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The Minimal English Test (MET) and the Relative Clause Test (RCT): A Preliminary Study*

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1. Introduction

1.1 Purpose

Maki, Wasada, and Hashimoto (2003) developed the Minimal English Test (MET), and found a relatively high correlation between the scores of the MET and the scores of the College Entrance Examination (English Part) 2002 administered by the College Entrance Examination Center ($r = .68$, $p < .05$, and $n = 154$). Further, Maki et al. (2004) found a strong correlation between the scores of the MET and the CT 2003 ($r = .72$, $p < .05$, and $n = 629$).¹ These results indicate that the two tests, which have quite different properties, measure the same kind of proficiency to some extent. Given this, we can predict that the scores of the MET should have relatively high correlation with other tests whose properties are quite different from the MET.

The purpose of this paper is then to investigate the correlation between the scores of the MET and the scores of a test which measures one's ability to construct relative clauses. We call this test the Relative Clause Test (RCT). The RCT is a simple test which requires the test taker to translate Japanese sentences with relative clauses into the corresponding English sentences, and thus, is totally different from major English tests, such as the College Entrance Examination (English Part), TOEFL, and TOEIC, which are intended to measure one's general English proficiency. A relative clause in English has a head noun to its left. On the other hand, a relative clause in Japanese has a head noun to its right. Observe the examples (1) and (2).

- (1) the man [John saw]
- (2) [John-ga mita] hito
 -Nom saw man
 'the man John saw'

Therefore, in transforming a Japanese relative clause into an English one, one needs to move the relative clause to the right across the head noun. In this sense, putting a relative clause in Japanese into English contains more complex operations than putting a simple clause in Japanese into English.

The research question of this paper is whether the scores of the RCT, which measures one's ability to construct relative clauses in English, will have a high correlation with the scores of the MET, which simply requires the test taker to fill English words into blank spaces.

In this paper, we analyze the data obtained from students of 6 institutions: Gifu University, Osaka University, Kochi Gakuen College, Nihon University, University of Shizuoka, and Shobi Gakuen University. The set of data was collected from December 2003 to June 2005 at each institution. The result of the correlation analysis was that there was a high correlation between the scores of the MET and the scores of the RCT.

1.2 Organization

The organization of this paper is as follows. Section 2 gives an overview of the materials used in this paper (the MET and the RCT), and Section 3 gives an analysis of the data. Section 4 reports the result, and Section 5 concludes this paper.

2. Materials

In this research, we use the data of the two tests: the MET and the RCT. We briefly review these below.

2.1 The Minimal English Test (MET)

The MET is a simple test which requires the test taker to fill a correct English word with 4 letters or less into each of the 72 blank spaces of the given sentences written on one piece of A4 paper, while listening to the CD which produces the sentences. The MET is based on Lessons 1 and 2 of the textbook for college freshmen written by Sakamoto, Furuya, and Hubenthal (2001) and the CD that accompanies it. The contents of the textbook are essays on the modern society of the United States. The CD lasts about 5 minutes with a speed of 125 words per minute. The MET is shown below.

The Minimal English Test

Name: _____ Date: Month ___ Day ___ Year _____ Score: _____/72

Please fill an English word with 4 letters or less into each blank spot, while listening to the CD.

1. The majority of people have at least one pet at () time in their ().
2. Sometimes the relationship between a pet () or cat and its owner is () close
3. that () begin to resemble () other in their appearance and behavior.
4. On the other (), owners of unusual pets () as tigers or snakes
5. sometimes () to protect themselves () their own pets.
6. Thirty years () the idea of an inanimate () first arose.
7. This was the pet (), which became a craze () the United States and
8. spread () other countries as ().
9. People () large sums of money for ordinary rocks and assigned () names.
10. They tied a leash around the rock and pulled () down the street just () a dog.
11. The rock owners () talked () their pet rocks.
12. Now () we have entered the computer age, () have virtual pets.
13. The Japanese Tamagotchi--() imaginary chicken ()--
14. () the precursor of () virtual pets.
15. Now there () an ever-increasing number of such virtual ()
16. which mostly young people are adopting () their ().
17. And () your virtual pet (),
18. you () reserve a permanent resting place () the Internet in a virtual pet cemetery.

19. Sports are big business. Whereas Babe Ruth, the () famous athlete of () day,
20. was well-known () earning as () as the President of the United States, the average
21. salary () today's professional baseball players is () times that of the President.
22. () a handful of sports superstars earn 100 times () through their contracts
23. () manufacturers of clothing, (), and sports equipment.
24. But every generation produces () or two legendary athletes () rewrite
25. the record books, and whose ability and achievements () remembered () generations.
26. () the current generation Tiger Woods and Michael Jordan are two () legendary
27. figures, () of whom () achieved almost mythical status.
28. The () that a large number of professional athletes () huge incomes
29. has () to increased competition throughout () sports world.
30. Parents () their children to sports training camps () an early age.
31. Such () typically practice three to () hours a day,
32. () weekend () during their school vacations
33. in order () better their chances of eventually obtaining () well-paid position
34. on a professional () when they grow ().
35. As for the () young aspirants who do () succeed,
36. one wonders if they () regret having () their childhood.

The test taker is verbally given the following 4 instructions in advance.

1. Write the score of the College Entrance Examination (English Part) you took in 2004.
2. Fill an English word with 4 letters or fewer into blank spaces, while listening to the CD.
3. The CD lasts about 5 minutes.
4. There is about a three-second interval between Line 18 and Line 19.

After the above instructions are given, and the volume of the CD is adjusted, the MET is administered.

2.2 The Relative Clause Test (RCT)

The RCT is a test that requires the test taker to translate Japanese sentences with relative clauses into English, as shown below. This test is written on one piece of A4 paper, and the time limit is 10 minutes. There are 8 questions on this test. The first two are warm-up questions, and do not contain relative clauses. The RCT and the answers to the RCT are provided below.

The Relative Clause Test (RCT)

Translate the following Japanese sentences into English.

- 1 ジョンは、メアリーを見た。
John-wa, Mary-o mita.
- 2 ビルは、スーザンが東京に行ったと思っている。
Bill-wa, Susan-ga Tokyo-ni itta to omotteiru.
- 3 ジョンは、メアリーが買った本を読むつもりだ。
John-wa, Mary-ga katta hon-o yomu tsumorida.
- 4 ジョンは、英語を一生懸命勉強している少女に、辞書をあげた。
John-wa, eego-o isshookenmee benkyooshiteiru shoojo-ni jisho-o ageta.
- 5 スーザンが通りで見た男は、アイスクリームを食べていた。
Susan-ga toori-de mita otoko-wa, ice cream-o tabeteita.
- 6 去年ジョンが買った車は、とても小さい。
Kyonen John-ga katta kuruma-wa, totemo chiisai.
- 7 メアリーが京都で会った少女は、ジョンが書いた本を知っている。
Mary-ga Kyoto-de atta shoojo-wa, John-ga kaita hon-o shitteiru.
- 8 テレビを見ていた少年が、本を読んでいた少女に、りんごをあげた。
Terebi-o miteita shoonen-ga, hon-o yondeita shoojo-ni, ringo-o ageta.

The Answers to the Relative Clause Test (RCT)

- 1 John saw Mary.
- 2 Bill thinks (that) Susan went to Tokyo.
- 3 John will read the book (which/that) Mary bought.
- 4 John gave a dictionary to the girl (who was) studying English hard.
- 5 The man (who/whom) Susan saw on the street was eating ice cream.
- 6 The car (which/that) John bought last year is very small.
- 7 The girl (who/whom) Mary met in Kyoto knows the book (which/that) John wrote.
- 8 The boy (who was) watching TV gave an apple to the girl (who was) reading a book.

Let us go into the details of each question. Questions 1 and 2 are warming-up questions, and do not contain a relative clause. Question 1 is a simple sentence. Question 2 is a sentence with an embedded clause, and is more complicated than Question 1.

Questions from Question 3 to Question 8 all include relative clauses. In Questions 3 and 4, the relative clause is attached to the noun in the object position of the main clause. In Question 3, the relative clause is attached to the inanimate noun which functions as an object. In Question 4, the relative clause is attached to the animate noun which functions as a subject.

In Questions 5 and 6, the relative clause is attached to the noun in the subject position of the main clause. In Question 5, the relative clause is attached to the animate noun which functions as an object. In Question 6, the relative clause is attached to the inanimate noun which functions as an object.

Questions 7 and 8 contain two relative clauses. In Question 7, one of the relative clauses is attached to the animate noun in the subject position of the main clause, which functions as an object in the relative clause. The other relative clause is attached to the inanimate noun in the object position of the main clause, which functions as an object in the relative clause. In Question 8, one of the relative clauses is attached to the animate noun in the subject position of the main clause, which functions as a subject in the relative clause. The other relative clause is attached to the animate noun in the (indirect) object position of the main clause, which functions as a subject in the relative clause. Therefore, all the questions in this test are different from each other in some respect.

Next, let us explain how to grade the RCT. As the purpose of the RCT is to measure one's ability to construct relative clauses, we ignore errors that are not directly related to construction of relative clauses. Therefore, we do not regard items listed in (3) as errors for our purpose.

- (3) a. errors in spelling of vocabularies
 b. errors in use of articles
 c. errors in sentence tense
 d. errors in use of prepositions

Also, we do not regard it as an error, when a relative clause is formed in passive voice, rather than active voice. This is because irrespective to whether it is formed in active or passive voice, it is correct in English if it is put to the right of the head noun. Therefore, we regard both (4a) and (4b) as correct answers to Question 6, for example.

- (4) a. The car (which/that) John bought last year is very small.
 b. The car (which/that was) bought by John is very small.

3. Data Analysis

3.1 Data

The MET and the RCT were administrated at the following institutions during the period from December of 2003 to June of 2005: Gifu University, Osaka University, Kochi Gakuen College, Nihon University, University of Shizuoka, and Shobi Gakuen University. The total number of data samples was 555, as shown below.

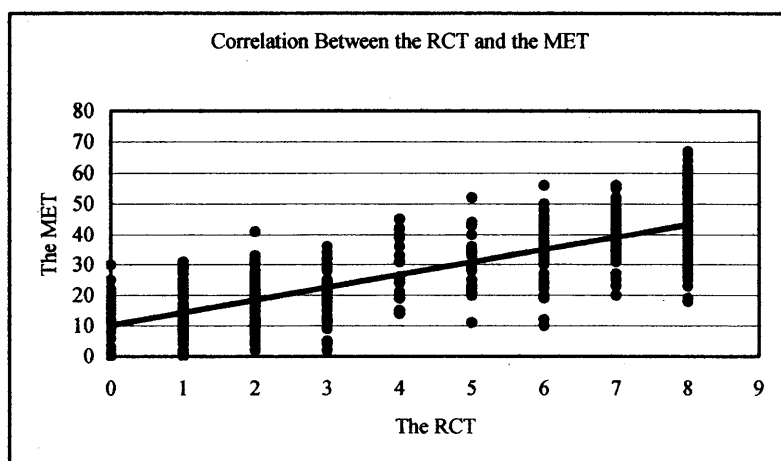
Institutions	Number of the Data
Gifu University	118
Osaka University	74
Kochi Gakuen College	86
Nihon University	105
University of Shizuoka	58
Shobi Gakuen University	114
Total	555

3.2 Data Analysis

We analyzed the data (the scores of the MET and those of the RCT) by a simple regression analysis (correlation analysis) using Microsoft Excel. The level of statistical significance is $p < .05$. The result is shown below.

Regression Statistics	
Correlation Coefficient (R)	0.811022
R Square	0.657756
Adjusted R Square	0.657137
Standard Error	8.776941
Observations	555
P-value	7.32E-131

The result of this analysis is more clearly represented by the following graph.



4. The Result

As the above analysis shows, there turned out to be a high correlation between the scores of the MET and the scores of the RCT. ($r = .81$, $p < .05$, and $n = 555$).

This result is amazing, because there is a high correlation between the ability to construct relative clauses and the ability to fill correct English words into blank spaces, while listening to the CD. However, as stated in the introduction, the scores of the MET and the scores of the College Entrance Examination (English Part) have a high correlation, and seem to measure the same kind of language proficiency to some extent, in spite of the fact that these two tests have quite different properties. Therefore, it is not

surprising that there is a high correlation between the scores of the MET and the scores of the RCT.

What does this result suggest for English education? We would like to point out two things. First, the result shows that the RCT, like the MET, is able to approximately measure the English proficiency of the learner at that point. Given the fact that there is a high correlation between the scores of the MET and the scores of the College Entrance Examination (English Part), we may say that the MET measures one's general English proficiency, with the exception of listening comprehension. Then, as there is a high correlation between the scores of the MET and the scores of the RCT, we may say that the RCT also measures one's general English proficiency to some extent, with the exception of listening comprehension. The RCT is very easy to administer, because it is written on a piece of A4 paper and is administered in under 10 minutes without any audio-visual equipment. Furthermore, the scores of the RCT have a high correlation with the scores of the MET. Therefore, when the MET cannot be administered, the RCT can function as a substitute for the MET.

Second, the result obtained suggests that a relative clause is an extremely important item in English instruction. This is because if the learner cannot understand and construct relative clauses, it would bring severe negative effects to his/her English proficiency. Therefore, it may not be exaggerating to say that whether or not one gets to like English depends on his/her success of internalizing relative clauses, and English instructors should take enough time to teach relative clauses.

Next, we would like to address two issues for future research. First, it is necessary to uncover the reason why the scores of the RCT have a high correlation with the scores of the MET. At this point, we suggest the following. Excluding the subject, English and Japanese phrase structures are in a mirror image relationship. Observe the examples in (5).

(5)	English	Japanese
a.	saw John	John-o mita -Acc saw
b.	to Tokyo	Tokyo-ni -to
c.	think that...	...to omoo that think
d.	because [...]	[...] node because
e.	even John	John-sae -even
f.	the man [John saw]	[John-ga mita] hito -Nom saw man

This relation is, so to speak, a linear symmetry, which is related to geometric concepts. Given this, we may say that translation between Japanese and English requires the use of geometric concepts. Thus, it is possible to assume that one's language proficiency is, to some extent, related to his/her proficiency in mathematics. It will be necessary then to investigate to what extent language proficiency and proficiency in mathematics are correlated in future research.

Second, it is necessary to investigate whether there are structures other than relative clauses that would behave like them in such a way that the scores of the test based on them have a high correlation with the scores of the MET. If we could find such structures and clarify the similarities and differences between relative clauses and them,

then, we may be able to uncover the reason why internalization of particular structures in the target language is highly correlated with one's overall language proficiency.

5. Conclusion

To conclude, we have found that the scores of the Minimal English Test (MET) had a statistically significant strong correlation with the scores of the Relative Clause Test (RCT).

As for its future, the RCT can be used as an effective tool in English education. This is because if the instructors administer the RCT at the beginning of the class, they can approximate each learner's English proficiency, and based on this, they can provide the best possible education suitable to each learner. It seems hard for a learner who has not acquired formation of relative clauses to get better scores on general English tests, no matter how many times he/she takes them. On the other hand, the learner will develop his/her language proficiency, if the instructors measure his/her ability to construct relative clauses by the RCT, and provide suitable instruction for him/her, depending on the scores of the RCT. In this way, introducing the RCT into a class will make it possible to provide effective instruction suitable to each learner.

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Note

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1. We follow Yanai (1998) in interpreting values of correlation coefficients. She assumes the following correspondence between correlation coefficients and their characteristics.

Correlation Coefficients	Characteristics
$0.0 \leq r < 0.2$	almost no correlation
$0.2 \leq r < 0.4$	weak correlation
$0.4 \leq r < 0.7$	moderate correlation
$0.7 \leq r < 0.9$	strong correlation
$0.9 \leq r < 1.0$	extremely strong correlation