

Japanese ESL Learners' Acquisition of English Loanword Cognates:

Difficulties Due to Semantic, Phonological, and Orthographic Factors

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Abstract

This is a study of the difficulties that Japanese ESL learners have with English loanwords. Japanese has borrowed thousands of words from English, but Japanese ESL learners often have difficulties identifying such words when they encounter them in English. This paper identifies three potential sources of difficulty or confusion for ESL learners with regard to loanwords, namely, semantic change, phonological change, and orthographic opacity. It also describes the results of a test that investigated the relationship between these three aspects of loanword adoption and ESL vocabulary learning.

The Japanese language includes thousands of words that have been borrowed from English. Stanlaw (1987) has outlined the historical roots of this phenomenon and Tomoda (1999) and Nakagawa (1996) have examined the sociological implications of loanword adoption. These researchers and others have also described the various changes that can occur when an English word is adopted by Japanese. From an ESL teacher's perspective, it might seem that the existence of these words in Japanese would make acquisition of the corresponding English cognates relatively easy. However, while this may be the case to some degree, it is also possible that the changes which English words undergo as they are adopted into Japanese could interfere with learning.

In this paper, I will review some of the work done on the effects of loanwords on English vocabulary acquisition by Japanese L1 speakers and I will describe three potential sources of difficulty or confusion for ESL learners, namely, semantic change, phonological change, and orthographic opacity. I will also describe the results of a test that investigated the relationship between these three aspects of loanword adoption and ESL vocabulary learning.

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Literature Review

Japanese L1 ESL learners and loanwords

Numerous researchers have attempted to assess the effectiveness of Japanese ESL learners' use of their L1 knowledge of adopted English words. In one of the earliest studies, Yoshida (1978) investigated the influence of Japanese loanwords from English on a three-and-a-half year old Japanese speaking child's acquisition of English vocabulary. Yoshida observed the child's English input and output over a seven-month period and conducted experimental tasks on comprehension and production. The data showed a large number of loanwords in the subject's English vocabulary and Yoshida concluded that "loanwords seem to help the subject to learn English words more quickly" (p. 99).

Brown (1995) had his Japanese ESL subjects complete a cloze exercise by selecting one of four possible word choices. He found a predilection for choosing words that had been borrowed and therefore had a cognate form in the subjects' L1. Brown called this the "borrowed word recognition phenomenon" and claimed that loanwords constitute a valuable latent English vocabulary base which ESL teachers should seek to exploit.

Daulton (2003) investigated the effect of loanwords on Japanese ESL learners' written English production. His participants were asked to write a paragraph in English describing the facial features of someone they did not personally know and to imagine that person's personality based on the description. Daulton then compared the frequency of those words appearance in the student texts compared to the frequency of the same words in the general lexicon of English. He found that words which had been borrowed into Japanese appeared with greater frequency in the student texts than they do in standard English texts. He concluded that his participants showed a preference for using borrowed words in their writing and that this indicates a facilitative effect of loanwords in ESL learning. Daulton (1999) has also conducted lexical analysis of the most frequently appearing words in English in an attempt to determine how many of those words have been borrowed into Japanese. He claims that at least 734 words on West's (1953) General Service list have been adopted in some form into the Japanese language.

Uchida and Scholfield (2000) tested Japanese L1 ESL learners' ability to identify errors in the use of loanword cognates appearing in English texts. Their participants were two groups of Japanese L1 ESL learners, one group living in the United Kingdom and the other group living in Japan. Uchida and Scholfield began by classifying the English counterparts of loanwords according to the types of semantic change the words had undergone as they were adopted into Japanese. They then investigated whether their participants' performance on the experimental task was affected by the type of semantic difference between the loanword as it appeared in Japanese and the original English word. They found differences in success with the task depending on the semantic nature of the words tested and used their results to develop a hierarchical description of the relative difficulty of individual loanwords.

Van Benthuisen (2007) tested Japanese L1 ESL learners' ability to distinguish between English words which have been adopted into Japanese and words which have not been adopted, and their ability to provide the Japanese word for the English words that have been adopted. The test items were taken from words in the 1001-2000 frequency range of the GSL; participants were able to correctly identify, on average, 70% of the tested words. However, a significant correlation with scores on a vocabulary levels test suggested that the participants who scored highest on the loanword test might have done so because of their larger English vocabularies. Van Benthuisen concluded that participants were not taking sufficient advantage of the latent vocabulary resource provided by their L1 knowledge of loanwords.

Simon-Maeda (1995) described some possible reasons for Japanese L1 ESL learners' failure to make full use of their loanword lexical resources. She argued that the greatest obstacle was the fact that many English words acquire new meanings when they are borrowed into Japanese and these new meanings are quite different from the definitions that students will find in their bilingual Japanese-English dictionaries. She cited *naisu-midoru*, which in Japanese denotes an attractively dressed middle-aged male, as an example of this semantic change.

Shepard (1995) also focused on the problematic nature of learners' use of loanwords in ESL learning. Among the several difficulties he described were problems caused by changes in pronunciation that occur when a word is borrowed, the fact that adopted words have been shortened or combined with Japanese words, changes in usage with regard to parts of speech, and semantic changes similar to those described by Simon-Maeda (1995).

While the problems described by Shepard (1995) and Simon-Maeda (1995) are real, the empirical studies previously cited here do seem to show the potential benefits for learners' who use loanwords as a vocabulary resource in ESL learning. Ringbom (1987) has pointed out that "lexical items which are cross-linguistically similar to L1-items already stored will be understood best of all by learners learning closely related languages" (p. 35). Japanese is dissimilar to English, but rather than dwell on the problems this causes for learners with regard to loanwords, it would seem useful to investigate the various causes of those problems and to suggest ways for dealing with them.

Semantic difficulties with loanwords

Uchida and Scholfield (2000) presented a semantic typology of English-Japanese cognates based on contrastive analysis. They were then able to demonstrate that the model could predict Japanese ESL learners' performance on a task that called for making judgments about the correct usage of loanwords in English sentences. They admitted that their model is tentative and requires confirmation through further research, and that the restriction to semantic considerations fails to take into account other problems that learners could have with loanwords, but the model provides a good starting point for inquiry into Japanese ESL learners' difficulties with this aspect of loanword acquisition. The model describes six dif-

ferent levels of semantic differentiation with regard to adopted words.

1. *True cognates* are words for which the main English meaning and the main Japanese meaning are the same. An example is *artist* and its corresponding cognate, *aateisuto*, which, in Japanese, means a person who creates art. Words such as these are potentially helpful cognates.
2. *Convergent cognate* describes a case in which the meaning of the borrowed word in Japanese is narrowly restricted compared to its meaning in English. *Akusesari*, the Japanese cognate of the English *accessory*, refers only to jewellery. Other English meanings of this word are covered by different words in Japanese (*tsukimono*, *tsukatari*).
3. *Divergent cognates* occur when the loanword as used in Japanese takes on more meanings than it has in English. An example is *feminisuto*, which can refer to the English feminist, but can also mean *gentleman*.
4. *Close false friends* share a certain conceptual similarity, but have meanings that are clearly different in the two languages. The English *stove* becomes *stoubu* in Japanese and refers to a heater.
5. *Distant false friends* are false friends whose meanings are almost completely unconnected. Japanese *yankii* refers to a young man who might best be described in English as a juvenile delinquent.
6. *Japanized English* refers to neologisms created by Japanese out of English words. Semantically, these words have no recognizable counterparts in English. *Wanman* is made up from English *one* and *man* and refers to a bossy person.

Uchida and Scholfield's taxonomy provides a useful frame of reference for analyzing the difficulty of learning specific loanwords, although there can still be some ambiguity and it can be a problem deciding into which category a word should be placed. The two researchers used their taxonomy to form hypotheses about the relative difficulty or learnability of various loanwords and tested those hypotheses on their Japanese subjects. They found some support for some of their ideas and in their discussion pointed out that further work is needed to distinguish types of cognates and to compare the difficulty of different types of cognates relative to each other and also with respect to non-cognates. In particular, they suggest there is a need for a general model of difficulty that takes into account factors that go beyond semantic differences between loanwords and their original English counterparts.

Phonological difficulties with loanwords

English words that have been taken into Japanese as loanwords are pronounced differently in Japanese compared to their pronunciation in English by a native-speaker. This can make it difficult for ESL learners to recognize an English word, even if they know its loanword counterpart. There are several factors that account for this change in pronunciation (Kay, 1995). The most obvious one is probably the different phonemic systems of English and Japanese. English has phonemes that do not exist in Japanese. When an English word containing one of these phonemes is adopted into Japanese, the pro-

nunciation of the non-Japanese phoneme is changed to the closest Japanese sound that can approximate the English pronunciation. For example, there is no /v/ sound in Japanese. The /v/ in an adopted word is changed to /b/ in Japanese; English /van/ becomes Japanese /ban/.

Another phonological change that occurs when an English word is adopted into Japanese is vowel epenthesis (Morrow, 1987). Every mora in Japanese ends with either a vowel, or the consonant /n/. There are no final consonants or consonant clusters. When an English word is adopted it is phonologically changed to conform to the standard Japanese pattern. The one-syllable English word *strike* becomes the five-mora Japanese word *sutoraiki*. (There are actually two Japanese words derived from the English *strike*. *Sutoraiki* refers to a work stoppage, while *sutoraiku* is a term used in baseball.)

The most difficult to analyze phonological changes occurring in loanword adoption concern accent or prosody. Linguists do not agree on how best to describe or explain changes in syllabic accent that take place when an English word is adopted by Japanese (Kubozono, 2006). In Japanese, words fall into two classes referred to as accented and unaccented. Loanwords usually seem to take on Japanese accents, although some loanwords seem to be unaccented. Kubozono suggests that the unaccented loanwords are those that are used the most frequently; they lose their accent through frequent use. As Kubozono points out, this is an area still being researched by linguists, and no definitive answers are possible. However, from an ESL learner's or teacher's perspective, the significant point is that the accent patterns of English words change when they are adopted into Japanese. This adds another aspect of phonological difficulty for the Japanese ESL learner.

Difficulties due to orthography

A Japanese ESL learner's ability to recognize that a given English word has a loanword counterpart in L1 can be hindered due to the different means of orthographic representation employed by Japanese and English. There are two sources of confusion at work here. First, as has been noted, English words undergo phonological change when they are adopted into Japanese. The previously cited example of *strike/sutoraiki* is a case in point. In order to comply with the Japanese phonological constraint that requires each mora to end with a vowel (except in the case of final /n/) four vowels have been added to *strike*. The resulting discrepancy between the word's orthographic representation in English and the katakana rendering of the loanword in Japanese can make it very difficult for a learner to recognize the English word as one she already, in some sense, knows.

The second source of confusion for Japanese ESL learners is the English spelling system. Spelling can, of course, cause problems in several aspects of ESL learning. In the case of loanwords the problems arise from the seemingly inconsistent representation of phonemes via alphabetical symbols. An example here is the word *tough*. The Japanese loanword, *tafu*, is both semantically and phonologically very similar to the original English. In Japanese the word can mean either strong and sturdy or difficult; the main

phonological change is the addition of one final vowel (the first vowel in the word also changes pronunciation slightly to conform to Japanese). Despite these semantic and phonological similarities, in a study conducted by Van Benthuisen (2007) only 35 out of 63 participants were able to correctly identify this word. A 56% success rate may seem high, but given this word's widespread use in standard, everyday Japanese it is surprising that the percentage is not higher. It is likely that participants who failed to identify the word were confused by the letters *ou* representing /ʌ/ and *gh* representing /f/.

Test of Loanword Awareness

I conducted three short tests for exploring the three types of difficulties described above. Each test included 10 non-loanwords, 10 loanwords that could potentially be problematic for a specific reason (semantic, phonological, or orthographic), and 10 loanwords that should not cause problems. A more detailed explanation of the construction of the tests follows.

Testing instruments

All the words on the tests came from the 1001-2000 level of the GSL. I chose this level because many of the participants are either unfamiliar with or only partially familiar with these words. I based my judgment about my student/participants' level of vocabulary knowledge on their scores on TOEIC tests, my extensive experience working with them, and their scores on various versions of Nation's (2001) vocabulary levels test.

I used Daulton's (1999) list of loanwords to select loanwords for the tests and the GSL to select non-loanwords. I began by making five pools of words: non-loanwords (all the words on the GSL that do not appear on Daulton's list), semantically difficult loanwords, phonologically difficult loanwords, orthographically difficult loanwords, and loanwords that should be fairly easy to identify. I categorized words primarily according to my own intuitions and judgments as informed by the readings I have cited in the literature review; I also consulted a Japanese-English dictionary (Word Power: Fully Bilingual Dictionary, Zoshinkai Publishers, 2002) and a native-speaker of Japanese. I then randomly selected 10 words from each of the three relevant pools for each test. For example, the test for semantically difficult loanwords was comprised of 10 non-loanwords from the GSL, 10 loanwords from the semantically difficult pool, and 10 loanwords from the fairly easy pool.

Participants

The participants were 27 Japanese first- and second-year university students enrolled in an ESL study skills program. The participants had elementary English language skills. Their scores on a standardized test of English proficiency, the TOEIC, ranged from 250 – 450.

Method

Participants were asked to identify non-loanwords on the tests by marking them with an X. They identified loanwords by writing the Japanese katakana word that corresponded to the English word on the test. Participants were not told how many non-loanwords or loanwords were on the test. They were asked to work quickly, but were given as much time as necessary to complete the test.

Results

Results for the six categories of loanwords are given in Table 1. Test1, Test3, and Test5 contained loanwords that I had judged to be difficult to recognize for semantic, phonological, and orthographic reasons respectively. Test2, Test4, and Test6 contained loanwords that were judged to be less difficult to recognize.

Table-1 *Loanword test*

Item	<i>N</i>	Mean	<i>SD</i>	<i>SE Mean</i>
Test1	27	6.44	1.48	.284
Test2	27	7.55	1.28	.247
Test3	27	5.81	1.47	.283
Test4	27	6.37	1.45	.278
Test5	27	5.48	1.62	.313
Test6	27	6.85	1.13	.218

Paired-samples *t* tests were conducted to compare the loanword test results. The scores for the easy loanword items were compared with the scores for the difficult (semantically, phonologically, orthographically) items. In all three cases participants had significantly higher scores on the tests that contained the easier to recognize loanwords (Table 2.).

Table-2 *Paired-Samples t Test*

Item	<i>t</i>	<i>df</i>	Sig.	Mean diff.	<i>r</i>
Test1/Test2	-3.98	26	.000	-1.11	.379
Test3/Test4	-2.11	26	.045	-.55	.146
Test5/Test6	-4.00	26	.000	-1.37	.381

$p < .05$

Discussion

The results lend support to Uchida and Shofield's (2000) conclusion that Japanese ESL learners' difficulties with loanwords can be predicted and systematically described in terms of specific linguistic

features of the borrowed words. This in turn suggests that it might be possible to construct a taxonomy of loanwords based on difficulty. Further studies could determine the reasons for the difficulty of specific words and would provide a basis for classifying loanwords according to learnability.

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