Achievement Levels of Prepositions for High School Students and Evaluation

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Abstract

A large number of high school students seem to have difficulty with prepositions. Does the difficulty vary among prepositions in their basic use? If so, what seems to be the cause for it? Can we properly evaluate students’ comprehension of prepositions through tests?

The purpose of this paper is to answer these questions in an experimental study of different prepositions using three kinds of tests. Through the analysis of the data acquired, it was found that there were some differences among the prepositions in the degree of difficulty, which was caused not only by the difficulty of the prepositions themselves but by the linkage with other words or some grammatical elements such as sentence patterns or structures. It was also found that the results of the tests changed depending on the kind of tests, which led to some thoughts on test making.

1. Introduction

At high schools, students learn the use of various prepositions through reading, writing, listening, or speaking. Those prepositions are taught grammatically and semantically—often in connection with verbs or nouns—in the school grammar. Despite that, a large number of students seem to have difficulty with prepositions; however, the difficulty is not sometimes presented clearly through some tests. This may lead us to misjudge the students’ comprehension of prepositions.

Learning prepositions would not be so difficult if properly taught, because Japanese have equivalents called renyou kakujoshi, which can be translated as referent particles in English.

In part of the paper which this author wrote in 1995, an argument was made about the achievement level in the basic use of prepositions putting stress not only on the basic use of
different prepositions but on the influence of the Japanese language upon them.

After completing this research, other ways to test the comprehension of prepositions was thought out with consideration paid to how the results would change depending on the tests. The next logical step was making further experiments using the same prepositions. In this paper, arguments are made on the results of the three kinds of tests which elicit students' comprehension about the basic use of prepositions.

2. Method

2.1 Subjects

The subjects were the same 114 students used in the previous study: 40 first-year students of an advanced class and 38 first-year students and 36 third-year students of regular classes, in general courses at Takamatsu First High School. They are abbreviated as 1-A, 1-R, 3-R, respectively in this paper.

An advanced class was composed of the students who were selected by the school in terms of general scholastic achievement.

The difference in the English proficiency between the 1-A class and the 1-R class was an average of about 8 points out of 100 per person in the four tests given within the period of this study—two academic achievement tests, one midterm examination, and one final examination.

2.2. Materials

Eight prepositions were selected. Three tests (see Appendix A) dealing with those prepositions were prepared and given to the subjects; each test was composed of eight questions containing a respective preposition which was to be tested.

In Test 1, which was a Japanese-English translation test, each of the entire Japanese sentences was asked to be translated into English.

In Test 2, which was given after the first one had been completed, the same Japanese sentences used in Test 1 were repeated; but this time, the part of each Japanese sentence intended to be translated into an appropriate preposition was underlined in order to be answered in English.

Finally, Test 3, which is often used by Japanese teachers to easily know about students'
proficiency, was given to the subjects. In the test, each English sentence—the translation of the corresponding Japanese sentence used in both Test 1 and Test 2—had a blank in place of a preposition; and the subjects were asked to choose an appropriate preposition from the list of nine prepositions referring to the Japanese phrase attached to each sentence.

3. Results and Discussion

Percentages of the correct answers to the questions testing prepositions in three types of tests are shown in Tables 1 to 3. The cases in which prepositions were not used in Test 1 because of different sentence structures are excluded from the percentages in the tables.

**Table 1.** The 1-A class: percentage classified by test covering eight prepositions

<table>
<thead>
<tr>
<th>Test</th>
<th>preposition</th>
<th>on</th>
<th>to</th>
<th>in</th>
<th>at</th>
<th>for</th>
<th>with</th>
<th>by</th>
<th>against</th>
<th>average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test 1</td>
<td></td>
<td>95</td>
<td>88</td>
<td>88</td>
<td>36</td>
<td>55</td>
<td>45</td>
<td>75</td>
<td>5</td>
<td>61</td>
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<tr>
<td>Test 2</td>
<td></td>
<td>98</td>
<td>93</td>
<td>95</td>
<td>90</td>
<td>78</td>
<td>65</td>
<td>75</td>
<td>3</td>
<td>75</td>
</tr>
<tr>
<td>Test 3</td>
<td></td>
<td>100</td>
<td>95</td>
<td>88</td>
<td>98</td>
<td>98</td>
<td>95</td>
<td>100</td>
<td>95</td>
<td>96</td>
</tr>
</tbody>
</table>

**Table 2.** The 1-R class: percentage classified by test covering eight prepositions

<table>
<thead>
<tr>
<th>Test</th>
<th>preposition</th>
<th>on</th>
<th>to</th>
<th>in</th>
<th>at</th>
<th>for</th>
<th>with</th>
<th>by</th>
<th>against</th>
<th>average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test 1</td>
<td></td>
<td>93</td>
<td>89</td>
<td>92</td>
<td>37</td>
<td>40</td>
<td>16</td>
<td>42</td>
<td>0</td>
<td>51</td>
</tr>
<tr>
<td>Test 2</td>
<td></td>
<td>97</td>
<td>74</td>
<td>95</td>
<td>63</td>
<td>66</td>
<td>42</td>
<td>71</td>
<td>3</td>
<td>64</td>
</tr>
<tr>
<td>Test 3</td>
<td></td>
<td>100</td>
<td>89</td>
<td>97</td>
<td>87</td>
<td>79</td>
<td>84</td>
<td>89</td>
<td>66</td>
<td>86</td>
</tr>
</tbody>
</table>

**Table 3.** The 3-R class: percentage classified by test covering eight prepositions

<table>
<thead>
<tr>
<th>Test</th>
<th>preposition</th>
<th>on</th>
<th>to</th>
<th>in</th>
<th>at</th>
<th>for</th>
<th>with</th>
<th>by</th>
<th>against</th>
<th>average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test 1</td>
<td></td>
<td>78</td>
<td>89</td>
<td>92</td>
<td>55</td>
<td>55</td>
<td>8</td>
<td>44</td>
<td>0</td>
<td>53</td>
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<tr>
<td>Test 2</td>
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<td>97</td>
<td>67</td>
<td>92</td>
<td>69</td>
<td>69</td>
<td>61</td>
<td>64</td>
<td>3</td>
<td>65</td>
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<tr>
<td>Test 3</td>
<td></td>
<td>92</td>
<td>89</td>
<td>86</td>
<td>83</td>
<td>89</td>
<td>81</td>
<td>83</td>
<td>47</td>
<td>81</td>
</tr>
</tbody>
</table>
In Test 1, each class has large percentages—almost all over 80 percent—for on, to, and in, probably because their implications or semantic categories were not difficult and also they were not used in close connection with verbs or in slightly difficult sentence patterns. This will be explained in more detail later in the argument of the other prepositions.

It is worth noting that, even in Test 1, the 1-A class surpasses the other two classes by 29 percentage points or more for with and by. In addition, 5 percent of the 1-A class correctly uses against compared to 0 percent for the other classes.

We can create Figure 1 from the average percentages for the three tests in each class presented in Tables 1 to 3.

Figure 1. Average percentage for the three classes in each test

The figure indicates that the 1-A class had the best comprehension of the prepositions in all the tests, followed by the I-R class and the 3-R class with almost the same percentages.

This makes it clear that the achievement level of the prepositions coincided with the general scholastic ability of English, but not with the advancement of grades.

Table 4 was created from Tables 1 to 3 in order to present the percentages classified by test covering eight prepositions for the three classes.
Table 4. Percentage classified by test covering eight prepositions for the three classes

<table>
<thead>
<tr>
<th>test</th>
<th>on</th>
<th>to</th>
<th>in</th>
<th>at</th>
<th>for</th>
<th>with</th>
<th>by</th>
<th>against</th>
<th>average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test 1</td>
<td>89</td>
<td>89</td>
<td>91</td>
<td>43</td>
<td>50</td>
<td>23</td>
<td>54</td>
<td>2</td>
<td>55</td>
</tr>
<tr>
<td>Test 2</td>
<td>97</td>
<td>78</td>
<td>94</td>
<td>74</td>
<td>71</td>
<td>56</td>
<td>70</td>
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<td>68</td>
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<td>97</td>
<td>91</td>
<td>90</td>
<td>89</td>
<td>89</td>
<td>87</td>
<td>91</td>
<td>69</td>
<td>88</td>
</tr>
</tbody>
</table>

In Test 1, the subjects seem to have had difficulty with at and with, which was probably caused by the poor understanding of their close connection with the verbs, arrive and agree respectively rather than by the difficulty level of both of the prepositions. Against has an extremely small percentage, which is probably attributed to the difficulty of the preposition as well as its combined use with a verb, hit. For and by attained scores of 50 and 54 percent respectively. This is higher than the percentages for the above-mentioned three prepositions but not high enough. This result is probably attributed to its use in a slightly difficult sentence pattern for the former preposition, and a passive structure for the latter.

In Test 2, low percentages for at and with, have increased greatly; but against does not rapidly increase until the next test.

In Test 3, the percentages for all the prepositions are as high as 80 percent and above except against, whose percentage has increased surprisingly compared with the results in Test 1 or Test 2 but is still far behind those of the others.

Through the tests, many prepositions—except on, to, and in which had already had high percentages in Test 1—increased percentages; the percentages for those three prepositions went up, down, or stayed the same depending on the prepositions and the tests.

It is also clear that the prepositions varied in percentage in each test. Variation among the prepositions was seen highest in Test 1 and lowest in Test 3.

4. Conclusion

The difficulty of comprehending prepositions seems to exist not only in the prepositions themselves but also when they are used in connection with verbs, or in unfamiliar sentence patterns or structures.
In the Japanese-English translation test, the prepositions such as *on, to,* and *in* were most often understood by the subjects, while *against* was least understood.

The data of the subjects acquired through the tests showed that the comprehension of the prepositions was not related to the advancement of grades but to the general scholastic ability of English. In this experiment, the lower-grade class with advanced learning gained the best comprehension among the three classes in any test.

The difficulty with prepositions seems to decrease when they are stressed, as seen in Test 1; and it seems to decrease even more when they are presented in a list for selection, as seen in Test 3.

Subjects' achievement levels of the prepositions varied depending on which test they took. Achievement was seen lowest in Test 1 and highest in Test 3. From this fact we may deduce that different evaluations—sometimes appropriate and sometimes not—for the students' comprehension of their learning materials may be given depending on the kind of tests they take.

In a sense, all the evaluations are correct in that prepositions can be used in many ways and under various circumstances, where the whole knowledge about each preposition is not necessarily needed. To take listening or reading for example, prepositions are already presented in these disciplines as they are and often used with the stress on them by the accent, in the context, or by some other elements.

But which evaluation shows the students' most adequate comprehension of prepositions in its actual sense as part of a natural language? Among the three tests experimented in this paper, the answer will surely be the one given in the Japanese-English translation test although the test was not designed to test only the proficiency in prepositions.

5. Thoughts on Subsequent Guidance

From the results of this study, some guidance for the subsequent teaching of prepositions should be considered.

First, the semantic category of each preposition must be taught sufficiently. Secondly, the strong linkage with verbs or nouns, and sentence patterns or structures in relation to the use of prepositions must be taught properly.

As for testing achievement levels of prepositions, various kinds of tests can be made and
used. Any test, if properly used, might serve its purpose in some way or other in evaluating students’ comprehension. However, when a fill-in-the-blank test is used, it would be better if the test did not provide choices for the answers. But in case the test must be multiple-choice for some reason such as time-sparing purpose for grading, it would be recommended that the choices should be larger than the correct answers in number—the larger the better—so that the students’ comprehension or proficiency in prepositions could be more properly evaluated.

References

小篠敏明（編）『英語の誤答分析』大修館 1994.
高橋潔・田部滋（編）『基礎からの新総合英語』数研出版 1987.

Appendix A. English Composition Tests for Prepositions

Test 1: ｛和文英訳をする｝

1. 両手をテーブルに置きなさい。
2. 私は、彼の家に行かないといけない。
3. 海に多くの魚がいる。
4. 私達が待っていた列車が駅に着いた。(arriveを使って)
5. 彼に本を買った。(本、彼という順に書け)
6. ある意味では、君に同意する。
7. 子供が車にはねられた。
8. 夜になると、虫が窓ガラスに当たる。(前置詞を使え)
Test 2: [下線部に相当する英語の前置詞を書く]

1. 両手をテーブルに置きなさい。
2. 私は、彼の家に行かないといけない。
3. 海に多くの魚がいる。
4. 私達が待っていた列車が駅についた。(arriveを使え)
5. 彼に本を買った。(本，彼という順に書け)
6. ある意味では，君に同意する。
7. 子供が車にはねられた。
8. 夜になると，虫が窓ガラスに当たる。(前置詞を使え)

Test 3: [選択肢から選んで入れる]

1. Put your hands ( ) the table. [テーブルに置く]
2. I must go ( ) his house. [彼の家に行かねば]
3. There are lots of fish ( ) the sea. [海に多くの魚が]
4. The train (which) we have been waiting for arrived ( ) the station. [駅に着いた]
5. I bought a book ( ) him. [彼に本を買った]
6. I agree ( ) you in a sense. [君に同意する]
7. A child got hit ( ) a car. [車にひかれた]
8. When night comes, bugs hit ( ) the windowpane/windowpanes. [虫が窓にあたった]

I. against Ⅱ. at Ⅲ. by Ⅳ. for Ⅴ. on Ⅵ. to Ⅶ. in
Ⅷ. into Ⅸ. with