

English Education and Polysemy

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Abstract

The process of learning and teaching two languages and cultures can be a very transformative experience. The present study explores how knowledge is constructed by learners and teachers through multiple levels of meaning. In the study, we focus particular attention on the correlation between L1 and L2 in language education. How does L1 affect the L2 learning process? How can teachers help students become aware of the polysemous meanings of words in L1, and realize that there is not always a simple one-to-one correspondence between L1 and L2 words? To try to get answers to these questions, we conducted a pilot study about the effectiveness of polysemy instruction regarding L1 and L2 errors. We gave two groups of subjects an English translation task concerning *dekiru* (a Japanese verb), with one group instructed about the polysemy of *dekiru* and the other group receiving no instruction. As a result, we found that instruction about polysemy prevented L2 errors to some degree, while some *dekiru* meanings seemed difficult for the subjects to recognize or understand. After the study, a questionnaire was given to the same subjects to examine whether they had become more conscious of the polysemy of *dekiru* (L1). The results show that awareness of polysemy had increased in both of the groups, and that to some extent, the students recognized the different meanings of *dekiru* correctly. However, they seemed to have difficulty recognizing some meanings of *dekiru* even in Japanese. Additionally, the subjects showed a subtle change in their perception of the English word “can”.

Keywords: Lexical learning process in L2, polysemy, L1 interference

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1. Research Background and Goals

The present research project began when several university instructors started to analyze the results of class evaluations. It soon became clear that most students had had difficulty expressing themselves in English regarding the reasons behind their particular evaluation of a class. We began to notice many errors or the use of “unnatural” constructions, particularly in regard to the usage of the modal auxiliary “can” and its past tense form “could”. We also began to notice several error or problem patterns. We then divided the error patterns into five distinct categories. The five basic error patterns are presented below:

1. I could learn how to write English. (overlap type)
2. I could read books of my level. (opportunity type)
3. I can become talk in public. (become type)
4. I could make friends in this class. (result type)
5. I can power point. (+noun)

To briefly explain and give an example, the first category is the “overlap type”. In an attempt to give the reason for his/her overall class evaluation, one of our students responded with example 1. above. As may be evident, perhaps a more “natural” response would be “I learned how to write English”. The student’s response is representative of quite a common error in which students felt internally compelled to directly translate the past tense verb “*dekita*” into “could”, while still using the verb “learn”. We chose to name this error pattern an “overlap” type, due to the “overlapping” use of verbs. To give one more example, in regard to answer 2., perhaps a more natural response would be “I had the opportunity to read books at (the appropriate) my level”. This reveals a situation of “opportunity”, thus the category nomenclature.

After further analyzing these errors and others, it became apparent that students were translating the Japanese word “*dekiru*” and its past tense form “*dekita*” into “can/could” in a rather automatic or direct manner. To illustrate further, the Japanese verb “*dekiru*” can be used to express ability, opportunity, and result, etc. In a like manner, the verb “can” may be used to express ability, possibility, and permission, etc. However, it became evident that students were not considering the polysemy of the two verbs, and were generally ignoring context, in their translations. Namely, they were simply equating “*dekiru*” with “can” and thus felt “compelled” to use “can” when forming English sentences in their minds.

We then began to ask several questions in order to discover the reasoning behind these patterns, and also in an attempt to develop pedagogical methods to prevent such errors in the future. Some prominent questions were: Are our students aware of polysemy?, What is the role of L1 polysemy?, What is the role of awareness of L1 polysemy in increasing L2 accuracy?, What is the role of L2 polysemy?, and finally, Can accuracy be improved through instruction about polysemy? We came to the, somewhat conjectural conclusion that awareness about L1 polysemy can help students to use more accurate or “natural” English.

2. Prior Research

Although a lengthy discussion of prior research is beyond the scope of this paper, an introduction to some of the prior research that aided us in forming our opinions is helpful in understanding our current research and subsequent line of progression. Although we are aware that Kroll and Stewart's (1994) Revised Hierarchical Model has come under some criticism in recent years, we would simply like to emphasize the following. According to the model, there are strong links between concepts and one's L1, but only weak links between concepts and one's L2. Furthermore, one's L2 is connected by strong links to one's L1. To put it another way, when learning a lexical item, L2 learners usually create a direct and strong association with a perceived equivalent in their L1. Thus, the importance of one's L1 becomes evident in the process of learning an L2. We therefore theorize that more conscious knowledge about the different meanings of L1 lexical items, in context, can help in the L2 learning process. In other words, more knowledge of L1, and also L2, polysemy could theoretically not only lead to a deeper, contextualized understanding of L2 words but also to a more "natural" or nuanced use of L2 words.

Jiang (2000, 2004), Imai (1993), and Tagashira (2007) all acknowledge the importance of one's L1 in learning an L2. At the same time, these authors emphasize the importance of teaching about differences in L1 and L2 meaning and structure. This led us to infer that if students were to become more consciously aware of the polysemy of L1 and L2 words, in context, then they would adopt a more "flexible" approach to translation and would tend to avoid simple, direct translations. They could also escape from, in Imai's words, an "extremely impoverished" understanding of L2 words, and gain a potentially richer L2 vocabulary; and the ability to use lexical items appropriately.

Regarding our prior research, in brief, we gave 58 third and fourth-year students (29 third-year and 29 fourth-year students) two translation tasks based on the five error patterns presented above. The students had to translate Japanese sentences featuring *dekiru* and *dekita* into English. The two groups (A and B), had an average TOEIC score of 470 points, with a high score of 860 points and a low score of 290 points. We tried to assure an equal level of English ability on an individual basis, otherwise the students were randomly assigned to the two groups. Group A members did receive some instruction about polysemy and more natural English usage before the second task. A few results of this research should be mentioned. Firstly, it did become clear that students did not appear to be aware of *dekiru/dekita* polysemy. Secondly, they had translated mechanically or directly. Finally, they did lack knowledge about English grammar patterns. Following this research, we decided to ask students to fill out a questionnaire mainly concerning the polysemy of *dekiru*, in order to further explore the role of L1 polysemy in English education.

3. A Questionnaire and Results

After the English translation tasks, we examined whether or not our students had become more conscious of the polysemy of *dekiru* and gave a questionnaire to the same A and B subjects. It is important to note again that Group A subjects were given instruction about *dekiru* and its polysemy, but Group B members were not. The following is an explanation about each question and results.

Question 1 is “How much were you aware of the different meanings of *dekiru/dekita* before the task?”, and the results are shown as Figure 1. It is apparent from Figure 1 that most of the subjects were aware a little (Group A 10; Group B 16) or somewhat aware (Group A 6; Group B 3) of the different meanings, which amounts to about 66% of all subjects. However, the fact cannot be ignored that at least 25% of the subjects were not aware of polysemy at all (Group A 8; Group B 7).

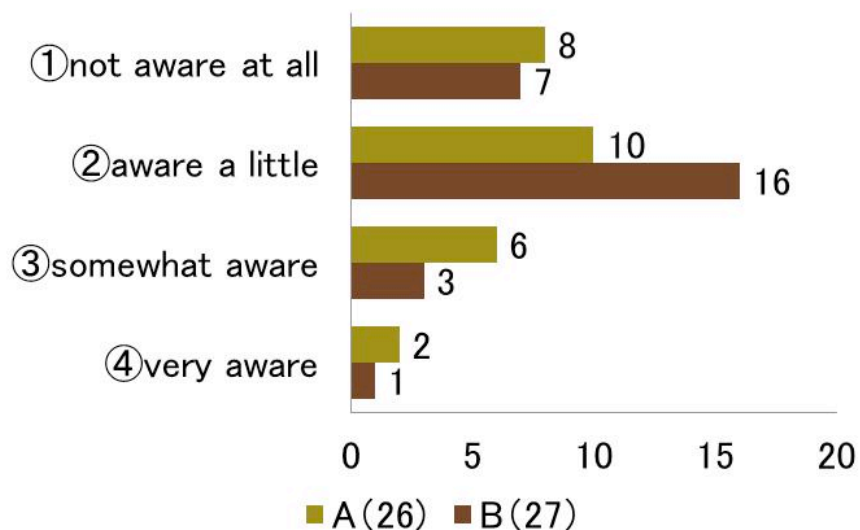


Figure 1. Subject awareness of “*dekiru/dekita*” meanings before tasks

Question 2 is “Did you pay attention to the different meanings of *dekiru/dekita* during the two translation tasks?”. The subjects were asked to answer regarding each translation task. Figure 2-1 shows the results for the first task and Figure 2-2 concerns the second task.

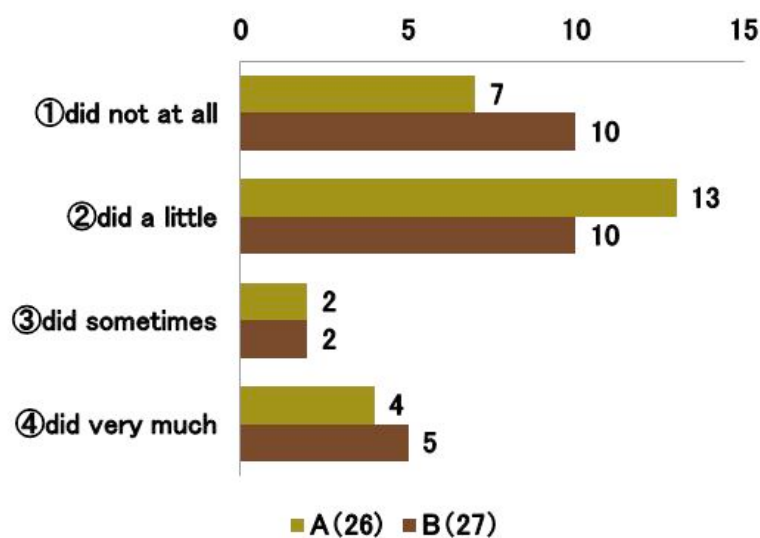


Figure 2-1. First task

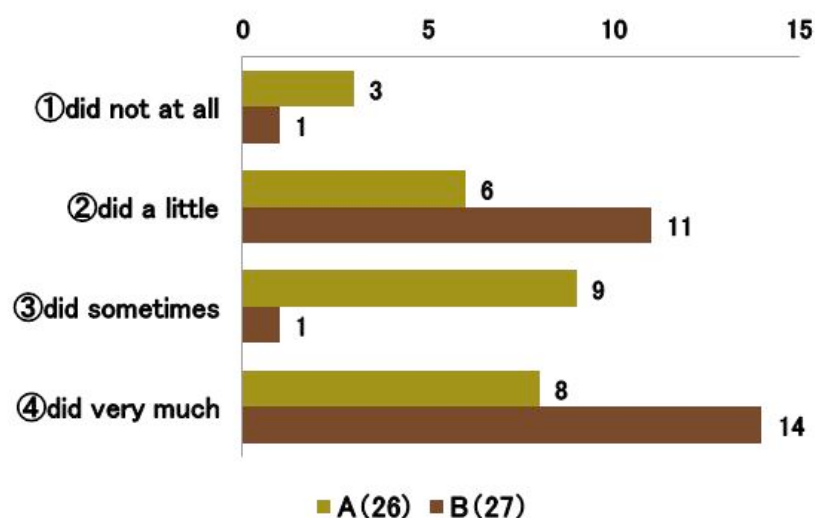


Figure 2-2. Second task

Examining Figures 2-1 and 2-2, the results show that more of the subjects paid attention to the different meanings the second time.

Moving on to Question 3, we asked about problems the subjects faced when they tried to translate “*dekiru/dekita*” sentences into English. Some of the subjects’ comments are as follows.

Group A

- Subject 1: I was uneasy about whether I understood the overall context in each sentence correctly.
- Subject 2: I was not sure whether one of the meanings of “*dekiru/dekita*” was “possibility” or “opportunity”.
- Subject 3: I only had a vague notion of the meanings of *dekiru/dekita* in Japanese.
- Subject 4: [I was uncertain about] the difference between “possibility”, “ability” and “opportunity”

Group B

- Subject 1: I was not sure whether the meaning was momentary or continuous.
- Subject 2: It was difficult to decide whether I should use the present tense (can) or the past tense (could).
- Subject 3: It was difficult to decide whether the sentences were about a past event or linked with the present [over time].

As can be seen from the comments above (subjects 1 to 4), on the whole, the subjects from Group A tended to comment on the different meanings of “*dekiru/dekita*” (L1) itself. On the other hand, as for Group B, more students expressed general concerns or doubts about Japanese-English translation or corresponding relationships, especially about tense differences. There were three additional comments similar to that made by Subject 1.

In Question 4, we asked students to choose the appropriate meaning of each underlined form of *dekiru/dekita* in sentences (1) through (5) from choices (a) to (f) below. The same answer was usable more than once.

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(1) 中国語で簡単な文を書くことができるようになった。

I have come to be able to write simple sentences in Chinese.

(2) 外国人と英語でコミュニケーションができる。

I am able to (can now) communicate with foreigners.

(3) フランスでたくさんのことを学ぶことができた。

I learned many things in France.

(4) インターンシップ中に多くの人々に会うことができた。

I had the opportunity to meet many people during my (the) internship.

(5) このキャンプで多くの友達ができる。

I made many friends at (this) camp.

[a. 可能である b. 能力がある c. 達成する d. 作る e. 生じる f. 関係がある]

(a. possibility b. ability c. to achieve/to accomplish d. to make e. chance/opportunity f. a relationship)

The answers for these sentences are correspondingly, (a) possibility for (1), (b) ability for (2), (c) to achieve/to accomplish for (3), (e) chance/opportunity for (4), and (d) to make for (5). The rate of accuracy is shown in Figure 3.

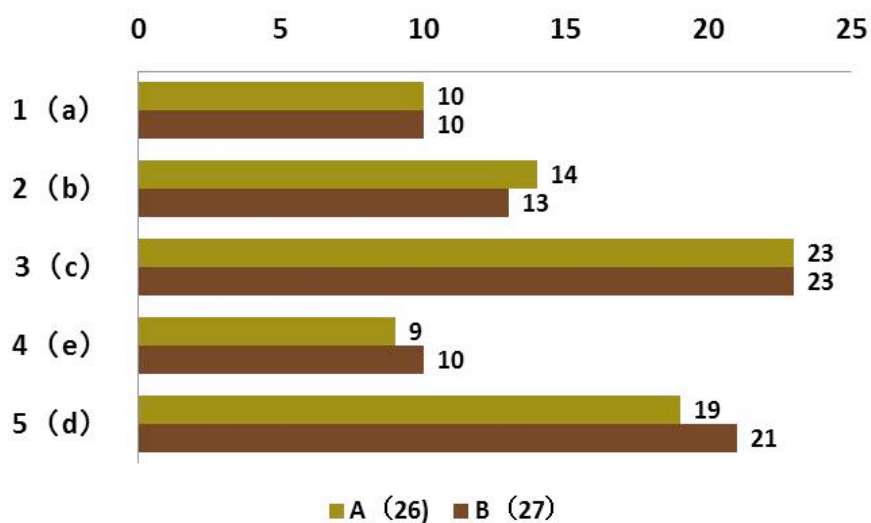


Figure 3. The rate of accuracy for “*dekiru/dekita*” questions

As for Question 5, we wanted to learn more about changes regarding L2 usage, so we asked the subjects whether the way they think and use the auxiliary verbs “can/could” changed after the two translation tasks. The results are shown in Figure 4 below.

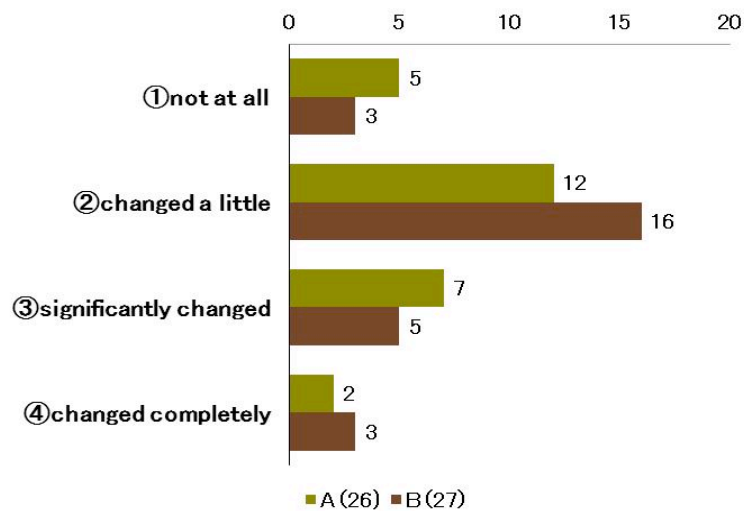


Figure 4. Changes in thinking regarding “can/could”

Except for 8 subjects who chose “not at all”, the way they think about “can/could” seems to have changed. More will be discussed later, but this appears to reflect a more heightened awareness of the existence and importance of polysemy.

For the final question, we asked the subjects who chose “changed a little”, “significantly changed” and “changed completely” to describe changes in their thinking. Most subjects gave comments similar to those below.

Group A

- Subject 1: I used to use “can” almost every time I translated “*dekiru*” into English, but have come to realize that “*dekiru*” has different meanings.
- Subject 2: I have started to think about sentence meaning carefully when making sentences. I have come to realize now that “*dekiru*” does not necessarily equal “can”.
- Subject 3: Before these translation tasks, I only thought that “*dekiru*” equaled “can”, but this questionnaire has caused me to think differently.
- Subject 4: I have stopped automatically using “can/could” to translate “*dekiru/dekita*”.

Group B

- Subject 1: I have come to think that “can” has many meanings.
- Subject 2: I realized that “*dekiru*” is not always equal to “can”, and that other verbs may be appropriate.
- Subject 3: I have come to believe that I need to think carefully about the meanings of “*dekiru/dekita*” in a sentence, and not literally translate into “can/could” since only “make”, for example, might be appropriate in some contexts.
- Subject 4: I see “*dekiru*” rather than “can” differently now (especially when I translate).

Although there were several different types of comments, many Group A subjects mentioned that they realize “*dekiru/dekita*” does not always correspond to “can/could”. Also, they seem to have learned that there are several *dekiru/dekita* meanings. On the other hand, an interesting point is that even though Group B members did not receive any instruction about *dekiru/dekita* polysemy, more than half of the subjects gave similar comments to those of Group A subjects concerning awareness of polysemy (such as subjects 2 to 4 above). At the same time, there were quite a few statements about the different meanings of “can/could”, rather than “*dekiru/dekita*” from Group B subjects (e.g. subject 1).

4. Analysis and Observations

In regard to the questionnaire results for Questions 1 to 6, we present our analysis and observations below.

Regarding Question 1, 18 out of 26 Group A students and 20 out of 27 Group B subjects self reported that they were aware of *dekiru/dekita* polysemy (answers ⊖ to ⊕) before the translation tasks. Moreover, there is almost no difference in awareness between the two groups.

However, after the two translation tasks, the number of ⊖ answers (“did not at all”) decreased in both groups for Question 2 (Group A: 7 to 3; Group B: 10 to 1). At the same time, the number of ⊕ answers (“did very much”) in both groups increased as well (Group A: 4 to 8; Group B: 5 to 14). This clearly shows more focus on the meanings of *dekiru/dekita* in both groups.

It is clear that most of the subjects focused more on *dekiru/dekita* meanings, however, according to the results of Question 3, when it comes to translating into English, the subjects seem to have had some problems. Group A subjects were given some instruction about the polysemous nature of *dekiru/dekita*, and tended to comment on the different meanings of *dekiru/dekita*. On the other hand, Group B subjects knew that there were some grammatical points to consider, but did not know which points they should be careful about. It can be conjectured that these differences may have caused Group B’s increased concern about the meanings of *dekiru/dekita*. However, the lack of specific instruction may also have caused them to pay more attention to grammatical forms.

Concerning Question 4, in general, the results show that there is almost no difference in accuracy concerning the different meanings of *dekiru/dekita* (L1) between groups A and B. Due to the limitations of this medium, just one prominent point will be dealt with here.

Among the queries in Question 4, the highest number of subjects accurately chose meaning (3) (i.e. “to achieve/accomplish”). The accuracy rate was 88% for Group A (23 out of 26) and 85% for Group B (23 out of 27). “*Dekiru*” in answer (3) corresponds to the “overlap type” among the five error types Oda, Dante & Nishitani (2014) classified. According to Nishitani & Oda (2014), the overlap-type error rate was relatively high during the first task, which was before polysemy instruction, but the error reduction rate was the highest after instruction. One reason why the subjects were so accurate in choosing meaning (3) could be that they had learned about the

overlap-type meaning of *dekiru/dekita* through instruction about L1 polysemy. Therefore, it can be said that L1 polysemy instruction had a positive impact on learning regarding at least the overlap type of *dekiru/dekita*.

For Question 5, 21 out of 26 Group A subjects chose \ominus to \oplus (changed to a greater or a lesser degree), which is 81% of the total. Furthermore, 24 out of 27 Group B subjects indicated the same answers, which represents 89% of the group members. After “*dekiru/dekita*” instruction, most subjects seemed to have recognized that the target word is polysemous, at least to some degree, and that there is no simple one-to-one correspondence between “*dekiru/dekita*” and “can/ could”. However, judging from the Question 4 results, some *dekiru/dekita* meanings, such as (1) (the “become type”) and (4) (the “opportunity type”), seem to remain difficult for Japanese learners of English to fully understand. Further detailed analyses are required in future.

Finally, overall, student comments in regard to Question 6 support the observations made above.

5. Educational and Future Implications

Although consideration of a plethora of educational implications would most likely be appropriate, we would like to present a few ideas here. Firstly, as a result of our research, it would appear that giving instruction on L1 polysemy when learning L2 words is effective for raising awareness. As most educators know, raising awareness concerning meaning and context is a very important step in understanding meaning, and in being able to develop and produce accurate or so-called natural output. We are, however, left with the question as to whether L1 accuracy is improved or not as a result of heightened awareness of L1 polysemy, and potentially, as a result of more L2 instruction. Although there were some indications of improved L2 accuracy, particularly among students with higher-level English ability in Group A, we cannot yet conclude that accuracy can be improved by more awareness of polysemy and instruction about commonly used English forms. Answers can only be found after more extensive research. We do believe, however, that more awareness about polysemy and more specific grammar and/or corresponding form instruction would be valuable in increasing accuracy, and we intend to test this hypothesis in future research. We also realize that there were too few students involved in our research thus far, and intend to increase the number of subjects in the future. Furthermore, we intend to explore the role of awareness raising and instruction concerning L2 polysemy and its effects on education in the future as well. Finally, we must state here that after our research was concluded, we discovered that the verb *dekita* (past tense) can be used to express more concepts than we had previously realized. In future research, we intend to separate the present tense verb *dekiru* from the past tense *dekita*.

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