Learning of English Phrasal Verbs with Audiovisual Aids

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Abstract
This study attempts to investigate whether computer-assisted learning is effective enough for Japanese learners to acquire English phrasal verbs. For many years English phrasal verbs have been considered idiomatic and arbitrary; therefore, learners of English have to memorize them mechanically. In line with studies of English prepositions by cognitive linguists (CL), several researchers have analyzed English phrasal verbs systematically. However, empirical studies in the classroom setting are very few (see Dirven 2001; Kurtyka 2001; Lindner 1983; Rydzka-Ostyn 2003; and Condon 2008). Moreover, no previous CL studies have examined the effectiveness of learning English phrasal verbs with audiovisual aids. With the help of moving pictures and sound stimulus in the classroom setting, we will show that the combined images of frequently used verbs ('go, come, take, bring, put, and break') and particles ('in and out') motivate Japanese university students to acquire English phrasal verbs directly without their L1, Japanese.

From April to July 2012, we conducted experimental lessons with Japanese college students. First, we measured their proficiency of English grammar and vocabulary with a standardized English test. Then we divided them into two groups: experimental and control. We held eight 30 minute classes for each group. For the experimental group students, following each introductory session with moving pictures, the next class was spent studying assigned printed material of phrasal verbs. Unlike other previous work, we utilized the combination of visual images of verbs and particles, and sound input of examples with the target phrasal verbs on the screen. As far as the control group is concerned, we spent an equal amount of time with the reading materials containing the same English phrasal verbs. Before and after those model lessons, we conducted pre- and post-tests, each of which included twenty sentences of target phrasal verbs and ten filler sentences on the subjects. After all of the lessons above, we compared the scores of the post-pre tests for both groups and the effectiveness of our approach was statistically proved. Next, we analyzed the performance score of each experimental-group student in terms of their English proficiency levels, finding that the advanced level and the basic level students performed better than the intermediate level students. In addition, we compared students’ errors on their homework with learners’ corpus data and categorized them into four tendencies.

In conclusion, we demonstrated that the less proficient students might acquire the basic meaning of the targeted phrasal verbs with their clear visual images and sound stimulus, and that the more proficient students could acquire a deeper understanding of the metaphorical meanings of those phrasal verbs.

1. Purpose of This Study
The twofold purpose of our paper is to prove the effectiveness of systematic teaching of phrasal verbs with the help of visual images, and then to clarify the characteristics in the acquisition of English phrasal verbs by Japanese university students. Based on this notion, several cognitive linguistics (CL) researchers, who put a great emphasis on the connection between the linguistic forms and their meanings, came to analyze English phrasal verbs systematically (Boers and Lindstromberg (2006) [1], Kurtyka (2001) [2], Lindner 1983 [3], and Rudzka-Ostyn (2003) [4]). Lindner (1983) [3] advocates that the notion of ‘container’ is essential to understand the concept of ‘in’ and ‘out.’ Under the CL style classroom setting, Rudzka-Ostyn (2003) [4] taught English phrasal verbs to Polish middle school students. Applying the cognitive linguistics point of view to English pedagogy, we attempt to prove that the exposure to visual images of phrasal verbs motivates L2 learners to acquire these lexical items, which are important in English pedagogy and difficult to learn (Kurtyka (2001) [2]). We will show the results of our experimental lessons of English phrasal verbs to Japanese college students by means of computer-assisted lessons using several visual images and sound stimulus. Next, we will investigate the correlation between the learners’ proficiency levels and their performances, analyze students’ homework errors, and compare the results with widely used spoken corpus data of Japanese learners of English (see Notes 2).
2. Methodologies

2.1 Experimental Design
As the Table 1 below shows, we conducted our experimental lessons from April to July 2012. 47 Japanese college students participated in our study. The first 30 minutes of each 90 minute lesson was spent for the phrasal verb learning once a week. First, we measured the students’ English levels with the TOEIC Test Part 5, a standardized test commonly used to assess English grammar and vocabulary knowledge. Then we divided the participants into a control group (CP) and an experimental group (EP).

(Table 1: Details of our experimental lessons)

<table>
<thead>
<tr>
<th></th>
<th>Number of subjects</th>
<th>Number of lessons</th>
<th>Teaching materials</th>
<th>Homework</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP</td>
<td>24</td>
<td>8</td>
<td>Illustrations of targeted phrasal verbs with audio-visual aids</td>
<td>Translation of targeted phrasal verbs</td>
</tr>
<tr>
<td>CP</td>
<td>23</td>
<td>8</td>
<td>reading materials containing the same targeted phrasal verbs</td>
<td>Translation of targeted phrasal verbs</td>
</tr>
</tbody>
</table>

Following Kordys[5]'s sets of ‘dichotomy’ with opposite spatial orientations, we presented in-out, go-come, and take-bring as sets of dichotomy. Our experimental lessons dealt with particles ‘in’ and ‘out’ in combination with frequently used verbs ‘go,’ ‘come,’ ‘take,’ ‘bring,’ ‘break,’ and ‘put,’ which are commonly used and have many different meanings: literal senses and figurative senses. Based on the ‘container’ concept of particle ‘in’ as Lindner[3] advocates, we showed our students various metaphorical senses of these particles.

2.2 Results
In order to examine the effectiveness of our teaching methodologies statistically, we set up the following hypotheses. The null hypothesis (1) stipulates that the mean of the experimental group is the same as that of the control group; whereas the experimental hypothesis (2) assumes that the two samples are not the same. In the result of t-test, t statistic is 1.86, namely, $H_0$ is rejected within the significant level of 0.05, proving that the experimental students outperformed the control group peers and the difference was statistically significant.

(1) The null hypothesis ($H_0$): $\mu_{\text{experimental}} = \mu_{\text{control}}$

(2) The experimental hypothesis ($H_1$): $\mu_{\text{experimental}} \neq \mu_{\text{control}}$

We have also compared the correlation between the students’ English proficiency and the performance results. The students’ proficiency is determined based on the TOEIC style test results. We divided the students into three levels: basic-level, intermediate-level, and advanced-level students, who obtained scores less than 20/40, 21-29/40, and 30-39/40 respectively. According to the mean scores of post-test minus pre-test, the experimental group students outperformed in all levels. On the other hand, in comparison to the other groups, the performance of the intermediate students was not as good: 4.833 (basic level), 3.067 (intermediate level), and 5.333 (advanced level). Although the average TOEIC scores of the basic-level (15.667/40) and the advanced level students (32.333/40) in the experimental group were lower than the corresponding control group students, 17.667/40 (basic level) and 33.000/40 (advanced level), the results of the post-test minus pre-test were far better than the control group students: 1.889 (basic level) and 1.667 (advanced level) in the control group.

3. Error analysis
We attempted to investigate why the subject students made mistakes in their homework analyzing their answers in detail. We observed four tendencies:
1. They are likely to confuse stative verbs with active verbs semantically, as (3a) shows.
2. They are inclined to rely the targeted phrasal verbs on the image of the verbs contained in them alone, as (3b) illustrates.

3. Conversely, they are apt to interpret the targeted phrasal verbs, referring to the particles of the phrasal verbs, as in (3c).

4. They seem to take the targeted phrasal verbs as others, as shown in (3d).

(3)

a. Confusion between stative and active verbs
   (3a-1) She is in despair because of her father’s death. → translated as ‘get in despair.’
   (3a-2) The light in John’s bedroom goes out at 10 p.m. → translated as ‘extinguish.’

b. Interpretation only with the images of verbs of the targeted phrasal verbs
   (3b-1) The new book came out last Monday. → translated as ‘arrive.’
   (3b-2) The government has brought in a law to increase tax. → translated as ‘enact.’

c. Interpretation only with the images of particles of the targeted phrasal verbs
   (3c-1) The war broke out. → translated as ‘terminated.’
   (3c-2) This class takes in both Eastern and Western histories. → translated as ‘contains.’

d. Misunderstanding with other phrasal verbs
   (3d-1) The school put in a new internet system last year. → misunderstood as ‘put on.’ (= add)
   (3d-2) I hope our great service will bring in a lot of customers. → misunderstood as ‘bring out.’ (= create)

One possible interpretation of (3a) errors comes from the nature of Japanese verbs, which rarely have separate distinguished forms between stative and active usages. In order to express this difference, the Japanese language has inflectional morphemes.

In order to compare our results with other Japanese learners of English, with respect to English phrasal verbs from NICT JLE Corpus[6], we collected the errors which were made by the learners of English as a second language during interview tests. As in the case above, the interviewees tend to interpret the targeted phrasal verbs based on the images of the verbs of the phrasal verbs alone (see (4a)). Likewise, they are apt to interpret the targeted phrasal verbs, referring to the particle included in the phrasal verbs (see (4b)). Unlike the case of error analysis of (4), they did not confuse the stative verbs with active ones. They also did not confuse the targeted phrasal verbs with other ones.

(4)

a. Interpretation only with the images of verbs of the targeted phrasal verbs
   (4a-1) <go in that university → enter the university>
   It is easy to go to XXX University. Er so my friends go in ah that university. But er I want to go to er this er mm XXX University. (file00456)
   (4a-2) <broke out → broke up (= explode)>
   The movie was exciting story, and .... the plane was broke out in the sky. (file00829)
   (4a-3) <broke out → broke down>
   I was on my way to my garage. But ur when I turned the when I turned the the engine of my car, it didn't urm it didn't go on. The car broke out. (file00676)

b. Interpretation only with the images of particles of the targeted phrasal verbs
   (4b-1) <come out → go out> (file01267)
   They didn't really come out during the day. But they seemed to stay up late at night.
   (4b-2) <go out of the zoo → come out of the zoo>
   Urr so (cough) uhmm and after a ... after... so after they urr they go out of zoo, urr he said, urr “Shall we go to see our old school?” (file00079)

The sentence in (4a-1) is a very interesting case. The speaker utilizes ‘go in’ only when he or she wants to emphasize ‘enter’ a university. As for (4b) sentences, we interpreted the speakers’ intentions based on the contexts. This kind of confusion stems from two Japanese verbs translated as ‘go’ and ‘come.’ However, in some cases, the intended directions are opposite between the two languages.

4. Conclusion

We have shown that moving pictures and sound stimuli which represent both the core and extended meanings of each particle, verb, and phrasal verb, will be effective in teaching English phrasal verbs to Japanese college students. The novice and the advanced learners will especially benefit from this approach for the following reasons: Our audio-visual aids attract the basic-level students because of their clear and interesting images, and the metaphorical extensions of each meaning fascinate the advanced learners. Students’ errors indicate that the clearer they grasp the integrated image, the fewer the number of their errors. Moreover, the structural differences between English and Japanese affect the acquisition of English phrasal verbs. We believe that the methodology we advocate is also
beneficial in terms of L1 transfer issues. In our experiment, since we limited our use of L1, Japanese, students in both groups were able to learn several English phrasal verbs directly in English without the interference of their L1.

Notes
1. This study is supported by JSPS (Grant No. C23520713). The primary investigator is Chikako Takahashi.
2. NICT JLE Corpus stands for The National Institute of Information and Communication Technology Japanese Learner English Corpus. The data were collected during the Standard Speaking Test.

Appendix
Major examples of our moving pictures.
References


