

Group D: noun + ni, -AFF

1. *He greased \_\_\_\_\_ his hair.*

"I imagined grease is on the hair." (B, T)

"If we say 'grease his hair,' I feel grease come out naturally." (C)

2. *Nancy strung \_\_\_\_\_ a bow.*

"I did not imagine the space. A bow is necessary to put string. I imagined 'with.'" (A)

"String is touching a bow." (B)

"String is on a bow." (C)

"A bow is necessary to put string on it. I imagined 'with using ...'" (D)

"I imagined a bow is fitted with string." (E)

"Because the noun is translated into 'noun + ni'..." (E)

3. *John plastered \_\_\_\_\_ the wall.*

"I imagined something on the surface." (A)

"I imagined the surface of the wall." (B)

"I imagined something touching on the wall." (C)

"Because the noun is 'the wall'..." (F)

## Guessing Unfamiliar Meanings of Familiar Words: L2 Learners' Sensitivity to Grammatical Morphemes

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*This study investigated the degree to which second language learners utilize salient morphosyntactic information when guessing the unfamiliar meanings of deceptively familiar words. Korean learners of English as a foreign language took a series of tests involving 10 English compound nouns. In these compound nouns, the first part was always a gerund based on noun-verb polysemy, as in landing signal. These words were used because their noun meanings are common and well known to most learners, whereas the same is not true for their verb meanings. Results from the tests revealed that participants did not fully use the information available from the grammatical morphemes, such as -ing and the infinitivizer to, both of which clearly mark a word as a verb. The results support a previous finding regarding the overriding effect of semantics over syntactic processing by second language learners (Kim, 1996). Information from salient grammatical morphemes can be short-circuited due to interference caused by partial familiarity with and incomplete semantic knowledge of second language vocabulary. Pedagogical implications include the importance of helping learners to become aware of the multiplicity of word meanings and to develop flexibility about revising their existing vocabulary knowledge.*

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If a second language (L2) learner of English learns the word *land* initially in a sentence like *The rich man gave the city some land to build a children's hospital*, can we expect this learner to automatically understand the same word in a sentence like *The little boy watched the airplanes land at the airport* without further explanation? Knowledge of a word includes knowing the range of meaning and use of the word (Nation, 2001). Although most literature on vocabulary acquisition makes it clear that beginning learners of English must focus on the 2000 most frequent words (Nation, 2001; Schmitt, 2000), it is important to emphasize that because many high-frequency words have more than one grammatical part of speech and several different meanings, learners must learn the multiple senses of these high-frequency words.

L2 learners constantly need to increase their vocabulary knowledge in both quantity and quality. On the one hand, educated adult native speakers of English know an estimated 20,000 word families (Nation, 2001); learning a lexicon of this size poses a tremendous challenge to L2 learners. Nagy and Anderson (1984) estimated that average school children learning English as their first language (L1) are expected to learn as many as 3000 words per year. This seems almost impossible in the case of L2 learning. Even though extensive reading for pleasure is believed to lead to vocabulary acquisition (Krashen, 1989), other studies show that a reader needs to know about 95% of the vocabulary in a given text for meaningful comprehension of that text (Laufer, 1992), or even up to 98-99% for pleasurable reading (Hirsh & Nation, 1992). Thus, basic vocabulary knowledge is crucial for extensive reading to become a facilitating factor for further vocabulary growth.

On the other hand, the lexicon of any given language has various types of internal complexities that are not necessarily the same as those of the lexicon of a learner's L1. For this reason, successful identification of regularities in the L2 lexicon can enhance the learner's vocabulary knowledge. Although some regularities might be associated with individual lexical items, others might be associated with more general, macro-level characteristics of the lexicon. In English, for example, noun-verb polysemies are very commonly observed as in *land* as a noun and *to land* as a verb, as in the example sentences above. Whereas most of these noun-verb polysemies are semantically related,

there are also semantically unrelated noun-verb homonyms, such as *rock* as a noun in *The boy threw a rock into the lake*, and *to rock* as a verb in *The babysitter gently rocked the cradle*.

Although it is important to know the individual instances of such vocabulary items, this study deals with a more general level of lexical information. Are L2 learners of English aware of such regularities in English to the extent that their knowledge of such words can be constantly revised and updated when they are presented with evidence indicating the possibility of unfamiliar meanings of familiar words? Failure to recognize such macro-level regularities might lead to rigid vocabulary knowledge and eventually impede full knowledge of the target vocabulary. This is a concern because, in a lot of noun-verb polysemies, the noun meaning is common and familiar to L2 learners, whereas its verb meaning may be less common or not so familiar to the learners. In other words, knowing a word in its noun sense only, without being aware that it can also be used as a verb or that it might be a homonym, can preempt further sophistication of learners' knowledge of the word.

If this proves to be true, it would be a case of comprehensive vocabulary growth being blocked by existing partial knowledge. With a pedagogical motivation, this study was designed to explore the following initial research question: Do L2 learners revise their existing vocabulary knowledge based on syntactic clues available from salient grammatical morphemes, such as *-ing* attached to a verb and the infinitivizer *to*? In an attempt to find the answer to this question, the multiple-choice test from Kim (1996), which had been designed to focus on the methodology of psycholinguistic research in L2, was revised to suit the purpose of this study.

## Method

### Participants

Forty-two college students from English conversation classes at a university in Korea volunteered to participate in this study. All participants were native speakers of Korean who were freshmen from various departments at the College of Commerce. Gender was not an

important factor for the purpose of the study. Because the pattern of within-subjects variation across tests on common vocabulary items was the object of investigation, it was not necessary to conduct a separate English proficiency test. However, at the time of data collection for this study, participants represented a homogeneous group of English learners on the following criteria: They had 6 years of formal English instruction in secondary school, and they had just been placed in the same level of conversation class.

### Materials

Ten noun-verb polysemies were used in this study: *arm, book, coat, ice, land, page, park, rock, taxi, and trip*, all of which were from the 2000 most frequent word list in English (Carroll, Davies, & Richman, 1971). Their noun meanings are more common than their verb meanings, and their noun meanings are well known to most learners of English. An informal survey among Korean learners with English proficiency comparable to that of the participants in this study confirmed that the noun meanings of these words were indeed familiar to these learners. Based on these target words, four types of tests were developed for data collection.

**Pretest self-evaluation of vocabulary knowledge.** The purpose of the pretest self-evaluation was to measure participants' general awareness of the polysemous nature of the target words. Participants were asked to rate their knowledge of each of the target words by marking one of the three response items: (a) *easy word for me: I know its meaning well, and I can use it without difficulty;* (b) *difficult word for me: I only vaguely know its meaning, and I have heard it before;* and (c) *unknown word to me: I do not know what it means, and I have never heard it before.* In addition, they were asked to indicate the parts of speech of the target words and were reminded that, if a word belongs to more than one part of speech, they should write them all. Notice that the purpose of this self-evaluation was not to test the knowledge of individual words, but to measure the learners' own perception of their knowledge of these words.

In addition to the target words, there were 10 low-frequency words and 10 made-up words. None of the 10 low-frequency words came

from either the list of the most frequent 2000 words or the academic word list (Carroll, Davies, & Richman, 1971; Coxhead, 2000). These were included because the target words were all high-frequency words, which could make the rating procedure unnatural from the participants' point of view if all the words were well known to them. Ideally, the three sets of words (the target words, low-frequency words, and made-up words) matched the three categories of responses to choose from (see Appendix A for a complete list of the words used in the pretest self-evaluation). To control for any possible order effects, the list was randomized to produce two versions: Order 1 and Order 2.

**Translation test.** The purpose of the translation test was to measure participants' interpretation of the target vocabulary relative to their noun meanings and verb meanings. Each item of the target vocabulary was used to form a compound noun, in which the target word was used as a gerund, as in *taxiing speed*. Then, each compound noun was used to form a sentence to be translated into Korean. All the words used in the sentences were high-frequency words, and the sentences were also simple declaratives such as *The passengers talked about the taxiing speed with each other.* Ten filler sentences were included, each of which had a noun preceded by an adjective, as in *The scientist bought a new computer for his son.* Twenty sentences were randomized to produce two versions to control for order effects (see Appendix B for a complete list of the sentences).

**Multiple-choice test.** The purpose of the multiple-choice test was to measure participants' attention to subtle syntactic cues—the grammatical morpheme *-ing* attached to the target words, and the infinitivizer *to-in* identifying the verb meanings of the target words rather than their noun meanings. The infinitivizer *to* was used in the choices rather than repeating the *-ing* morpheme to avoid making the correct option too obvious. The participants had experienced 6 years of explicit English grammar instruction in Korea, where use of the phrases *verb + -ing* or *to + verb* is very common, so it was assumed that participants were familiar with the fact that these morphemes are attached to verbs in English.

Based on the sentences used in the translation test, 20 multiple-choice items were constructed: 10 target items and 10 filler items. In

each of the target sentences, the target word in its gerund form was underlined, and the participants were supposed to choose a phrase that best explained the meaning of the underlined target word. Of the four choices provided, one had the verbal meaning of the target word, and another had its noun meaning. The other two choices were distractors. For the compound noun *taxiing speed* in the sentence *The passengers talked about the taxiing speed with each other*, for example, the following verb and noun meaning choices were provided:

Verb meaning: to move slowly

Noun meaning: a small passenger automobile

Notice that the phrase that designates the verb meaning was headed by *to*, and this was to make it clear that it is a verb phrase. In other words, even when the verb meaning of *taxi*, the root verb of the gerund *taxiing*, is unknown to the participants, they can infer that its meaning derives from a verb because the grammatical morpheme *-ing* must be affixed to a verb. If they use this clue to identify the grammatical root of the word as a verb, then a similar clue that the phrase headed by the word *to* is a verb phrase can help them identify the correct answer. This process does not even involve accessing the semantic information of the target compound noun for the verb phrase choice. It only takes paying attention to syntactic information that is readily available. However, participants need to overcome being deflected to the noun meaning of the target polysemy because the noun meaning is more commonly known to them.

The filler items were constructed in a similar manner with the exception that, in 5 out of the 10 filler sentences, the adjective before a noun was replaced with a made-up word. This was to balance the level of difficulty associated with the target vocabulary, and to engage the participants in both semantic and syntactic processes in their efforts to choose correct answers for either the target items or the filler items. In the example sentence mentioned earlier, the word *new* was replaced with the made-up word *lertant* to produce the sentence *The scientist bought a lertant computer for his son*. For such test items, there was no correct answer because the made-up word could mean anything. (The four choices given as possible synonyms of the made-up word

*lertant*, for the sake of illustration here, were *brand new*, *expensive*, *hi-tech*, and *slow*.) The remaining 5 filler items were easy. For example, the word *expensive* was underlined in the sentence *Tom went to an expensive restaurant last night*, and the four choices were *costing a lot of money*, *new and unknown*, *famous and stylish*, and *extremely popular*. See Appendix C for a complete list of test items.

The three subsets of items in the multiple-choice test were supposed to engage the participants in different types of decision-making processes. The answers to the easy filler items could be readily identified without much effort. As for the filler items with made-up words which offered no clues, the participants were expected to try all known strategies to guess the meaning of the made-up word, such as varying pronunciation, seeking morphological clues, placing the word in a semantic context, and drawing upon one's knowledge of the world. Only in the test items with the compound nouns using the noun-verb polysemies were there syntactic clues available from grammatical morphemes. Thus, participants were expected to use such clues to identify the correct answers.

Posttest self-evaluation of vocabulary knowledge. The purpose of this test was to see the effect of having taken both the translation and the multiple-choice tests on participants' self-evaluation of the target noun-verb polysemies. For that reason, the material used in the pretest evaluation was reused. Notice that the purpose of the pretest and the posttest was to assess not the participants' knowledge of the target words but their perception of their knowledge of these common words.

#### Procedure

Participants took the series of tests in small groups. The instructions were given in Korean. The instructions for the translation test directed that each and every word from the sentence must be translated into Korean. As for the multiple-choice test, participants were directed to guess the meaning of the target vocabulary using all clues available in either the sentence or the four provided choices. The pretest of vocabulary knowledge preceded the translation test, which was followed by the multiple-choice test so that the information available in the multiple-choice test could not influence participants'

interpretations of the target vocabulary. The series ended with the posttest of vocabulary knowledge. It took 35-40 minutes to finish all four tests.

### Results and Discussion

Table 1 shows the proportion of verb choices and noun choices in each of the four tests.

Table 1  
Proportion of Verb and Noun Choices Across Tests

Test	Verb choice	Noun choice	Verb & noun choice
Pretest	0.04	0.64	0.25
Translation	0.31	0.34	—
Multiple choice	0.47	0.34	—
Posttest	0.03	0.39	0.39

*Note.* Dashes indicate that the choice was not provided on the test. Participants also chose other parts of speech, so the totals do not add up to 1.00.

There was no significant effect of order in any of the four tests; thus, order was not considered in further analyses. Of interest was the comparison of participants' choices of verb meanings between the translation and the multiple-choice tests. A matched *t* test revealed that the difference was significant ( $t = 5.63$ ,  $df = 41$ ,  $p < .001$ ) in the direction that the participants chose verb meanings in the multiple-choice test at a higher rate than in the translation test. This means that there was increased awareness of multiple meanings of the target vocabulary as a function of forced attention to syntactic information in the multiple-choice test.

How does such task-related attention to multiple applications of vocabulary affect a learner's self-evaluation of vocabulary knowledge? This was the focus of an analysis of the participants' choices of parts of speech for the target noun-verb polysemies in the pretest and posttest self-evaluations. A preliminary glance at the descriptive data showed that the noun-verb polysemies were identified mostly as nouns in the pretest, whereas they were recognized as noun-verb polysemies at a similar rate as they were recognized as nouns in the posttest. For the purpose of this study, however, it was more important to examine the difference between the two tests rather than the distribution of answers within each test. Matched *t* tests revealed a significant difference between the two tests in the choice of both verb and noun ( $t = 4.71$ ,  $df = 41$ ,  $p < .001$ ) and in the choice of noun ( $t = -5.52$ ,  $df = 41$ ,  $p < .001$ ). Such results indicate that task-related attention to syntactic clues changed participants' view of the target vocabulary. Participants' self-ratings of the level of difficulty of the target vocabulary also revealed this pattern. The target vocabulary items, all high-frequency words as nouns, were mostly rated as easy words in both the pretest and the posttest. However, the target noun-verb polysemies were rated as easy words slightly less often in the posttest (88%) than in the pretest (97%), and the significance was more than marginal ( $t = -3.39$ ,  $df = 41$ ,  $p < .002$ ).

Although participants rated the target vocabulary as easy words most of the time in the translation test, they translated correct verb-based meaning only 31% of the time. In addition, 8% of the time they translated the target words as verbs unrelated to the target meaning, which may indicate that the participants noticed the verbal form even though they were not familiar with the verb-based meaning of the target vocabulary. Thus, on the translation test a total of 39% of responses reflected awareness of the verbal morphosyntactic form, a smaller proportion than the 47% of noun-verb polysemies correctly identified as verbals in the multiple-choice test. However, the 25% decrease in the participants' perception of the noun-verb polysemies as nouns (from 64% in the pretest down to 39% in the posttest) did not translate into an equivalent increase in the participants' perception of the same words as noun-verb polysemies in the posttest. The increase was only by 14% (from 25% in the pretest to 39% in the posttest), which indicates

that some participants are reluctant to classify the words into multiple parts of speech.

There remains yet another important concern when we look at the participants' changed view of the words. Although the multiple-choice test clearly facilitated participants' correct recognition of the target noun-verb polysemies as verbals, the exact nature of this facilitation is still not clear. The assumption underlying the multiple-choice test was that participants' improved performance would indicate successful processing of syntactic information even when the target words were unknown to them as verbs. But this assumption may be erroneous. Some participants might have already known some of the target polysemies as verbs, yet recognized them as such only in the multiple-choice test and again in the posttest self-evaluation of vocabulary knowledge. This would mean that the results from the multiple-choice test and the posttest self-evaluation could be confounded with task effect and previous familiarity with some of the target vocabulary. See the General Discussion section for further speculation about this.

### General Discussion and Pedagogical Implications

A successful learning mechanism would capitalize on regularities occurring in the object of learning. In the English lexicon, for example, noun-verb polysemies are fairly common, and it would help facilitate vocabulary growth for L2 learners of English to be aware of this phenomenon. Knowing a word as a noun in the first place might function as a springboard for learning its verb meaning. However, when the familiarity of the word as a noun is very strong, it could, ironically, hinder the process of expanding the knowledge of the word because it is labeled as a very well-known vocabulary item in the learners' minds (Laufer, 1989). The study reported here examined the level of flexibility in restructuring the knowledge of familiar vocabulary in L2. Because a previous study showed that L2 learners do not utilize syntactic information to the same degree as native speakers do when the syntactic information is very subtle (Khn, 1996), stronger syntactic clues were used in this study to investigate the effect of such clues in reorganizing L2 vocabulary knowledge. The results showed that the L2 learners did not always use the grammatical morphemes *-ing* and *to* to recognize noun-verb polysemies as verbs although these morphemes clearly label the target vocabulary as verbs. As mentioned in the

description of the test materials, it had been assumed that, for Korean learners with 6 years of formal grammar instruction in English as represented by the participants in this study, such grammatical morphemes would be a salient feature marking the part of speech of a word. It appears that the saliency of such morphemes may not be as strong as had been assumed although it certainly influenced the participants' performance in the tests.

This is a cause of pedagogical concern, particularly when considering the fact that the tasks used in this study were designed to direct the learners' attention to relevant features for guessing the unfamiliar meaning of familiar words. The experimental context in this study provided possible verb meanings of the target noun-verb polysemies, whereas such provision is not always available in real language use contexts, where the learners would have to derive (or *generate*, in Nation's, 2001, terminology) the unfamiliar meaning based on various contextual clues. The point is that, even when the context was set up to help the participants recognize the fact that the target vocabulary had more than one part of speech, their use of grammatical morphemes was limited. Because the familiar meaning of the target vocabulary is so strongly represented in their mental lexicon, some learners apparently do not even entertain the possibility that they might not really know the word very well. If this is a pattern that learners exhibit when encountering words that are perceived to be highly familiar, further learning of vocabulary will suffer greatly.

While the discussion among researchers continues regarding the implicit-explicit continuum of instruction (Abu Radwan, 2000), it seems almost intuitive that the participants in this study could have benefited from some form of instruction on the importance of incorporating morphosyntactic information in guessing meaning from context. Notice that this does not necessarily mean that explicit instructions are needed every time phrases like *arming cast* are encountered. In fact, all the participants in this study are familiar with phrases like *verb + -ing* and *to + verb* because these are explicitly introduced in their textbooks. Rather, the problem is associated with limited ability to use their grammatical knowledge of these forms when familiar words are used in an unfamiliar way. Thus, it seems important to help raise L2 learners' level of awareness as to the use of all relevant features and

clues when guessing word meanings. As evidence from L2 vocabulary acquisition suggests (Aarnoutse & Tomesen, 1998; Slobin, 1973), strategies such as morphological analysis may assist L2 learners as well (Mogilevski & Burston, 1999), and some form of instruction might be required because the strategies of morphological analysis and guessing from context are independent of each other (DeKeyser, 1997; Mori & Nagy, 1999). By contrast, Laufer (1997) warned of the danger of relying too much on morphological information when guessing word meaning because some morphological structures can be deceptive; for example, some learners interpreted *outline* as *a line on the outside*. Most relevant to the findings from this study is the suggestion by Nation (2001) that determining the part of speech of an unfamiliar word should be the first step in guessing its meaning from context.

The concern raised in this study becomes even more serious when we consider that most high-frequency words are associated with multiple meanings because they frequently occur in various contexts. As mentioned earlier, the emphasis on the importance of knowing the most frequent words includes the importance of knowing these words in their multiple senses. Thus, the ability to use such words in various contexts, rather than in some limited contexts only, would add to learners' mastery of L2 vocabulary and enhance the productivity of vocabulary use. Unfortunately, however, L2 learners tend to make relatively less effort to learn more about high-frequency words than they do to learn low-frequency words that have limited use in common contexts. A series of informal surveys of college students in English conversation courses revealed that they almost never look up high-frequency words, such as *water* and *land*, in English monolingual dictionaries (in-class interviews with Korean learners of English by the author).

Beginning students, who are at the level of learning just this kind of vocabulary, rarely use monolingual dictionaries. For advanced learners, who are proficient enough to use English monolingual dictionaries, words like *water* and *land* have already become so familiar that they rarely look them up in the dictionary. Most of these advanced learners admitted that they use the dictionary when they encounter completely unknown words or relatively unfamiliar words such as *moisten* and *soil*. Thus, it is likely that L2 learners will look up the

word *moisten* when they encounter the word in a sentence like *The nurse moistened the patient's mouth*. It seems less likely, however, that L2 learners will look up the word *water* when they encounter the word in sentences like *My mouth watered* or *The reporter watered down her comments about the congressman*. An analogy that comes to mind is that of flexibility and productivity in use between a \$20 bill, which can be used in most transaction contexts, and a \$20 prepaid calling card, which can be used only for telephone calls. Similarly, high-frequency words function like cash, whereas low-frequency words have limited use. L2 learners need to understand the importance of investing more effort in acquiring cash-like vocabulary.

The observation that L2 learners exert less effort to learn high-frequency words is consistent with the results obtained in this study. Although the investigation was limited to the case of noun-verb polysemies in English, the findings from this study suggest that premature stability and lack of flexibility in revising existing knowledge of apparently easy L2 vocabulary can hinder further growth of vocabulary knowledge. When both quantity and quality are measures of a speaker's vocabulary knowledge, knowing only the primary sense of a high-frequency word is not sufficient. At a more global level of vocabulary learning, learners need to be reminded of the multiplicity of word meaning and use. General characteristics of the lexicon such as polysemy and homonymy need to be brought to their attention in a meaningful context. Awareness of such phenomena can help reduce confusion and prompt learners to attend to relevant information that can help them expand their vocabulary knowledge.

### Implications for Further Research.

Psycholinguistic studies have shown that native speakers share rule-governed knowledge about the semantic boundaries allowed for novel senses for a given word (Kaschak & Glenberg, 2000; Kelly, 1998), as in the novel verb sense of the noun *crutch* in *Lyn crotched her apple to Tom so he wouldn't starve* (Kaschak & Glenberg, p. 512). In this sentence, the word *crutch* is used as a verb that means something like *using a crutch to push an object to someone*. The present study did not clearly distinguish noun-verb polysemies, such as *land*, from homonyms, such as *rock*, in the materials used. Thus, to analyze L2

learners' sensitivity to multiplicity and productivity of vocabulary use with more precision, future research will need to be more selective about the words used in this type of study. With a more selective list of words, researchers could explore whether L2 learners and native speakers apply the same kinds of psycholinguistic rules when expanding their existing knowledge of certain words. Productivity is an important aspect of vocabulary knowledge, yet too much idiosyncrasy in generating novel meanings or uses may cause miscommunication among speakers.

Another direction for research addresses teaching strategies. From a pedagogical point of view, what types of vocabulary learning activities or strategies are conducive to increased understanding of the multiplicity of word meanings? Activities such as the multiple-choice test used in this study seem to improve L2 learners' awareness in this area. The words used in this study are only a small sample of a large number of high-frequency words. Strategies for teaching and learning L2 vocabulary that can be applied effectively to the majority of these high-frequency words will prove most productive. When it comes to high-frequency words, a principled approach to teaching L2 vocabulary includes explicit teaching of individual words and strategies for learning them (Nation, 2001; Schmitt, 2000). Some of these strategies must focus on raising the learners' awareness of the polysemous nature of these high-frequency words so that their existing knowledge serves as a solid foundation, not as an unheeded obstacle, to enriching their vocabulary knowledge.

#### REFERENCES

- Aarnoutse, C., & Tomesen, M. (1998). Effects of an instructional programme for deriving word meanings. *Educational Studies*, 24, 107-128.
- Abu Radwan, A. (2000). Focus-on-form instruction and the acquisition of English dative alternation: Does noticing help? (Doctoral dissertation, Georgetown University, 2000). *Dissertation Abstracts International*, 60 (9), 3339A.

- Carroll, J. 13., Davies, P., & Richman, B. (1971). American heritage word frequency book. Boston: Houghton & Mifflin.
- Coxhead, A. (2000). A new academic word list. *TESOL Quarterly*, 34, 213-238.
- DeKeyser, R. M. (1997). Beyond explicit rule learning: Automizing second language morphosyntax. *Studies in Second Language Acquisition*, 19, 195-221.
- Hirsh, D., & Nation, P. (1992). What vocabulary size is needed to read unsimplified texts for pleasure? *Reading in a Foreign Language*, 8, 689-696.
- Kaschak, M. P., & Glenberg, A. M. (2000). Constructing meaning: The role of affordances and grammatical constructions in sentence comprehension. *Journal of Memory and Language*, 43, 508-529.
- Kelly, M. H. (1998). Rule- and idiosyncratically derived denominal verbs: Effects on language production and comprehension. *Memory and Cognition*, 26, 369-381.
- Kim, C. (1996). Native and nonnative speakers' syntactic knowledge of English dative verbs assessed in grammaticality judgments and multiple choice tests (Doctoral dissertation, University of Illinois at Urbana-Champaign, 1996). *Dissertation Abstracts International*, 57(11), 4723A.
- Krashen, S. (1989). We acquire vocabulary and spelling by reading. *Modern Language Journal*, 73, 440-464.
- Laufer, B. (1989). A factor of difficulty in vocabulary learning: Deceptive transparency. *AILA Review*, 6 (*Vocabulary Acquisition*), 10-20.
- Laufer, B. (1992). How much lexis is necessary for reading comprehension? In P. J. L. Arnaud & H. Bejoint (Eds.), *Vocabulary and applied linguistics* (pp. 126-132). London: Macmillan.

Laufer, B. (1997). What's in a word that makes it hard or easy: Some intralexical factors that affect the learning of words. In N. Schmitt & M. McCarthy (Eds.), *Vocabulary: Description, acquisition, and pedagogy* (pp. 140-155), Cambridge: Cambridge University Press.

Mogilevski, E., & Marston, J. (1999). Morphosyntactic accuracy in the written composition of advanced university level students of French. *Australian Review of Applied Linguistics*, 22, 61-80.

Mori, Y., & Nagy, W. (1999). Integration of information from context and word elements in interpreting novel kanji compounds. *Reading Research Quarterly*, 34, 80-101.

Nagy, W., & Anderson, R. (1984). How many words are there in printed school English? *Reading Research Quarterly*, 19, 304-330.

Nation, P. (2001). *Learning vocabulary in another language*. Cambridge: Cambridge University Press.

Schmitt, N. (2000). *Vocabulary in language teaching*. Cambridge: Cambridge University Press.

Slobin, D. I. (1973). Cognitive prerequisites for the development of grammar. In C. A. Ferguson & D. I. Slobin (Eds.), *Studies of child language development* (pp. 175-208). New York: Holt Rinehart Winston.

APPENDIX A

List of Words Used in Pretest and Posttest  
Self-Evaluation of Vocabulary Knowledge

Category	Words
Target words	arm, book, coat, ice, land, page, park, rock, taxi, trip
Low-frequency words	brim, churn, fizz, fluke, gaunt, heave, lieu, nudge, slug, tote
Made-up words	bink, dune, drade, frab, grock, gruse, smill, spig, tive, vash.

instructions

*Level of difficulty.* Evaluate your knowledge of the words, and mark one of the following categories.

1. Easy word for me: I know its meaning well, and I can use it without difficulty.
2. Difficult word for me: I have heard it before, and I only vaguely know its meaning.
3. Unknown word for me: I do not know what it means, and I have never heard it before.

*Parts of speech.* For each word, indicate its part of speech using the following expressions: *noun, verb, adjective, adverb, article, determiner*. If a word belongs to more than one part of speech, write them all.

APPENDIX B

Sentences Used in the Translation Test

Target Sentences

Mr. Lee heard about the arming cost yesterday.  
 A strange man came to the booking desk at noon.  
 The company uses cheap coating material for its product.  
 Julia put the icing cream on the table.  
 Everyone saw the landing signal in the dark.  
 There was a paging announcement during the meeting.  
 Sam remembered the parking hours very clearly.  
 Mr. Kim bought a rocking chair two weeks ago.  
 The passengers talked about the taxiing speed with each other.  
 Mary had a tripping accident at the station.

Filler Sentences

Tom went to an expensive restaurant last night.  
 The nurse talked to the old patient with a smile.  
 Someone sent a strange letter to the president.  
 Mrs. Park made a delicious pie for her guests.  
 Cindy wrote a long letter to her grandmother.  
 The doctor put the green bottle on the floor.  
 Susan told a terrible lie to her sister.  
 The scientist bought a new computer for his son.  
 Bill met his best friend in front of the library.  
 A girl brought a small box to her mother.

APPENDIX C

Multiple-Choice Test items Used in the Experiment

items with Target Vocabulary

1. The passengers talked about the taxiing speed with each other.
  - a) a small automobile
  - b) to move slowly
  - c) with a loud noise
  - d) pins in a box
2. A strange man came to the booking desk at noon.
  - a) to arrange in advance
  - b) a piece of information
  - c) a set of printed pages
  - d) near a corner
3. Everyone saw the landiltg signal in the dark.
  - a) a corner in a building
  - b) in a hurry
  - c) a ground space
  - d) to come onto a surface
4. Mr. Lee heard about the arming cost yesterday.
  - a) to supply with weapons
  - b) a chemical element
  - c) a part of the human body
  - d) thin and light
5. The company uses cheap cg jgIn material for its product.
  - a) a bold statement
  - b) to cover the surface
  - c) a long jacket
  - d) extremely complicated

6. Julia put the icing cream on the table.  
a) a piece of frozen water  
b) a container with handles  
c) in small pieces  
d) to cover with mixture
7. There was a paging announcement during the meeting.  
a) to call aloud  
b) a side of paper in a book  
c) a lid for a kettle  
d) rarely available
8. Mary had a tripping accident at the station.  
a) a short journey  
b) into a dark hole  
c) a list of titles  
d) to lose one's balance
9. Mr. Kim bought a rocking chair two weeks ago.  
a) a risky plan  
b) under pressure  
c) to move regularly  
d) a large piece of stone
10. Sam remembered the park hours very clearly.  
a) a piece of grassy land with trees  
b) with an angry tone of voice  
c) to put a vehicle somewhere for a time  
d) a large piece of plastic board

Filler Items with Made-up Words

1. The scientist bought a lertant computer for his son.  
a) brand new  
b) expensive  
c) hi-tech  
d) slow

2. Someone sent a Heard letter to the president.  
a) dangerous  
b) impolite  
c) secret  
d) strange
3. A girl brought a cried box to her mother.  
a) small and light  
b) large and heavy  
c) dark in color  
d) made of wood
4. Bill met his commirt friend in front of the library.  
a) suspicious  
b) best  
c) comfortable  
d) truthful
5. Mrs. Park made a snart pie for her guests.  
a) sweet and warm  
b) a kind of fruit  
c) very delicious  
d) cold and sour

Filler Items with Real Words Only

1. The nurse talked to the old patient with a smile.  
a) not young in age  
b) clever  
c) weak and sick  
d) respectable
2. The doctor put the green bottle on the floor.  
a) an unprepared stage  
b) fresh and new  
c) heavy in weight  
d) a color between yellow and blue

3. Cindy wrote a funny letter to her grandmother.
  - a) difficult
  - b) enjoyable
  - c) strange
  - d) serious
  
4. Tom went to an expensive restaurant last night.
  - a) new and unknown
  - b) costing a lot of money
  - c) famous and stylish
  - d) extremely popular
  
5. Susan told a terrible joke to her sister.
  - a) very surprising
  - b) extremely bad
  - c) funny and interesting
  - d) slow and boring

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## TEACHING NOTES

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### **Downshifting: A Visual Technique for Teaching Paragraph Development**

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