . . . . Ah, I could say a person, some person that gave them something . . . . Anything, like give poison to make his stomach hurt" (Rosebery et al., 1992:81).

Second, the students conceptualized evidence as information they already knew, either through personal experience or second-hand sources, rather than data produced through experimentation or observation. When asked to generate an experiment to justify an hypothesis--"How would you find out?"--they typically offered declarations: "Because the garbage is a poison for them . . . . The garbage made the fish die" (Rosebery et al., 1992:78).

Third, the students interpreted an elicitation for an experiment--"How would you be sure?"--as a text comprehension question for which there was a "right" answer. They frequently responded with an explanation or assertion of knowledge and consistently marked their responses as explanatory ("because"): "Because fish don't eat garbage. They eat plants under the water" (page 78).

In the June interviews, the students showed that they had become familiar with the function of hypotheses and experiments and with reasoning within larger explanatory frameworks. Elinor had developed a model of an integrated water system in which an action or event in one part of the system had consequences for other parts (Rosebery et al., 1992:87):

You can't leave [the bad stuff] on the ground. If you leave it on the ground, the water that, the earth has water underground, it will still spoil the water underground. Or when it rains it will just take it and, when it rains, the water runs, it will take it and leave it in the river, in where the water goes in. Those things, poison things, you aren't supposed to leave it on the ground.

In June, the students no longer invoked anonymous agents, but put forward chains of hypotheses to explain phenomena, such as why children were getting sick (page 88):

Like, you could test what the kids ate and, like, test the water, too; it could be the water that

isn't good, that has microbes, that might have microscopic animals in it to make them sick.

The June interviews also showed that students had begun to develop a sense of the function and form of experimentation. They no longer depended on personal experience as evidence, but proposed experiments to test specific hypotheses. In response to a question about sick fish, Laure clearly understands how to find a scientific answer (page 91):

I'd put a fish in fresh water and one fish in a water full of garbage. I'd give the fresh water fish food to eat and the other one in the nasty water, I'd give it food to eat to see if the fresh water, if the one in the fresh water would die with the food I gave it, if the one in the dirty water would die with the food I gave it. . . . I would give them the same food to see if the things they eat in the water and the things I give them now, which will make them healthy and which wouldn't make them healthy.

Conclusion

Teaching and learning in science have been influenced very directly by research studies on expertise (see Chapter 2). The examples discussed in this chapter focus on two areas of science teaching: physics and junior high school biology. Several of the teaching strategies illustrated ways to help students think about the general principles or "big" ideas in physics before jumping to formulas and equations. Others illustrate ways to help students engage in deliberate practice (see Chapter 3) and to monitor their progress.

Learning the strategies for scientific thinking have another objective: to develop thinking acumen needed to promote conceptual change. Often, the barrier to achieving insights to new solutions is rooted in a fundamental misconception about the subject matter. One strategy for helping students in physics begins with an "anchoring intuition" about a phenomenon and then gradually bridging it to related phenomena that are less intuitive to the student but involve the same physics principles. Another strategy involves the use of interactive lecture demonstrations to encourage students to make predictions, consider feedback, and then reconceptualize phenomena.

The example of Chèche Konnen demonstrates the power of a sense-making approach to science learning that builds on the knowledge that students bring with them to school from their home cultures, including their familiar discourse practices. Students learned to think, talk, and act scientifically, and their first and second languages mediated their learning in powerful ways. Using Haitian Creole, they designed their studies, interpreted data, and argued theories; using English, they collected data from their mainstream peers, read standards to interpret their scientific test results, reported their findings, and consulted with experts at the local water treatment facility.

Outstanding teaching requires teachers to have a deep understanding of the subject matter and its structure, as well as an equally thorough understanding of the kinds of teaching activities that help students understand the subject matter in order to be capable of asking probing questions.

Numerous studies demonstrate that the curriculum and its tools, including

textbooks, need to be dissected and discussed in the larger contexts and framework of a discipline. In order to be able to provide such guidance, teachers themselves need a thorough understanding of the subject domain and the epistemology that guides the discipline (for history, see Wineburg and Wilson, 1988; for math and English, see Ball, 1993; Grossman et al., 1989; for science, see Rosebery et al., 1992).

The examples in this chapter illustrate the principles for the design of learning environments that were discussed in Chapter 6: they are learner, knowledge, assessment, and community centered. They are learner centered in the sense that teachers build on the knowledge students bring to the learning situation. They are knowledge centered in the sense that the teachers attempt to help students develop an organized understanding of important concepts in each discipline. They are assessment centered in the sense that the teachers attempt to make students' thinking visible so that ideas can be discussed and clarified, such as having students (1) present their arguments in debates, (2) discuss their solutions to problems at a qualitative level, and (3) make predictions about various phenomena. They are community centered in the sense that the teachers establish classroom norms that learning with understanding is valued and students feel free to explore what they do not understand.

These examples illustrate the importance of pedagogical content knowledge to guide teachers. Expert teachers have a firm understanding of their respective disciplines, knowledge of the conceptual barriers that students face in learning about the discipline, and knowledge of effective strategies for working with students. Teachers' knowledge of their disciplines provides a cognitive roadmap to guide their assignments to students, to gauge student progress, and to support the questions students ask. The teachers focus on understanding rather than memorization and routine procedures to follow, and they engage students in activities that help students reflect on their own learning and understanding.

The interplay between content knowledge and pedagogical knowledge illustrated in this chapter contradicts a commonly held misconception about teaching--that effective teaching consists of a set of general teaching strategies that apply to all content areas. This notion is erroneous, just as is the idea that expertise in a discipline is a general set of problem-solving skills that lack a content knowledge base to support them (see Chapter 2).

The outcomes of new approaches to teaching as reflected in the results of summative assessments are encouraging. Studies of students' discussions in classrooms indicate that they learn to use the tools of systematic inquiry to think historically, mathematically, and scientifically. How these kinds of teaching strategies reveal themselves on typical standardized tests is another matter. In some cases there is evidence that teaching for understanding can increase scores on standardized measures (e.g., Resnick et al., 1991); in other cases, scores on standardized tests are unaffected, but the students show sizable advantages on assessments that are sensitive to their comprehension and understanding rather than reflecting sheer memorization (e.g., Carpenter et al., 1996; Secules et al., 1997).

It is noteworthy that none of the teachers discussed in this chapter felt that he or she was finished learning. Many discussed their work as involving a lifelong and continuing struggle to understand and improve. What opportunities do teachers

have to improve their practice? The next chapter explores teachers' chances to improve and advance their knowledge in order to function as effective professionals.