Testing receptive knowledge of derivational affixes

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Abstract

Derivational affixes create variations of meaning within word families, so learner knowledge of how derivations transform meaning can boost comprehension. This paper looks at second language (L2) learners’ receptive knowledge of unknown members of word families in order to better understand how learners encounter new forms of words with derivational affixes. Overall, the participants were able to move within word families at a receptive level but often had difficulty with non-target, sentential syntax of the British National Corpus examples. It was also found that words-per-minute was a predictor of the participants’ ability to move within word families. Finally, participants were challenged when moving from one derivational affixed target to another.

Keywords: Second-language vocabulary acquisition derivational affixes

Introduction

This paper looks at second language (L2) learners’ receptive knowledge of unknown members of word families in order to better understand how learners encounter derivational forms of words. Derivational affixes, which often change the form of the root family member, create variations of meaning within word families. Learner understanding of how derivations transform meaning can boost comprehension and can equate both to recognition of word type within a sentence and to the recognition of the grammar of a sentence (Schmitt & Zimmerman, 2002; Mochizuki & Aizawa, 2000). Learners, who understand how an affix changes the meaning of a word, then have a better chance of understanding the meaning of the entire sentence. Furthermore, learners have a better chance to produce grammatically correct language when they understand the appropriacy of affix usage (Schmitt & Zimmerman, 2002). Bauer and Nation even claim that “as a learner’s knowledge of affixation develops, the size of the word family increases [for the learner]” (Bauer and Nation, 1993, p. 253).

Potentially, understanding a word family, known or unknown, could be dictated by learner knowledge of a word’s root meaning coupled with learner knowledge of affixes. Looking closely at
receptive affix recognition might shed light on how learners negotiate unknown word families. Also, knowledge of a base word might have a facilitative effect on the recognition of a derived word within the same family as well as implications for deciding a unit of counting (e.g., word type, lemma, word family and level inclusiveness of the word family). Furthermore, increased understanding of word families has implications for learners’ comprehension and use of a target language. While several studies have looked at L2 derivational production, there are limited studies that have looked at learners’ receptive abilities to recognize unknown family members as they are first encountered.

**Literature Review**

In general, *vocabulary knowledge* is often explained by size and depth, as well as by the reception and the production of words (Gardner, 2007). Size refers to the number of root word meanings that a learner has, and depth refers to the degree of said meanings, for example, other members of the word family or collocates. Receptive knowledge refers to a learner’s ability to understand a word when encountered while listening or reading, and productive knowledge relates to the degree in which a learner is able to speak or to write the word (Nation, 2005; Read, 2000; Schmitt, 2000). Although overlap occurs, it is considered by some researchers that receptive vocabulary knowledge moves towards productive knowledge along a continuum, as learners begin to use the words that they have heard (Melka, 1997).

Other researchers suggest that receptive and productive knowledge differ in type, forming distinct forms of associative knowledge that do not share a continuum (Meara, 1997). The contention holds that, in contrast to productively-known words, receptive words are not linked to the lexicon, and therefore no continuum between receptive and productive states exists. Words at the productive level must link in meaning (e.g. *peanut butter* and *sandwich*) to create a network of association (Meara, 1996), and testing the associative powers of the learner is the correct way of establishing a truer understanding of the structured dimensionality of a learner’s vocabulary. This association between words is argued to be non-existent at the receptive level making natural progression baseless. A clear threshold of transference remains unclear (Laufer & Goldstein, 2004). However, receptive knowledge is a key feature of vocabulary knowledge regardless of its final relationship with productive knowledge.
Furthermore, there are generally four common units for counting words. These include tokens, types, lemmas, and word families. If tokens and types are excluded from vocabulary size measurements (due to sheer size and lack of specificity), this leaves lemmas and word families as the choices related to estimating productive and receptive vocabulary knowledge. A single lemma includes a root form, inflected forms, and reduced forms (i.e., contractions). Word families include a root form, inflected forms, reduced forms, and derived forms within one family.

**The unit of counting**

When deciding on a unit of counting (e.g., word type, lemma, word family and level inclusiveness of the word family), the reason why the counting is being done needs to be examined. If the counting is being done to see how much or what needs to be learned, then the unit of counting needs to relate to the learning required. Does each new word require new learning? This is the major reason why, for receptive use (for listening and for reading), the word family is the most sensible unit of counting. Learners with knowledge of the major morphological word building devices of English can figure out in a written or spoken context what a derived form of a known stem is likely to mean with the help of context clues. When counting for the purposes of production (for speaking and for writing), the word type or perhaps the lemma may be the most sensible unit of counting, because different word forms often require different collocates.

Choosing between types, lemmas, and word families as a unit of counting involves making a decision on (a) how much rule-based generalization involving morphology and core meaning is involved in dealing with the previously unknown family members and (b) how much new learning each family member requires. It is likely that both kinds of knowledge are involved, so it is necessary to consider the involvement of both. If a prospective family member requires a large amount of new learning which is different from the usual rule-based generalization, then it should be counted as a separate family.

When counting words and when comparing different studies of vocabulary size, it is important to know what the unit of counting is and whether the same or different units are being used. Let us look in more detail at what should be counted as a separate word for receptive purposes such as reading.
Word families

The unit of counting called word families is described in Bauer and Nation (1993), and some general principles and a detailed list of affixes are provided. One of the major purposes of this description was to enable the construction of frequency-ordered word family lists, which could then be used for computerized text analysis using programs like Range and AntWordProfiler. The description could also be used for the construction of vocabulary size tests so that the biases involved in dictionary-based sampling could be avoided. The lists can also be used as a basis for language course design, and for graded reader schemes.

Ideally, what is included in the word family should grow as learners’ morphological proficiency develops, although this creates problems in the creation and use of word lists. Certainly, however, the restriction of word families to the affixes available up to Level 6 in Bauer and Nation should be relaxed when looking at words from, say, the 10th 1000 onwards.

A major weakness at present is that the word lists do not distinguish homographs and homonyms. There are ways to deal with this, such as using a computer program to tag homographs and homonyms in the corpus before they are counted. (Cobb's http://www.l pretextor.ca/ is working on doing this.) There are however a few compromises until this can be done. In the present British National Corpus (BNC) and Corpus of Contemporary American English (COCA) word lists, where affixes can distinguish at least some of the items, such as hardly from the hard family, oriented, orients, orienting from Orient, Oriental, then they are given separate entries in the word lists. This is far from a completely satisfactory solution but it is at least a start. The other slight consolation is that pairs of homonyms and homographs typically differ greatly in their frequency of occurrence (Wang and Nation, 2004), with one member of the pair typically making up well over 95% of the total occurrences of the pair.

Word families are the most suitable unit for counting for receptive purposes, and the conservative position follows the Bauer and Nation guideline of only allowing free forms not bound forms to act as the headword for a word family. This means that clearly related items like present and presence are put into different families. It does not make sense for receptive purposes to see swim as a noun (e.g., I went for a swim) requiring extra learning when swim as a verb (e.g., I like to swim) is already known. Similarly, there is minimal interpretive effort required to understand sadness and
sadly once sad is already known and the learners know about –ly and –ness and have met them in several words. Understanding a newly met regular form like sadness where the stem or another family member is known is in a completely different category from understanding a newly met unknown word like grief.

When the guidelines of what can be included in a family are followed, some family members may be infrequently occurring word forms, but if the families are properly made, the words should be readily accessible when reading.

Research of L2 learners’ production of affixes shows that learners often have limited ability outside of knowing the stem and, if present, one or two high frequency family members (Schmitt, 1999). Moreover, at the receptive level, learners are seen to have difficulty identifying family members (Tyler & Nagy, 1989). The most telling criticism of word families for receptive purposes centers on what affixes should be allowed for membership of the family. The combined levels up to level 6 include a lot of affixes and many of these may be unknown by young native speakers and intermediate level learners of English as a foreign language. It would be good to have word family lists at different levels of affixation. Further research into word stems has shown native participants to recognize known word stems with nonsense derivational stems, meaning that there may be some transfer of meaning for word families with more transparent relationships (Taft, 1994). Exploring the importance of receptive vocabulary knowledge may give some insight into learner word knowledge. It is very likely that L2 learners who struggle at the productive level may be more adept at the receptive level.

Learners, with knowledge of a root family member, should be able to understand other forms at a receptive level when encountering those forms in context. The research question this paper hopes to address is as follows: Given an unknown word root, a gloss of the root, and examples of said root used in sentences, can learners then cope with encountering another member of the family in context? Will the learners be able to explain the meaning of the new family member as it relates to the context of a new sentence?
The authors hypothesized that, due to affix knowledge, participants would be able to work out meanings of unknown target family members, and that this relative ability would be visible in a reading diagnostic.

**Methodology**

Participant interviews were done with 20, first-year Japanese, university students, with TOEFL scores ranging from 415 to 630. The average TOEFL score was 520. All of the participants were members of advanced English, returnee-oriented classes at a private university in the Kansai area of western Japan. Most of the participants had been abroad to English speaking countries for travel, homestays, or extended periods of schooling (e.g. high school). At the beginning of the semester, participants were given a vocabulary size test (VST) using the Victoria University of Wellington’s online test (my.vocabularysize.com) in their first language (L1). According to that assessment, the class had an average vocabulary size of 8,200 words, with the high score 9,300 and the low score 5,400. A reading speed/comprehension diagnostic was also run to gauge the participant’s reading speed in words per minute (WPM). The average WPM was 146 for the cohort.

A pilot test was done to work out word-types, timing, language (prompts), number of items, and follow-up questions. After the pilot, target words were increased from six (pilot) to fifteen for a better representation of participant abilities. Also after the pilot, the time given to each target word family was left open-ended. This allowed the participants to give reliable explanations of the derivative target without being hindered by any contextual uncertainty from the other words in sentences.

Fifteen target words were chosen from the 7th 1000 word level band. The fifteen words were chosen for their variety of affixes and the probability that they were unknown to the participants. All of the facility values for the chosen affixes were greater than 80% at the +5000 word level, meaning that there was a greater than 80% chance that the affixes could be used accurately by the participants (see Mochizuki & Aizawa, 2000).

The fifteen example sentences from the BNC containing the target words were chosen. Example sentences were chosen that conveyed the meaning of the word within the context of the sentence. Another criterion was that the extraneous words would not require extended off-task explanation.
Eleven of the fifteen chosen word families used root word examples and required learners to explain a family member with derivational affixes. Four of the fifteen chosen word families moved from one affixed member to another, or between derivationally affixed family members. The inclusion of initial affixed member examples was done to look at the success rate of moving from derivational affix to derivational affix, as this would be a realistic common occurrence when encountering unknown word family members. Finally, language prompts (e.g. “Can you explain the sentence?”) were kept to a minimum but it was found that additional vocabulary explanation of non-target words was often needed. (This was clearly due to some of the concepts in the BNC, for example *stage coach*, which is outside of the learners’ conception in the L2 and often in the L1).

Participants were first shown a root word unknown to them (verified through initial, direct questioning, i.e., *Have you seen this word before?*) from the 7,000 band. They were shown two examples of the target word in sentential contexts in English and given an L1 (Japanese) translation of the target root. Finally, a new target example was shown containing another member of the same word family in sentential context. The participants were then asked to explain the context of the sentence related to the new family member.

Participant answers were noted by a single interviewer and recorded. The recording was then scored by two more raters. Vocabulary knowledge of the target family member was rated to be understood (3), general idea but slightly off topic (2), understood with further explanation (1), or completely off topic/no idea (0).

The interviews were scripted so that each participant had a similar experience and similar opportunities to explain the targets. Target items were scored by the types of affixes added. Type of affix refers to the affix levels from Bauer & Nation (1993). The table in Appendix B shows the root words and non-root inclusions with their affixed targets along with the L1 gloss used in the experiment. Affixes, affix levels and combinations of affixes are also shown in the table.

The data were collected and analysed in an exploratory manner using IBM SPSS Statistics 22. Although exploratory data analysis is a weak form of analysis, it was chosen because there was
little precedent for this type of experiment, and with the idea for this initial experiment to be used to highlight future opportunities. The ratings were considered to be the independent variables in this survey because affix knowledge might connect to overall vocabulary size or reading WPM.

Follow-up questions immediately followed each task’s interview. These included the following: *What was difficult about this exercise?* & *Which items were most difficult?* The follow-up questions were for the purpose of directly asking the participants about their thoughts on the idea of derivational affixes within unknown word families.

**Results**

Initial observation of the data intake showed that the VST was not predicted by the participant scores. Instead, WPM and percentage of comprehension indicated higher or lower overall scores of affix negotiation. In other words, some participants with high VST scores received low ratings on some of the targets and some participants with low VST scores (both relative to the mean) were able to negotiate the target word forms. However, weaker WPM and percentage of comprehension did signal weaker ratings for the target words.

Table 1 shows a sample of the data collected during the interview process. A variety of affix types, levels, and multiple-affix level words are included in the sample. An initial question involved how to characterize the level of affix when several of the targets had more than one affix and more than one level. It was decided to label the target with the multiple-affixed levels. The first column shows the participant’s number and WPM average. The middle column shows the participants answer to the prompt, *What does this sentence mean?* (A second prompt, *What does this word mean?* was used if the participants struggled with the specific target sentence. The justification for allowing a second, alternate prompt was that affix knowledge is used with grammatical context of sentential construct, and therefore allowing the participants to notice the context was deemed acceptable within the study.) The fourth column (from left) shows example notes taken during the interview prior to the rating. The final column (far right) shows the numeral rating and its verbal meaning, along with the average rating for all participants. The examples shown are meant to shed light on how a participant was given a rating in relation to their output.
Table 1. Participant/target specific rating with notes

<table>
<thead>
<tr>
<th>Participant 1</th>
<th>Target word: ADJUDICATOR</th>
<th>Answer: People who tell the truth; person</th>
<th>Notes: This participant understood that the target word referred to a person and related to truth. However, the participant did not adequately acknowledge the position of the person in relation to the law.</th>
<th>Rating: 2 (Slightly off topic)</th>
<th>Average rating: 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>WPM = 200</td>
<td>Level 3 affix + er</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Root word: ADJUDICATE</td>
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<tr>
<td>Participant 1</td>
<td>Target word: CARICATURING</td>
<td>Answer: Make more money; I don’t know why they are making more money</td>
<td>Notes: This participant is clearly off topic in terms of the meaning of the target, referring instead to the action of the person creating the caricature.</td>
<td>Rating: 1 (Off topic)</td>
<td>Average rating: 3</td>
</tr>
<tr>
<td>WPM = 200</td>
<td>Level 2 affix</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td></td>
<td>Root word: CARICATURE</td>
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<tr>
<td>Participant 3</td>
<td>Target word: CLAMOUROUSLY</td>
<td>Answer: The audience was excited for the show to start and made a lot of noise.</td>
<td>Notes: This participant is able to define the word within their definition.</td>
<td>Rating: 3 (Understood)</td>
<td>Average rating: 3</td>
</tr>
<tr>
<td>WPM = 134</td>
<td>Level 4 + Level 3 affixes</td>
<td></td>
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<tr>
<td></td>
<td>Root word: CLAMOUR</td>
<td></td>
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<tr>
<td>Participant 7</td>
<td>Target word: ADJUDICATOR</td>
<td>Answer: Person who is in charge of judging</td>
<td>Notes: This participant clearly understands the concept of the word from the context of the sentence.</td>
<td>Rating: 3 (Understood)</td>
<td>Average rating: 3</td>
</tr>
<tr>
<td>WPM = 112</td>
<td>Level 3 affix + er</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Root word: ADJUDICATE</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Participant 9</td>
<td>Target word: DISSIPATIVITY</td>
<td>Answer: Heat is too high and it breaks the machine</td>
<td>Notes: This participant misunderstand the meaning of the word so that, instead of the machine functioning because of the dissipated heat, the machine breaks because of a lack of dissipating heat.</td>
<td>Rating: 1 (Off topic)</td>
<td>Average rating: 2</td>
</tr>
<tr>
<td>WPM = 196</td>
<td>Level 6 + Level 4 affixes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Root word: DISSIPATE</td>
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</tbody>
</table>

A regression analysis was conducted to evaluate how well the VST was predicted by participant scores with the target words. The predictor variables were set as the ratings for each participant made by the three judges on the 20 participants for each of the 15 target words/sentences, while the outcome variable was the VST. There were no correlations shown in the data, $R^2 = .93$, $F(9,2) = 2.81$, $p > .25$. A second regression analysis was conducted with WPM set as the outcome variable and the ratings of the three judges on the 20 attempts at 15 different words was used as
the predictor variables. Several predictors in this model showed significance, $R^2 = .35$, $F(1, 10) = 5.4$, $p < .05$, with a standard error of 24. Based on these results, it may be that WPM is a better choice to look at when researching correlations with receptive affix knowledge.

Discussion

Difficulties reported by the participants immediately after the task were limited to the overall words and ideas, and the concept of the sentences or the concept of the target. In other words, participants did not have difficulty moving from the root family member to a derivation of the root. Participant difficulty was based in the context of the sentence without regard for known vocabulary: it did not matter if they knew the words; the participants had trouble understanding.

By the 5th 1000 word level (the minimum VST of the participants), learners should have encountered enough words to have some receptive awareness of affixes, which may have helped the participants to have better contextualized the meaning of word family members. That said, and even with the fairly homogenous makeup of the sample, each participant had a varied understanding of context. One might assume from an initial look at VST and WPM assessments that the participants with higher scores on the VST might also have a better grasp of affixes and therefore a better receptive knowledge of word families. However, vocabulary size may be a loose variable as there are many exceptions (it would be naïve to assume that a learner at any level knows all the words in previous levels). It has been reported that Japanese participants, especially, have high amounts of 3rd 1000 word level words while having low amounts of 2nd 1000 word level words.

Moving from a non-root to another non-root target did present more of a challenge. However this could be linked to more to the difficulty of the sentence (i.e., concept of the word or concept of the sentence) rather than the actual negotiation of affixes. It may be better to hypothesize that the speed at which a learner reads in general is the speed at which the learner acknowledges each word. This score with the comprehension score could be the more absolute variable in relation to the metalinguistic skill of word knowledge that affixes are a part.
Limitations of This Study

There were several generalizable limitations of this study. First, the size of the intervention is still limited. The words chosen as targets could have been expanded to include several more varieties of affixes, which may have allowed for a greater understanding of the participants use of contextual clues. Any of the participants could have been more familiar with affixes unused (Levels 1, 5, & 7). This may seem like a weak argument in light of the variety that was used, but the correlation between words known and unknown changes with each learner.

Next, a wider sample of participants, including those at the baseline 6th 1000 word level may have helped to better confirm if the WPM variable actually aided the negotiation of the target words.

It is also unclear whether or not the experiment actually tests receptive knowledge of word families, given that there are so many context clues provided. The target words are defined in the L1, and then explained with example sentences. With so many clues pointing towards the meaning of the word family target, there may be little use of the new affixes in negotiating meaning. An authentic use of receptive knowledge would more than likely involve fewer contextual clues.

Finally, the weakness of the participants to negotiate between derivational affixes tags an interesting challenge, as authentic texts do not arrange root family members followed by derivation. Movement within word families must work in all directions to be a strength.

Conclusion and Future Study

The primary aim of this study was to look at second language (L2) learners’ receptive knowledge of unknown members of word families in order to better understand how learners encounter new forms of words with derivational affixes. It was also to continue the argument for word families as the appropriate measure for counting receptive knowledge. If learners are able to move within word families at a receptive level using the context of a sentence where a particular target is embedded and using their prior receptive knowledge of affixes, then it may further the argument in word families favor.

Clearly, this study needs to be enlarged to include direct focus on WPM. While the initial results here may have indicated that WPM may be a part of the learners’ process when it comes to
negotiating affixes, there is only enough evidence to warrant another study. It needs to include more participants with different vocabulary sizes. It also needs to include a more thorough use of the affix levels proposed by Bauer and Nation (1993).

Finally, as Gardner (2007) argues, derivational affixes include prefixes and suffixes which may hold different challenges for learners. Specificity would have greatly improved this study.

Biodata
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References


Appendix A

Instrument

GLEANINGS

Translation: 収集する
(Gloss: things gathered slowly and laboriously, bit by bit; ideas learned, discovered, or found out, usually little by little or slowly)
EX1: The few gleanings she got from her garden made an adequate meal.
EX2: He didn’t understand the situation but looked on the Internet to find some gleanings.

Target: She hasn't been one of the hardworking farmers, she's been but a gleaner, but God has provided for her.

Word: ADJUDICATE
Translation: 宣告する
(Gloss: to pronounce or decree by judicial sentence)
EX1: The trials were held to adjudicate the prisoners.
EX2: To adjudicate freedom is a strong power.

Target: It was clear that the Adjudicator had hoped for a more detailed explanation.

VULGARIZATIONS

Translation: 卑俗化
(Gloss: to make commonplace or to debase)
EX1: He wanted to marry her, but she laughed at him too, and said she had already made her choices and it would be a vulgarization to give up her God and replace him with a somewhat rude and certainly brutal man.
EX2: The signs point toward a deepening vulgarization, a widening corruption by the media, by commerce, by vanity, by ostentatiousness.

Target: You've obviously NEVER been in love or you’d never think of it so vulgarly!

Word: CARICATURE
Translation: 戲画
(Gloss: a picture, description, etc., exaggerating the peculiarities or defects of persons or things)
EX1: His caricature of the mayor in this morning's paper is the best he's ever drawn.
EX2: She was like a caricature of bad manners, for example she always arrived late.

Target: Several people were in the park taking money to do caricaturing.
Word: CONSCRIPT
Translation: 徴兵
(Gloss: to draft for military or naval service)
EX1: Across the road, an army conscript dressed in battle clothes watches.
EX2: My father was a conscript in the second war.
Target: Many of the conscriptions were given out to the younger boys, and their mothers were upset.

Word: DISSIPATE
Translation: 散らす
Gloss: to scatter in various directions
EX1: To dissipate the crowd, the police threatened to shoot them.
EX2: We hoped for sunshine to dissipate the clouds.
Target: The rate of heat dissipativity was high for the new machine.

Word: ENCROACH
Translation: 侵入する
(Gloss: to advance beyond proper, established, or usual limits)
EX1: Every year, humans encroach more and more on nature.
EX2: I felt the man sleeping next to me on the train encroach with his head onto my shoulder.
Target: I always think that the noise of babies in restaurants encroaches on our service.

Word: PROTRACT
Translation: 長引かせる
(Gloss: to draw out or lengthen, especially in time; extend the duration of; prolong)
EX1: Not deadly, but still a problem, was the way in which an interest in ceremony could protract and complicate negotiations between people, especially when a number of them were involved.
EX2: The contract for our job was protracted due to the amount of work that still needed to be done.
Target: Be prepared for a protractive process in which communication seems inadequate.

Word: NULL
Translation: 空白; ヌル
(Gloss: without value, effect, consequence, or significance; being or amounting to nothing)
EX1: The game ended in a tie, null to null.
EX2: He decided that the marriage was null and void.
Target: In the end, Mike's efforts were very quickly nullified.
Word: RECTIFYING
Translation: 整流
(Gloss: to make, put, or set right; remedy; correct)
EX1: In addition, there are surely to be one or two early mistakes which will need rectifying, and also plans to be considered for next spring's display.
EX2: The whole firm, working as a team, set about rectifying his mistake.
Target: Good efficiency is mainly a matter of using good switches and rectifiers, since they are where most of the losses occur.
Word: SUPERSEDE
Translation: 取って代わる
(Gloss: to replace in power, authority, effectiveness, acceptance, use, etc., as by another person or thing; to replace in function, office)
EX1: As cultures weaken, status and power will come to be less connected with an outward demonstration of wealth, and this may lead to a more powerful generation of entrepreneurs, as specific objectives come to supersede those of status.
EX2: Societies, like family groups, tend to supersede the individual as the unit of selection.
Target: Initially railway practices, arrangements, even rolling stock, were modelled on those of the old stage-coaches they were superseding.
Word: UNEMBELLISHED
Translation: 飾られていない
(Gloss: not improved or beautified by adding detail or ornament; not adorned)
EX1: The forms were simple, graceful, unembellished by anything save the intensity of light and movement trapped in the glass itself.
EX2: At this stage his use of machinery is unembellished and matter of fact.
Target: Deceptive restoration or alteration and embellishment of antiquities is another area of faking.
Word: INCITER
Translation: 敎唆者
(Gloss: a person who stirs up, encourages, or urges on; stimulates or prompts to action: a person who incites a crowd to riot.)

EX1: When an action is illegal, the penalty for the inciter is stronger, with a fine in addition to the three months’ imprisonment.

EX2: An isolated monk who wanted knowledge found himself living a few yards from a man who at first sight was a popular preacher, but who happened also to be one of the coming academic theologians of England, and an inciter of younger minds.

Target: He was one against four — and already wounded — and yet he stood there deliberately inciting the men to fight.

Word: CLAMOUR

Translation: 喚声

(Gloss: a loud uproar, as from a crowd of people)

EX1: The clamor from the children angered the people who lived nearby.

EX2: The clamor from the train going past made kept us awake.

Target: The group clamorously waited for the concert to start.
Appendix B
Affixes, Levels, & L1 Gloss

Table 1
Root word examples and target words with affixes and glosses

<table>
<thead>
<tr>
<th>Root word</th>
<th>Target family member</th>
<th>Affixes</th>
<th>Affix level(s)</th>
<th>L1 gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conscript</td>
<td>Conscription</td>
<td>-ion; -s</td>
<td>L6 + L2</td>
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*Non-root prompts