Total quality management and higher education: the employers’ perspective

T. Hillman Willis & Albert J. Taylor

1Department of Management and Marketing, Louisiana Tech University, PO Box 10318, T.S., Ruston, LA 71272, USA & 2College of Business, PO Box 4426, Austin Peay State University, Clarksville, TN 37044, USA

ABSTRACT Efforts to adopt the total quality management (TQM) philosophy are spreading to institutions of higher learning. The fundamental purpose of TQM is to serve the customer better. One of the most important customers of a college or university are the firms that hire the school’s graduates. This article explores the question of how business employers perceive the quality of today’s college graduate. Sample survey data obtained from business organizations are presented. In general, a significant proportion of businesses do not perceive a difference in the quality of schools based on employee performance. A ranking of required skills is presented and the implications for colleges and universities are discussed.

Introduction

Quality concerns have spread from manufacturing and service businesses to the public sector including public and private educational systems. An increasing number of higher education institutions are adopting a total quality management (TQM) approach to enhance the school’s ability to attract and retain students by implementing processes to continually improve quality. An annual survey conducted by Quality Progress has shown that the number of colleges and universities that use TQM has increased from 78 institutions in 1991 to 216 in 1996 (Caleb, 1995; Klaus, 1996). Even though TQM ‘usage’ can be interpreted as anything from ‘implementing quality practices in administration’ to offering TQM courses in various disciplines, the results reflect an expanding awareness of the desire, if not necessity, to improve the quality of the educational process. The application of TQM that is of interest in this discussion is the dimension of applying TQM concepts in campus operations. It is important to recognize that there is a difference between the institutions that claim to be for quality and those that do quality.

The purpose of this study is to look at the quality issue from the perspective of one of the most important customers of the university—the business firms that hire the school’s graduates. First, the role of TQM in higher education is discussed. This is followed by an assessment of the skills that businesses desire in new hires and the ability of universities to fulfill those needs. Finally, the results of a survey of business organizations that routinely

Correspondence: T. Hillman Willis, Department of Management and Marketing, College of Administration and Business, Louisiana Tech University, Ruston, LA 71272, USA.

0954-4127/99/070997-11 © 1999 Taylor & Francis Ltd
employ 4-year college graduates are presented. The survey was taken to determine: (1) how companies measure the quality of graduates; (2) whether or not they are able to identify the institutions that consistently produce superior or inferior employee candidates; (3) how well skill requirements match skill preparedness; and (4) the overall quality of recent college graduates. The critical question is: Do companies that hire college graduates perceive a difference in the quality of various colleges and universities? If the answer is yes, the implications for colleges and universities are important.

Role of TQM in higher education

The ideal manifestation of TQM is the continual pursuit of improvement in every aspect of operation. In recent years, there have been increased efforts to bring TQM to academia and make academics more accountable for the quality of their product (Higgins & Johnson, 1992). Students are both an end product and one of the customers, which creates a unique dilemma for the educational server.

Customer satisfaction is the central goal of TQM, and institutions of higher learning serve several constituencies, including students, employers, parents, alumni, faculty, taxpayers, supporters, governing boards, administrators, staff, research users and society as a whole. The university must have the resources and flexibility to serve the various needs of these constituencies. Within the TQM framework, educators should understand the needs of the student as a customer a few years after graduation and thereby help 'shape' their needs during schooling to make a positive contribution to future society. Many experts feel that US educational institutions cater too much to student satisfaction and should be more demanding in teaching discipline rigor (Keller, 1992).

The primary accrediting agency for college programmes in business administration, the American Assembly of Collegiate Schools of Business (AACSB), serves as a prime example of the focus on quality at the university level. Their accreditation standards state that the school is expected to demonstrate its ongoing commitment to achieving quality and continuous improvement (AACSB, 1993; Duke & Reese, 1995). AACSB's refocused emphasis on quality is based on the widespread adoption of TQM programmes in other industries (Cunningham & Sarayrah, 1994; Hammond et al., 1996; Seymour, 1991).

Seeking ways of improving the quality of students produced by universities begins with researching the needs of industry (Gomes et al., 1992) and an assessment of programme quality, including peer review and self-evaluation (Duke & Reese, 1995). The study described in this paper illustrates one of the more structured ways to perform a self-evaluation.

Overview of industry needs

What skills do businesses desire from today's college graduate? According to many experts, including Cappelli (1992), there is no general consensus about what skills are needed by businesses and who possesses those skills. Businesses require a broad blend of technical and strategic skills (Sheridan, 1993). Several institutions, including Indiana University, have established a standard, routine procedure to survey businesses who hire their graduates (Rau, 1995). The list of skills needed in a 1991 survey conducted by Schmidt (1991) included creativity, communications, ethics, entrepreneurship, globalization, information technology, interpersonal skills and problem-solving. The recent explosion of Internet usage clearly indicates the increasing importance on computer skills. A recent study by Hammond et al. (1996) reveals a surprisingly low percentage of college courses that require the student to
work on computer-based applications despite the fact that businesses routinely rely on computer support to handle real-world operations.

The ability to 'think and communicate' tends to dominate most skill requirements lists (Subcommittee on Technology and Competitiveness, 1993). As one example, the response of the AACSB to this call has been to require that at least 50% of each undergraduate curriculum should have a general education component that is required of all students at the institution. Further, the business curriculum should include written and oral communication as an important characteristic and provide coverage of ethical and global issues as well as the influence of political, social, legal and regulatory, environmental and technological issues (AACSB, 1993).

How does a potential employer assess a job applicant's suitability for employment? The evidence is not clear. A survey conducted in 1994 by the US Bureau of Census reported that a majority (75%) of the employers said that 'neither grades, teacher recommendations, nor the reputation of the school attended provided useful information' on the suitability for employment (Institute for Research on Higher Education at the University of Pennsylvania, 1996). Attitude, previous work experience, communication skills and prior employment recommendations were found to be more important. As a result, many employers rely on alternative ways to predict job performance capability. These procedures are usually more costly since they require that the employer obtain more primary, first-hand information (tests, observation, intensive interviews) to supplement secondary data such as transcripts and letters of recommendation. These selection procedures can be separated into three groups (Cappelli, 1992): (1) ability tests (achievement and aptitude), (2) bio-data (background information), and (3) work samples, e.g. in-basket tests and group role-playing. Job analysis is also an important part of the process because labor laws require that hiring be based on the knowledge, skills and abilities required for each specific job position.

Universities' response to industry needs

Many critics contend that higher education falls short in meeting the job requirements of industry (Parry et al., 1996). Colleges and universities have been criticized for several shortcomings. A major criticism is that business schools put too much emphasis on analytical problem-solving without regard to the practical implications of managerial actions and decisions. Livingston (1973) explains that schools require a 'respondent behavior' for the student to get high grades in exams, whereas success in business requires an 'operant behavior' to find problems and opportunities, initiate action and follow-up to obtain the desired results. An example of this anomaly is that the university grading system does not promote teamwork and the business curriculum rarely teaches teamwork, one of the important skills businesses require (Hotch, 1992). Academic institutions tend to become creatures of habit and are slow to change, making it difficult to connect with the social and environmental challenges of the real world (Astin, 1991).

Businesses complain that college graduates tend to have unrealistic expectations about organizational life, job responsibility and pay (Buckley et al., 1989; Hotch, 1992; Parry et al., 1996). Businesses have also been critical of the lack of curriculum breadth and teaching quality. Maybe an even more important criticism is that too many colleges and universities have shifted from teaching students how to think, to teaching what to think. Teaching the skills of logical analysis and systematic use of evidence so that students are able to examine ideas critically with factual information has been replaced by emotional interpretation constructs that are not based on reality (Sowell, 1997). As a result, college graduates who enter the job market may have biased expectations about the level of performance required
by industry. More specifically, businesses complain that too many students put their personal
career before the goals of the organization (Hotch, 1992), but this should not be unexpected
given the changing employment environment of the present economy.

A former dean of the School of Business at Indiana University said that schools should continually seek feedback from corporate friends to know how to adjust academic programmes to meet changing job market requirements (Hotch, 1992). Schools should create a niche that exploits a unique strength to achieve a regional, if not a national, reputation. This type of focusing is fundamental to every quality management programme. Some of the better-known examples of highly regarded business programme reputations include the following universities (McNeil, 1990): University of South Carolina—international business; Michigan State University—supply chain management; University of Tennessee—TQM; University of Southern California—entrepreneurship; and Indiana University—leadership and team-building.

Survey methodology and results

An empirical study was undertaken to assess the opinion of business firms concerning the quality of college graduates. Several questions pertained to the issue of whether colleges and universities prepare their graduates adequately with the job skills that businesses require for success in the competitive environment of today and the future. Four specific areas of inquiry included: (1) What procedures do businesses use to evaluate employee performance? (2) Can businesses detect a difference in the quality of graduates from various institutions of higher learning? (3) Are colleges and universities providing graduates with the skills that businesses desire? (4) How do businesses rate the quality of today’s college graduate?

A systematic random sample was taken from the Chamber of Commerce directory of business listings for the MSA (metropolitan statistical area) of a south-east regional market in the US. A target sample of 100 responses was established to gather descriptive statistics and test certain hypotheses. This sample size was limited by time and funding constraints, yet was sufficiently large enough to provide valid hypothesis testing based on normal distribution assumptions. The first sampling pass had a 30% non-response rate. The shortfall was made up by selecting the business listed in the directory following each non-response until the target sample of 100 was complete. After the survey was completed one questionnaire was deemed unusable, resulting in a sample size of 99 different companies.

The businesses in the survey represented retail, manufacturing, wholesale and service firms. All questionnaires were completed using personal interviews to help ensure valid data. The company representative providing the information was either the CEO/President of the company or the person who had primary responsibility for employing workers. The person who decides which people are to be employed and is also involved in the performance evaluation process was the targeted survey respondent. Companies that indicated that they did not employ college graduates were eliminated from the survey list and replaced. There were no restrictions as to the type of college programme (e.g. liberal arts, business, engineering, etc.) in which the employed graduate had matriculated. Prior to conducting the survey the questionnaire instrument was tested for consistency, validity and clarity. The sample descriptive statistics and two-tailed hypothesis tests are presented in table format.

Employee performance evaluation method

The first set of questions dealt with the employee evaluation process. Table 1 shows the results. Almost all companies (98%) periodically review performance. The review is usually
Table 1. Employee performance review process

1. Does your company periodically review employee performance?
   - Yes 98%
   - No 2%

2. How frequently is this review conducted?
   - More than once a year 36%
   - Annually 62%
   - Less than once a year 2%

3. Is the evaluation a formal, standardized process or an informal, subjective process?
   - Formal 34%
   - Informal 21%
   - Combination of both 45%

4. For employees who are graduates of 4-year colleges, is the evaluator aware of the college or university attended?

   Percentage responses
   
<table>
<thead>
<tr>
<th>Always</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Never</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>32</td>
<td>24</td>
<td>27</td>
<td>10</td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

   Mean 2.37 Mode 1 Median 2 SD 1.224 z = -5.096 p < 0.0001

(1 = Always, 5 = Never)

performed annually and in 79% of the cases included all or part of a formal process. In a majority of the surveyed businesses the evaluator was aware of the college or university that the employee attended so companies were basically aware of the college backgrounds of their workers. Fifty-six per cent of the firms always or almost always know the college attended as opposed to only 17% never or almost never knowing the identity of the school. The hypothesis test to determine if the mean differs from three \( H_0: \mu = 3 \), which represents the dividing point between awareness and unawareness, was significant at a \( p \)-value of less than 0.0001. The interpretation of this result is that the respondents are generally cognizant of what colleges their employees attended.

Several respondents indicated that this information was known through association rather than any formal data provided on the evaluation form. Knowledge of the worker's college background is necessary for judging differences among schools.

Importance of college/university attended

Next, questions were asked to gain insight into whether or not the firm perceives a difference in performance based on where the employee received his/her degree. The implications of these questions are important. If an employer feels that there is a difference in the quality of students that universities produce, they might concentrate recruiting efforts at certain schools while bypassing others when filling specific job needs. When students realize that their chances for job offers are enhanced at certain schools and diminished at others, enrollment shifts between campuses are likely. The survey results to these questions are given in Table 2.

The first two questions in Table 2 asked if graduates from certain universities seemed to exhibit job performance above or below average. Roughly, one out of three firms surveyed (32%) indicated that graduates from certain institutions performed above average on the job. However, the appropriate hypothesis test \( H_0: \pi_{\text{high}} = \pi_{\text{low}} \) revealed that significantly more
Table 2. Business opinions of differences among colleges and universities

| 1. Do graduates from particular colleges/unicrsities seem to perform their job responsibilities above average? |
|---|---|---|
| Yes—32% | No—58% | No response—10% |
| Test statistic: $z = -2.612$ (significance: $p < 0.01$) |

| 2. Do graduates from particular colleges/unicrsities seem to perform their job responsibilities below average? |
|---|---|---|
| Yes—14% | No—78% | No response—8% |
| Test statistic: $z = -6.585$ (significance: $p < 0.0001$) |

| 3. Does the university where the employee candidate received his/her degree influence the hiring of that person? |
|---|---|---|
| Percentage responses |
| Always | 1 | 2 | 3 | 4 | 5 |
| Never | Mean | Mode | Median | SD | Test stat. | Significance |
| 6 | 20 | 26 | 16 | 32 | 3.46 | 5 | 3 | 1.288 | $z = 3.481$ | $p < 0.001$ |
| (1 = Always, 5 = Never) |

| 4. Does your company/organization prefer to hire graduates of particular colleges/unicrsities? |
|---|---|---|
| Yes—33% | No—41% | No response—26% |
| Test statistic: $z = -0.955$ (not significant: $p = 0.337$) |

| 5. Does your company/organization prefer NOT to hire graduates of particular colleges/unicrsities? |
|---|---|---|
| Yes—12% | No—58% | No response—30% |
| Test statistic: $z = -5.418$ (significance: $p < 0.0001$) |

($p < 0.01$) respondents felt that graduates from certain schools did not necessarily perform their jobs better than average. This was consistent with the response to the next question, in which a significant majority of respondents ($p < 0.0001$) felt that graduates from certain schools did not seem to perform their jobs below average. Even though there is slight evidence that the more outstanding workers are more clearly identified with particular universities than the poorer performing workers, most employers did not associate job performance with particular schools. Roughly one out of every 10 firms had no response to these two questions, which might indicate that some evaluators were hesitant to criticize a college.

Based on the results of question 3, where an employee obtains his/her degree seemed to have little overall influence on that person being hired. According to the hypothesis test results, a significant majority of companies indicated that the college never or almost never influenced the hiring of an individual ($H_0: \pi = 3$ was rejected with a $p$-value $< 0.001$). However, over one-quarter (26%) of the surveyed firms indicated that the college attended always or almost always influenced the hiring decision, while 48% said it was never or almost never a factor.

Questions four and five of Table 2 assess whether employers make an effort to hire or avoid hiring graduates from certain schools. One-third of the respondents preferred to hire from select schools and just over 40% did not. But the percentage of ‘yes’ and ‘no’ responses was not significantly different. Only a small proportion of business organizations (12%) avoided hiring from certain schools on purpose. The percentage of employers who did not purposely bypass particular schools to hire from was statistically very significant. This is certainly understandable in view of today’s equal employment opportunity regulations. The high percentages of ‘no response’ (26% for ‘prefer to hire’ and 30% for ‘prefer not to hire’) reflects an unwillingness or inability to answer the questions. Overall, these results indicate...
Table 3. Businesses rating of college graduates' job skill preparedness

1. Overall, how well prepared are recent college graduates in meeting each of the following skill requirements?

<table>
<thead>
<tr>
<th>Skill requirement</th>
<th>Mean rating (1 = excellent, 5 = severely lacking)</th>
<th>Rank (1 = best prepared skill to 16 = least prepared skill)</th>
<th>Not applicable (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer</td>
<td>1.64</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Ability to perform assigned tasks</td>
<td>2.46</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Dress/appearance</td>
<td>2.50</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>General knowledge to perform job</td>
<td>2.53</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Analytical/math/statistical</td>
<td>2.55</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>2.60</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Teamwork</td>
<td>2.66</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>Project management</td>
<td>2.66</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Problem-solving, research and reasoning</td>
<td>2.72</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>Leadership</td>
<td>2.78</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Initiative, motivation, personal attitudinal</td>
<td>2.80</td>
<td>11</td>
<td>0</td>
</tr>
<tr>
<td>Language</td>
<td>2.86</td>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td>Interdisciplinary</td>
<td>2.90</td>
<td>13</td>
<td>5</td>
</tr>
<tr>
<td>Communication, written</td>
<td>2.91</td>
<td>14</td>
<td>2</td>
</tr>
<tr>
<td>Communication, oral</td>
<td>3.09</td>
<td>15</td>
<td>0</td>
</tr>
<tr>
<td>International focus</td>
<td>3.11</td>
<td>16</td>
<td>22</td>
</tr>
</tbody>
</table>

2. What skills, if any, are most critically lacking among college graduates you recruit today?

- Communication, writing skills: 23%
- Work ethic/job commitment, attitude, motivation: 16%
- Teamwork: 4%
- Other skills: 1–3%

that a significant majority of companies do not perceive enough of a difference in the quality among colleges to influence the tendency to recruit exclusively at certain schools.

Assessment of job skills

The third part of the questionnaire asked businesses to rate the ability of recent college graduates to satisfy several specific job requirements. These results are presented in Table 3. Businesses seemed most pleased with the computer skills of personnel holding college degrees. At the negative end of the scale, an international focus was judged most lacking by receiving the highest mean rating of 3.11. This skill also garnered the largest ‘not applicable’ responses, as 22% of the firms said it was unimportant. Not surprisingly, oral communication skills received the second highest average rating (3.09), making it the second most lacking of the 16 skills listed, and it was followed closely by written communication skills (2.91). These findings are generally consistent with previous research (Buckley et al., 1989; Duncan, 1974). For over 25 years the business community has pointed out that its expectations regarding communication skills have not matched worker performance, yet it continues to be a major concern of business employers.

Most of the skill factor ratings averaged slightly under 3.0, which can be interpreted as meaning that business organizations feel that colleges/universities are doing a ‘fair or average’ job of teaching the necessary skills of graduates. This is hardly a resounding vote of confidence for the ability of colleges and universities to provide business firms with employees who
possess the desired assortment of skills. Companies today are investing more money in the education and training of new hires.

An open-ended question asked surveyors to list the skills that were most critically lacking in recent college recruits. Not surprisingly, the most frequent criticism was a lack of communication and writing skills (23%). Sixteen per cent of the firms were critical of poor work, motivation, commitment, or attitude on the part of new college recruits. Company representatives also mentioned that company loyalty and a lack of patience (e.g., expecting immediate placement in a management position) were problems. In all, about 30 different factors were listed as critically lacking.

Overall evaluation of college graduate quality

The purpose of the final group of questions appearing in Table 4 was to find out what businesses think of the overall ability of colleges and universities to prepare people to fill the responsibilities of the job in today's competitive environment.

According to the business employers who were in a position to judge, today's college product was rated as better qualified (36%) over three times as often as being rated worse qualified (11%) when compared to the graduate of previous years. The difference between these percentages was significant at a two-tailed $p < 0.001$, so overall improvement has been perceived. The ability of colleges and universities to do an adequate job of preparing employees for successful careers could safely be judged as above average. The mean response of 2.54 to question 2 was significantly different from the neutral value of 3 on the 1-to-5 scale. A similar, significantly favorable response was given by employers when asked to assess the overall quality of recent college graduates (mean rating = 2.46). It is interesting to note that none of the businesses surveyed recorded an unacceptable score when rating colleges' ability to prepare employees for success or when rating the overall quality of graduates.

Surveyed employers were also asked to identify the major strengths and weaknesses of today's college graduate. The results were predictable in light of the responses to the previous question concerning required skills. Computer skill was the primary strength and communication skill was the most frequently listed weakness. Another weakness that was mentioned almost as frequently as communications ability was a lack of work ethic. Several employers felt that college graduates lacked a sense of commitment and patience in that they expected to move quickly up the ranks without 'paying their dues'.

The final question asked what colleges and universities could do to produce better quality students. The recommendations included providing more internship opportunities and teaching better communication and teamwork skills. It was also suggested that greater emphasis be placed on producing a more well-rounded student, who had both technical and business/accounting skills. Pragmatic suggestions included increasing opportunities for company visits or plant tours and role-playing exercises to prepare students for dealing with stressful project situations and conflict resolution.

Conclusions and recommendations

The evidence in this study indicates that even though business employers are basically satisfied with the college graduates that they have hired, there is room for improvement on the part of institutions of higher learning to produce better quality students. A clear majority of employers feel that certain universities cannot be characterized as producing particularly superior or inferior employees. However, this does not apply to all employers. Close to one-third of all employers stated that certain universities produced superior graduates and 14% produced
Table 4. Business firms' assessment of the quality of college/university graduates

1. In your opinion, do colleges/universities produce an employee today who is better or worse qualified in meeting job requirements than in years past?

   Today's graduate is:
   - Better qualified—36%
   - About the same—53%
   - Worse qualified—11%

   Test statistic: $z = 3.540$ (significance: $p < 0.001$)

2. Overall, do you feel that colleges/universities do an adequate job of preparing employees for success in today's jobs?

   Percentage responses

<table>
<thead>
<tr>
<th>Excellent</th>
<th>Unacceptable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3</td>
<td>4 5</td>
</tr>
<tr>
<td>Mean</td>
<td>Mode</td>
</tr>
<tr>
<td>2.54</td>
<td>3</td>
</tr>
</tbody>
</table>

(1 = Excellent, 5 = Unacceptable)

3. What is your overall assessment of the quality of recent college/university graduates?

   Percentage responses

<table>
<thead>
<tr>
<th>Excellent</th>
<th>Unacceptable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3</td>
<td>4 5</td>
</tr>
<tr>
<td>Mean</td>
<td>Mode</td>
</tr>
<tr>
<td>2.46</td>
<td>2</td>
</tr>
</tbody>
</table>

(1 = Excellent, 5 = Unacceptable)

4. What single attribute is the major strength of today's graduate?

   - Computer capability: 34%
   - Willingness to learn and work hard: 7%
   - Self-esteem: 4%
   - Ambition: 4%
   - Other attributes: 1–3%

5. What single attribute is the major weakness of today's graduate?

   - Written and oral communication skills: 12%
   - Lack of work ethic, patience: 11%
   - Inexperience with business world: 4%
   - Lack of team focus: 3%
   - Other attributes: 1–2%

6. Please specify the ways in which colleges and universities could better prepare graduates to meet your needs.

   - Internships: 15%
   - Teach better communication skills: 7%
   - Better understanding of ‘real world’: 7%
   - Greater emphasis on teamwork skills: 6%
   - Other recommendations: 1–5%
graduates that performed their job below average. Job performance does not necessarily correlate with academic standards, but schools need to establish procedures to monitor the quality of graduates, whether it be by formal survey processes or informal feedback.

The survey does not flesh out the reasons why a few companies prefer particular colleges. It may be because certain companies need to hire individuals that have received training in a particular academic field. For example, an engineering firm would be more likely to fill their personnel needs from universities that possess a strong technical heritage rather than from those schools with liberal arts strengths. It could also have to do with many other reasons not disclosed in the survey.

The study results also showed that the university from which the employee receives his/her degree does not significantly influence the hiring decision. Further, there was no significant difference in the proportion of businesses that preferred to recruit/hire from particular schools and those that had no preference.

On the other hand, the proportion of businesses that purposely avoided hiring from certain schools was significantly small. The high percentage of non-responses (26 and 30%) to the questions about seeking or avoiding specific colleges is troublesome, but not unexpected due to the sensitive nature of the information.

The decision on the part of a company to recruit or not recruit graduates of a particular university is important to those schools. Part of the TQM process is to maintain an awareness of the needs of the customer and have the ability to build on strengths and eliminate weaknesses. Understanding the personnel needs of business employers is necessary to make that assessment and enhance the quality of the college graduates.

It was encouraging to find that most employers felt that the quality of the college graduate employee had improved in recent years and that colleges are adequately preparing graduates for successful business careers. Business and academia have a shared responsibility to learn, teach and practice TQM. Too often businesses have to reeducate their new hires, which can easily put them at a competitive disadvantage by incurring unnecessary costs.

Academic institutions should incorporate TQM in the core curriculum and it should not be limited to the business discipline or operations management classes. They should also incorporate TQM in their administrative practices on a school-wide operational basis. Improving the quality of graduates begins with self-evaluation and customer focus. Accreditation agencies expect schools to have processes in place to gather information from stakeholders, such as employers and alumni, on graduates' performance (AACSB, 1993). The study described in this paper serves as an example of such a process.

After the university has completed an assessment survey, analyzed the data and compiled the findings, it needs to implement appropriate strategies to improve quality performance. These strategies concern three major areas. One is to refine processes, e.g. course scheduling, customer service, recruitment/marketing communication and planning/budgeting systems. The second area involves a refinement of the three key functions of a university, which are teaching/advising, research and service. The last primary refinement deals with outcomes and measures that are used as benchmarks in the assessment process.

Colleges need continually to reevaluate course offerings, testing/grading procedures, admission requirements, student services, and the employee skills and personal traits required by hiring firms. The challenge to academia is to produce graduates that meet the requirements of potential employers.

References

HOTCH, R. (1992) This is not your father's MBA, Nation's Business, 80, pp. 51–52.