# Derivative-Based Materials Development to Improve Students' Vocabulary Acquisition

### Dadang Sudana, Didi Sukyadi, and Fuad Abdul Hamied

**Abstract:** Implementing morphological competence of derivational affixation has been reported to improve students' vocabulary acquisition (Sudana, 2006). Attempts need to be done to construct learning materials that can help learners develop such competence. Using concordance software, this study has analysed various texts of about five hundred thousand words: texts of TESOL, literature, linguistics, and education to look for frequency distribution of affixes. The result of the analysis has provided data based information on the behaviour of ten most frequently used English derivational affixes in the corpus (5 prefixes and 5 suffixes). This information has been consulted to construct language teaching materials to help learners develop their morphological competence of derivational affixation to improve their vocabulary acquisition.

Key words: morphological competence, affixation, language corpus, materials development, consciousness raising, vocabulary acquisition

#### 1. Introduction

On most occasions, grammar is needed to convey meaning. Batstone (1994: 28) argues that "The less we can account for the shared knowledge, the more we need to call on grammar". Today, most experts - linguists, applied linguists, and practising language teachers alike - seem to agree that without mastering grammar the learners' linguistic repertoire would be seriously restricted. In other words, the centrality and importance of grammar in language learning is obvious. Consequently, much effort has to be given to finding an effective way to help learners develop grammatical competence as an important element of his/her language proficiency. Morphological competence is part of grammatical competence. Learners should be encouraged to develop this competence.

In morphology related research, some linguists (e.g. Butterworth, 1983; Bybee, 1995; Hatch, 1983) were interested in building models of how words are organized in the human mind. Hatch (1983) believed that affixes are organized in the human mind in a particular way differently from lexical items. She suggested that some high frequency complex words may be stored in their whole forms in the mind and are ready to be accessed at any time, but some others tend to be constructed on the spot by applying morphological processes such as derivation and inflection.

Hatch's suggestion about the organisation of the mental lexicon is supported by Anshen and Aronoff's study (1988). In an ongoing study of the English suffixes *-ity* and *-ness*, Anshen and Aronoff found that "(1) people do, in fact, store certain complex morphological items in their mental lexicon while they construct others as needed; (2) that in producing sentences, speakers simultaneously attempt to find a needed lexical item and to build it by rule from a related form" (Anshen and Aronoff, 1988: 32). This information suggests that teaching affixes may need a different approach from teaching lexical words.

Batstone (1994: 5) proposed a very useful way of considering grammar, either as *a product* or as *a process*. Grammar as a product can be found in reference grammar books. Its descriptions may vary from one book to another reflecting the underlying beliefs of the grammarian who has written it. Nonetheless, seen as a product, grammar shares a similar character of being static, that is, simply being a collection of rules, structures, or forms (Batstone, 1994: 5). Learners need help to master these various elements of grammar as ways of expressing meanings. Accordingly, grammar teaching can be seen as teaching grammar as a product in which there is a deliberate attempt to develop learners' mastery of particular grammatical items.

#### 2. Consciousness raising and the teaching of grammar

Rutherford and Smith define consciousness raising in pedagogy as embracing "a continuum ranging from intensive promotion of conscious awareness through pedagogical role articulation on the one end, to the mere exposure of the learner to specific grammatical phenomena on the other" (Rutherford and Smith, 1988:3). They acknowledged this quite broad nature of consciousness raising conceptualization. However, they stressed the important point that "grammatical CR [consciousness raising] is not an end in itself" (Rutherford and Smith, 1988: 4).

Nunan noticed that consciousness raising is open to various ways of implementation and "it is wrong to imply that teachers are confronted with two mutually exclusive choices when it comes to teaching grammar: either avoiding teaching grammar altogether, or to a 'traditional' form-focused approach" (Nunan, 1991: 151). In other words, consciousness raising can be seen as a better alternative to traditional grammar teaching and a challenge to language teaching practices which show little or no interest in teaching grammar.

The present study uses the view of grammar as a product. Teaching grammar as a product can vary in its implementation ranging from a noticing activity in which learners are asked to notice particular grammatical items for processing, to activities which are quite similar to process teaching. It should be stressed from the outset that there is no single best way to teach language, and this 'product' teaching is not an exception.

A form of consciousness raising activity which gives opportunities for more communication to take place while dealing with a difficult grammar item is reported in Fotos and Ellis (1991). That activity results in a kind of negotiated interaction which is assumed to facilitate acquisition and in increased knowledge of the target structure. Yip (1994) carried out consciousness raising grammar teaching of some ergative constructions in English. Her students not only enjoyed the teaching but also improved their competence in the target structure significantly. Yan-Ping (1991) used consciousness grammar teaching to teach various uses of the simple past tense, the present perfect, the passive construction to Chinese learners learning English. His findings indicated that explicit grammar teaching through a kind of consciousness raising results markedly better in student gained knowledge for less complex properties and structures than non-conscious raising grammar teaching. Using consciousness raising principles,

Sudana (2006) taught affixation in Bahasa Indonesia to BIPA learners that resulted in significant improvement. For the present study, the notions of noticing – re-noticing and structuring – restructuring which are features of the conscious raising grammar teaching have been used in developing the teaching materials.

#### 3. Corpora and language teaching

Mindt (1997) noted that what was taught in foreign language classrooms was not always an accurate sample of the language actually used by the native speakers of the language being taught. A similar opinion was also expressed by Sinclair (1997). He noted that the response of fashionable ELT methodology to the result of a more rigorous language description that became available from research in corpus linguistics was inappropriate and slow, "behaving as if the facts of English structures were no longer in dispute" (Sinclair, 1997: 30). In fact, corpus linguistics opens wide the possibilities for language teaching. One essential benefit of basing teaching on information extracted from millions of words is the precision it offers regarding the actual uses of the target language.

The information on meanings and structures is not only based on intuition of the writers, but also drawn from samples of the language actually used by other native speakers. Leech (1997) mentioned three points concerning the ways linguistic corpora could support the construction of language teaching materials: (1) the frequency of linguistic items; (2) the availability of copious examples of authentic language in use; and (3) the availability of computer-based learning packages. For the purpose of this study, a corpus of about five hundred thousand words comprising texts of TESOL (131.585 words), of literature (226.291 words), of linguistics (70.342 words), and of education (75.880) has been prepared. Using concordance software, ten most frequently used English derivational affixes in the corpus (5 prefixes and 5 suffixes) have been identified as presented in the following tables.

Prefixes	Total	Verb Bases	Noun Bases	Adjective	Adverb
	Number of Bases			Bases	Bases
re-	271	241	27	3	-
in-	127	8	23	96	-
dis-	79	39	33	7	-
inter-	60	18	32	10	-
de-	35	27	6	2	-
	572	333	121	118	0

Table 1 The distribution of five most frequently prefixes attaching to their bases

Prefixes	Total	Verb Bases	Noun Bases	Adjective	Adverb
	Number of			Bases	Bases
	Bases				
-ly	1117	3	17	1096	1
-ity	215	13	22	180	-
-tic	175	3	170	2	-
-cy	140	1	8	131	-
-ful	99	41	38	20	-
	1746	61	255	1429	1

Table2. The distribution of five most frequently suffixes attaching to their bases

The bases of the affixation process are also classified semantically to find out if attachment of an affix to its base is semantically motivated. For illustration purposes, semantic distribution of prefix reattaching to Action Verb bases is presented in Table 3.

	Action Verb Bases						
Prefix	Activity	Accomplishment	Momentary Act	Transitional			
				Act			
re-	Search (108),	Print (1), place	Act (1),	Present (19),			
	serve (3),	(26), produce (3),	commend (7),	turn (9), call (1),			
	convene (1),	construct (2), form	quest (6)	mark (1), mark			
	classify (1),	(8), pack (2), move		(1), cite (1),			
	write (2),	(4), lease (4), send		name (1)			
	mediate (1),	(1), locate (1),					
	design (1)	direct (2)					
	117	54	14	32			
217							

Table 3 Attachment of prefix re- to Action Verb Bases

### 4. Materials development

Tomlinson has noted that for sometimes "many L2 learners have been disadvantaged because, until very recently, textbooks have been typically based on idealised data about the language they are teaching" (Tomlinson, 1998: 87). Jolly and Bolitho (1998: 97) offered a set of steps to formalize the process of writing materials: (1) *Identification* by teacher or learner(s) of a need to fulfil or a problem to solve by the creation of materials; (2) *Exploration* of the area of need/problem in terms of what language, what meanings, what functions, what skills etc.; (3) *Contextual Realization* of the proposed new materials by the finding of suitable ideas, contexts or texts with which to work; (4) *Pedagogical* 

*Realization* of materials by finding appropriate exercises and activities and the writing of appropriate instructions for use; and (5) *Physical production* of materials, involving consideration of layout, type size, visuals, reproduction, tape length, etc.

For the purposes of the present study, materials for teaching the targeted affixes have been constructed. They have been designed and constructed by taking into account the information from the corpora analyses with the main objective of helping learners improve their mastery of several affixes used in affixation processes to create new words they need. For illustration purposes, a sample of teaching materials is presented in the Appendix. The teaching materials reflect the underlying principles of consciousness raising grammar teaching of a product teaching type (cf. Batstone, 1994).

## **5.** Conclusions

The present study shows that attachment of an affix to its bases will vary; hence some affixes will be more productive than some others. It is possible to identify the semantic class of the bases to which an affix attaches. Semantic maps of affixation using particular affixes could be worked out from the attachment of these affixes to the bases which have been scrutinized semantically and allocated into their appropriate semantic groups. The information about the meanings of affixation and their frequency of occurrence, and the semantic maps of affixation is very important for the construction and implementation of the teaching materials and the teaching of that aspect of grammar. Realizing that accuracy does matter in communication, language teaching theorists and practitioners have tried to find ways of teaching grammar. One such practice currently known as Conscious Raising grammar teaching – also known as CR- has been used in this study to develop teaching materials.

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