The English vocabulary level of Japanese junior high school students.

Rachael Ruegg
Kanda University of International Studies

Reference data:
Ruegg, R. (2007). The English vocabulary level of Japanese junior high school students.
In K. Bradford Watts, T. Muller, & M. Swanson (Eds.), *JALT2007 Conference Proceedings*. Tokyo: JALT.

In considering vocabulary knowledge, there are three main aspects which must be taken into account. One is the number of words known, another is the depth of knowledge of these words and the third is the usefulness of the known words. The best gauge of usefulness for vocabulary is frequency of occurrence in the language. In this research Nation's Vocabulary Levels Test (2004) was used in different forms to gain insight into the vocabulary knowledge of junior high school students. It was found that while the number of words known by junior high school students is sufficient, the depth of knowledge is insufficient and many of the words known are low frequency words and thus not very useful for communication. The research challenges the long-held perception of vocabulary translation as a valid method of vocabulary learning and goes on to consider how a deeper level of vocabulary learning could occur.

　語彙知識について、考えられなければならない主な特徴が三つあります。一つ目は知っている単語の数、二つ目は単語の知識の深さ、そして三つ目は知っている単語の実用性です。語彙の実用性の一番良い判断基準は、言語の中で使用される頻度です。この研究では、中学生の語彙知識を洞察するために、Nation's Vocabulary Levels Test（ネイションズ　ボキャブラリー　レベルズ　テスト）が様々な形で使用されています。そこで分かったことは、中学生が知っている単語数が十分であること、知識の深さが十分でないこと、そして知っている単語の多くは使用頻度が低くコミュニケーションをするにはあまり便利ではないことです。長年、語彙習得の有効な方法として単語を翻訳することが正しいと思われていますが、本当にそれが正しいのでしょうか。この研究では、より深いレベルでの言語学習がどのように行われるのかを考察していきます。

The present research was done to ascertain the English vocabulary level of Japanese junior high school students after two years of English instruction at school. In formulating questions to test vocabulary knowledge, it is necessary to use defining words which are more frequent than the target word. The 1,000-word level deals with the most frequent words in the English language so it is difficult to find words which can be used to define target words at the 1,000-word level. Because of this problem, the test at the 1,000-word level takes a different form from the tests at the other levels. I wanted to see how this different form would affect the results.

Methodology

Three different versions of the Vocabulary Levels Test were used at the 1,000-word level. Two of the versions were English sentences with a true or false answer involving comprehension (see appendix). The other one contained Japanese words and English words to be matched, involving translation from English to Japanese. These three different versions were used to compare how the different question forms would affect the students' ability to answer correctly.

English and Japanese versions of the test were given out in equal proportions; however, unforeseen circumstances resulted in twelve usable samples of test A and nine usable samples of test B of the English version, a total of just twenty-one usable samples. The Japanese version on the other hand yielded thirty-four usable samples. The second group of students were stopped by their teachers before all of them had had a chance to complete the test. Any test that had been completed was considered to be a usable sample. Because the English version took longer for the students to complete, many who had been given the English version had not finished whereas most of those with the Japanese version had completed it. In total fifty-five usable samples were generated.

The English instruction

The students came from two different private junior high schools in central Japan. None of the students tested attend any extra English lessons outside of their junior high school. The students were thirteen and fourteen years old and were tested one month prior to the end of their grade two year. The students in both of the schools had been studying English for twenty-two months. They all had four-forty-five minute lessons per week and thirty-eight weeks of tuition per year. Both schools used New Horizon 1 & 2. All of the teachers reported that they had trouble getting through the textbook in thirty-eight weeks so they had little time to include any other resources in their lessons. Prior to giving the test, the vocabulary content of the current editions of New Horizon 1 & 2 was analysed. New Horizon 1, studied in grade one contains three hundred and twelve types excluding proper nouns and cardinal numbers. Two hundred and twelve of these words are in the most frequent 1,000 words of English, fifty-two of them are in the second most frequent 1,000 words of English and forty-eight of them are moderate or low frequency words. New Horizon 2, studied in grade two contains four hundred and sixty-five types excluding proper nouns and cardinal numbers. Two hundred and eighty-nine of them are in the most frequent 1,000 words of English, fifty of them are in the second most frequent 1,000 words of English and one hundred and twenty-six are moderate or low frequency words. The combined vocabulary of the two books contains seven hundred and four types. Of these, four hundred and thirty-five are in the most frequent 1,000 words of English, one hundred and one are in the second most frequent 1,000 words of English and one hundred and sixty-eight are moderate or low frequency words.

Expectations

According to the analysis of the textbooks, in the first two years of junior high school students learn four hundred and thirty-five words from the most frequent 1,000 words of

English (43.5%). Although the students have not studied English outside of school, it is reasonable to believe that they sometimes come across English in their lives. It could be on the Internet, on TV, in movies and comic books etc. Furthermore, because of the nature of the Vocabulary Levels Tests it is possible for students to guess the answer. Certainly none of the students left any gaps in the Japanese version of the test although they surely did not know all of the words. In the English versions, the instructions encourage students to put an X if they don't understand the sentence in question. Of the twenty-one students who took the English version of the test, only six (28.6%) used any X`s at all. It is reasonable to believe that the others simply guessed some of their answers, as they certainly did not know all of the words. It seems reasonable to expect that a student could gain correct answers on 80% of the words that they have learnt at school and on 50% of the others through guessing.

Results

As expected, the results of the test show that none of the students knew all of the words tested. The range of scores was 7 to 29 out of 30. The mean score for the test was 21 words out of 30. That means that on average the students know 700 of the most frequent 1,000 words of English. However, there was a significant difference between the different versions of the test. The mean score for the Japanese version was 23.85 words out of 30. This shows that the students know 795 of the most frequent 1,000 words of English. The median score was 24 (800 words) with a standard deviation of 1.09. On the other hand, the mean score for the two English versions of the test was 16.38

(only 546 words) with a standard deviation of 4.57. There is quite a wide range of scores for the English version of the test (From 7 to 26 out of 30) however there is no significant difference between the two different forms of the English version of the test. It can be seen from the statistics that the score on the Japanese version of the test is probably representative of the vocabulary known by the students. While the wide variation of scores for the English versions shows that there was some kind of problem for these students with the test form itself.

Only one word was tested in all three versions of the test. The word was *night*. In the English versions of the test, 12 people chose the correct answer. In the Japanese version of the test, all 34 people chose the correct answer. Furthermore, analysis of the difference between the two different English versions of the test found that all 12 people who took version A chose the correct answer and all 9 people who took version B chose the wrong answer. This poses a problem for the reliability of the English version of the test.

To get a more thorough picture of the ability of the test to distinguish which words the students knew I found which words from the test appeared in New Horizon textbooks 1 or 2 and compared them with the other words that were tested but didn't appear in New Horizon 1 or 2. It is reasonable to expect that the students should be more able to answer correctly about the words that are in their school textbook than about those which are not. In the Japanese version of the test, thirteen of the words directly tested appear in New Horizon 1 or 2. The mean score for these words was 11.88 out of 13 (91.4%) and the median was 12 out of 13. There was a very narrow range of 10 to 13 out of 13. In contrast,

for the words which do not appear in New Horizon 1 or 2, the mean score was 11.97 out of 17 (70.4%) and the median was 12 out of 17. The range was much wider: 6 to 16 out of 17. In the English versions of the test 16 of the words appear in New Horizon 1 or 2. In English version A the mean score for words appearing in New Horizon 1 or 2 was 10.33 out of 16 (64.56%) and the median was 10. The range was very wide: 6 to 14 out of 16. For the other 14 words, the mean score was 6.08 (43.43%) and the median was 6. In English version B the mean score for words appearing in New Horizon 1 or 2 was 9.56 out of 16 (59.75%) and the median was 10. For the other 14 words the mean score was 6.78 (48.43%) and the median was 7.

Discussion

The actual test results were compared with the expectation that students would get 80% of the answers correct on words that they have learnt at school and 50% of the others correct through guessing. The students who did the Japanese version of the test did much better than expected, getting on average 91.4% of the answers correct on words that they have learnt at school and 70.4% of the other answers correct. Even taking into account that they have learnt 28 out of the total 60 words appearing in this test, this figure shows that the students do know more vocabulary than they have learnt at school. The students who did the English versions of the test didn't do as well as expected, getting on average 62.5% of the answers correct on the words they have learnt at school and 45.6% of the other answers correct. The latter figure corresponds to the expectation that the students just guessed any words they didn't know and the figure itself is not too different from the 50% figure expected. However, the former figure of only 62.5% shows cause for concern.

From these statistics we can see an overall trend. In the Japanese version of the test the students were able to show which words they knew, getting over 90% of words they have learnt at school correct. They were also more easily able to guess the other words (if unknown) by a process of elimination. Although only 30 words were directly tested, altogether 60 words appeared in the test. Thirteen of the directly tested words appear in New Horizon 1 or 2 (43.33%). However, out of all the words appearing in the test, 28 appear in New Horizon 1 or 2 (46.67%). That means that the students should have managed to eliminate these as possible answers when trying to find an answer that they haven't learnt at school. On the other hand, in the English versions of the test it is not possible to eliminate answers. There is simply one sentence with a true/false/don't know response. This is one of the reasons that the students who did the Japanese version of the test got on average 24% more correct answers than those who did one of the English versions. Obviously though this is not the only reason.

In Japanese junior high schools, students get a lot of practice in translation from English to Japanese or from Japanese to English. When the students have tests, a large proportion of the questions involve translating from one language to the other. This is one reason to explain why the students did so much better in the translation version of the test than in the comprehension version. Many specialists in the field of vocabulary accept translation as a fast and efficient method of direct vocabulary teaching. There are times when translation certainly is more efficient; however, the low scores in the

comprehension version show us the disadvantage of learning through translation. Although these students surely knew the words being tested, they were unable to choose the correct answer because they did not comprehend the English sentences. While learning vocabulary through translation is the first step in knowing a word, it is just that - the first step. Further practice is necessary to gain a deeper understanding of the words so that they can go from being able to understand the form receptively when decontextualised, to understand it receptively in context and finally being able to use it productively. Nation (2001,pp.63-70) explains a three-part process, first noticing, then retrieving and then using the word creatively or generatively. If it could be said that these students have only taken the first step as they have only been studying English for two years and have at least a further four years of study ahead of them then that would be understandable. In the next years they could be seen to have a chance to use the words more both receptively and productively and thus deepen their understanding. Unfortunately, this is not the case; in the later years of schooling Japanese students need to learn such a large quantity of words that they have no chance to attain much depth of understanding. So at least until they reach university, they only ever know words at the most basic level.

Another factor that may have hindered the students who took one of the English versions of the test is knowledge of the defining words. The words in a Vocabulary Levels Test need to be described or defined using more frequent words. This causes a problem at the 1,000-word level, as there are few words we can possibly use to describe or define the 1,000 most frequent words of the English language. The students in this study were estimated to know about seven hundred words in total, only four hundred and thirty-five of which are in the most frequent 1,000 words of English and only one hundred and one of which are in the second most frequent 1,000 words and one hundred and sixty-eight of which are moderate or low frequency words. In the MEXT "Course of Study for Lower Secondary School English" It is stated that students should know "Up to approximately 900 words...." after 3 years of junior high school English instruction and that "....frequently used items should be selected and mastered." It seems that in reality, although students probably know about 900 words by the end of their junior high school English instruction, they are not the most frequent words.

In order to better fullfil the MEXT course of study, it would help the students to have more high frequency words and less moderate or low frequency words in their textbooks. As Chujo (2004, pp231-232) states "Clearly, it is first necessary to examine what vocabulary exists in learners textbooks and to determine if the learners are able to meet the 95% comprehension criteria. If not, educators must provide the supplemental vocabulary to bridge this gap. Without this bridge, learners would face a daunting amount of dictionary work." In this case, educators are not bridging the gap; the only supplementary vocabulary comes from day to day life outside of school. If some kind of measure were taken to bridge this gap, this would not only allow the students to get a better score on the Vocabulary Levels Test but more importantly, it would allow them to understand English. Simply because they are the most frequent words of English, they are necessary for comprehension.

Conclusion

In the Japanese version we could reliably test which words the students knew, but in the English version we could see that they didn't really know the words to the extent that they need to for comprehension. What's the use of being able to translate a word if you don't understand it when you come across it in a sentence? As I have discussed, there are many possible reasons for this and further research is needed to find the exact reason for the comprehension problems in the English version of the test.

I would suggest that the students need more practice in coming across words in context so that they have a chance to apply what they do know about a word and gain a deeper understanding of the vocabulary they do have. Even though the students who took the Japanese version of the test showed that they know more than seven hundred words, because of their apparent inability to comprehend the words in context I feel that the best approach would be to encourage students to read graded readers at level 2 (700 words) until they get used to the sentence structures and then quickly move them up to level 3 (1,000 words). In the future, so that students don't have this kind of problem, I also feel that it would be appropriate to incorporate graded readers into the syllabus in general with students in grade 1 reading one book per week at level 1, in grade 2 reading one book per week at level 2 and in grade 3 reading one book per week at level 3. This extensive reading could be done by students at home rather than taking up class time. Junior high school students have more free time and were also shown in previous research (Ruegg 2005) to have higher levels of motivation to study English than their high school counterparts. The benefits of introducing extensive reading at junior high school level go far beyond English vocabulary knowledge. It could increase students' motivation and enjoyment of studying English as well as their ability and enjoyment of reading in both English and Japanese.

Rachael Ruegg has an MA in Applied Linguistics from Victoria University of Wellington. She works in the English department at Kanda University of International Studies in Chiba, Japan.<ruegg@kanda.kuis.ac.jp>

References

Asano, H.,*et al* (2002) *New Horizon English Course 1.* Tokyo Shoseki: Tokyo.

Asano, H.,*et al* (2002) *New Horizon English Course 2.* Tokyo Shoseki:Tokyo.

Chujo, Kiyomi (2004) *Measuring Vocabulary Levels of English Textbooks and Tests Using a BNC Lemmatised High Frequency Word List.* In Language and Computers: 51, 1. Published by: Rodopi.

Nation, I.S.P. (2001) *Learning vocabulary in another language.* Cambridge University Press: Cambridge.

Nation, I.S.P. (2004) *Vocabulary resource booklet.* English Language Institute Occasional Publication No.21.

The Course of Study for Foreign Languages <ibuki. ha.shotoku.ac.jp/~ishihara/ shidou/shidou_index.html> (Retrieved on 22 March 2008)

Challenging Assumptions

JALT2007 —

Appendix

All test items were created by Paul Nation (2004)

VOCABULARY TEST: 1000 word level

TEST A

Write T if the sentence is true. Write N if the sentence is not true. Write X if you do not understand the sentence. The first one has been answered for you.

We cut time into minutes, hours and days __T__

Some children call their mother Mama. _____

This country is a part of the world. _____

Most children go to school at night. _____

VOCABULARY TEST: 1000 word level

TEST B

Write T if the sentence is true. Write N if the sentence is not true. Write X if you do not understand the sentence. The first one has been answered for you.

We can stop time. __N__

When someone asks "What are you called?" you should

say your name _____

All the world is under water. _____

Day follows night and night follows day. _____

VOCABULARY TEST: 1000 word level

1 could

2 during _____ 〜することができた

3 this _____ 〜の間

4 piece _____ 〜するために

5 of

6 in order to