<table>
<thead>
<tr>
<th>項目</th>
<th>内容</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title</td>
<td>The METs 4E3, 4E4, 4E5, and 6: Their Correlations with the TOEIC IP</td>
</tr>
<tr>
<td>Author(s)</td>
<td>牧秀樹、梅澤敏郎、長谷部めぐみ、セヴィエマイケル</td>
</tr>
<tr>
<td>Citation</td>
<td>岐阜大学地域科学部研究報告 vol.41 p.21-30</td>
</tr>
<tr>
<td>Issue Date</td>
<td>2017</td>
</tr>
<tr>
<td>Rights</td>
<td>Gifu University / Gifu City Women's College / Shinshu University / Gifu City International Exchange Association</td>
</tr>
<tr>
<td>URL</td>
<td><a href="http://hdl.handle.net/20.500.12099/72796">http://hdl.handle.net/20.500.12099/72796</a></td>
</tr>
</tbody>
</table>

※この資料の著作権は、各資料の著者・学協会・出版社等に帰属します。
The METs 4E3, 4E4, 4E5, and 6: Their Correlations with the TOEIC IP*

Hideki MAKI¹, Toshiro UMEZAWA², Megumi HASEBE³, and Michael SEVIER⁴

Gifu University*¹, Gifu City Women’s College*², Shinshu University*³, and Gifu City International Exchange Association*⁴

(Received April 18, 2017)

1. Introduction

Since 2003, the Maki Group has shown relatively strong correlations between the scores on the Minimal English Test (MET) developed by Maki, Wasada, and Hashimoto (2003) and the scores on the English section of the Center Test (CT in this paper), otherwise known as the university entrance examinations in Japan, which is administered by the National Center for University Entrance Examination. See Maki (2010, 2015) and Goto, Maki, and Kasai (2010) for the details of the MET.

Maki et al. (2008) examined, as a preliminary study, the correlation between the scores on the MET and the scores on the Test of English for International Communication Institutional Testing Program (TOEIC IP) hosted and administered by the University Coop in Japan, and found a relatively strong correlation between them. Maki et al. (2010a) then investigated the correlation between the scores on the MET and the scores on the Test of English for International Communication (TOEIC) administered by Educational Testing Service (ETS).¹,²

Maki et al. (2010b) developed a new version of the MET, the MET 6, where every 6th word was a target word. Maki et al. (2015) then created the other versions of the MET, which they call the METs 4E3 and 4E4, and examined the correlations between the scores on the METs 4E3/4E4/6 and the scores on the CT 2014. The METs 4E3 and 4E4 are just like the MET 6, except for the fact that the target words are restricted to English vocabulary words with four letters or fewer. Also, in the MET 4E3, every third word is left blank, and in the MET 4E4, every fourth word is left blank. The major difference between the METs 4E3/4E4 and the MET 6 is the fact that the target words are restricted to words with a certain number of letters or fewer in the METs 4E3 and 4E4, while the MET 6 is free from such a restriction. Maki et al. (2015) put the restriction on the number of letters for the target words in the METs 4E3 and 4E4, because in the past study, they used to use the MET 4, in which the target words contained four letters or fewer, and had results that showed relatively high correlations between the scores on the MET 4 and the scores on the CTs. Maki et al. (2015) showed that there was little difference among the three versions of the METs in terms of the predictability of the scores on the CT 2014.

Maki et al. (2016) further created the MET 4E5, and showed that there was little difference among the four versions of the METs (the METs 4E3, 4E4, 4E5, and 6) in terms of the predictability of the scores on the CT 2015.

The paper then aims to investigate the correlations between the scores on the METs 4E3/4E4/4E5/6 and the scores on the TOEIC IP, and decide which version of the MET can predict the scores on the TOEIC IP better than the other versions of the MET for the first time in the history of the research related to the MET.
The organization of this paper is as follows: Section 2 presents the materials (the Minimal English Tests (METs) 4E3/4E4/4E5/6 and the TOEIC IP to be employed in this research, Section 3 analyzes the data, and Section 4 concludes the paper.

2. Materials

2.1. The Minimal English Tests (METs) 4E3, 4E4, 4E5, and 6

The Minimal English Tests (METs) 4E3, 4E4, 4E5, and 6 are based on Lessons 1 and 2 of the textbook for first year university students written by Kawana and Walker (2002) and the CD that accompanies it, exactly like the original MET. The METs were designed along the rules in (1).

(1) Rules

a. Every Xth word is left blank in the MET (E)X, where X = 3, 4, 5, or 6.

b. Japanese words, years, and unpronounced words in parentheses are ignored.

Rule (1a) guarantees that the MET X is a cloze test, where every Xth word is left blank. The METs 4E3, 4E4, 4E5, and 6 are simple tests which require the test taker to write a correct English word into each of the blank spaces of the given sentences, written on one piece A4 paper, while listening to the CD on which the sentences are recorded. The CD lasts about 5 minutes with a speed of 125 words per minute. The METs 4E3, 4E4, 4E5, and 6 have 73, 55, 43, and 65 questions in total, and are illustrated in (2), (3), (4), and (5), respectively.
(2) The Minimal English Test 4E3 (The MET 4E3)

Please fill an English word into each blank spot, while listening to the CD.

01. The majority of people ( ) at least one ( ) at some ( ) in their life.
02. Sometimes ( ) relationship between a pet ( ) or cat ( ) its owner
03. is ( ) close that they begin ( ) resemble each other in their appearance
04. ( ) behavior. On the other ( ) , owners of unusual pets
05. ( ) as tigers or snakes sometimes ( ) to protect themselves
06. from their ( ) pets. Thirty years ago ( ) idea of ( ) inanimate pet first arose.
07. This ( ) the pet ( ) , which became a craze in ( ) United States
08. and spread to other countries ( ) well. People paid large ( ) of money
09. for ordinary rocks ( ) assigned them names. They ( ) a leash around the ( )
10. and pulled it ( ) the street just ( ) a dog.
11. ( ) rock owners even talked ( ) their pet rocks.
12. Now ( ) we have entered ( ) computer age, we ( ) virtual pets.
13. The Japanese Tamagotchi---( ) imaginary chicken egg---
14. was ( ) precursor of many virtual ( ) .
15. Now there are ( ) ever-increasing number of such virtual ( )
16. which mostly young people are adopting as their ( )
17. And if your virtual ( ) dies, you ( ) reserve a permanent resting place
18. on ( ) Internet in a virtual ( ) cemetery.
19. Sports are big business. Whereas Babe Ruth, ( ) most famous athlete of ( ) day,
20. was well-known ( ) the President
21. of ( ) United States, the average salary of today's professional baseball players
22. ( ) ten times that ( ) the President. And ( ) handful of sports superstars
23. earn ( ) hundred times more through their contracts with manufacturers
24. ( ) clothing, food, and sports equipment. ( ) every generation produces
25. one or ( ) legendary athletes who rewrite the record books,
26. ( ) whose ability and achievements are remembered ( ) generations.
27. In the current generation Tiger Woods ( ) Michael Jordan are two ( )
28. whose ability and achievements are remembered ( ) generations.
29. In the current generation Tiger Woods ( ) Michael Jordan are two ( )
29. whose ability and achievements are remembered ( ) generations.
30. The ( ) that a large number ( ) professional athletes earn huge incomes
31. led to increased competition throughout ( ) sports world.
32. Parents send their children to sports training camps ( ) an early age.
33. ( ) kids typically practice three to ( ) hours a day,
34. of eventually obtaining a well-paid position ( ) a professional team
35. ( ) they grow ( ) . As for ( ) many young aspirants
36. who ( ) not succeed, one wonders ( ) they will regret having ( ) their childhood.
Please fill an English word into each blank spot, while listening to the CD.

1. The majority of people have ( ) least one pet at ( ) time in their life.
2. Sometimes ( ) relationship between a pet dog ( ) cat and its owner
   and behavior. ( ) the other hand, owners of unusual ( )
   such as tigers or snakes sometimes ( ) to protect themselves from their own ( )
3. Thirty years ago the idea ( ) an inanimate pet first arose.
4. This ( ) the pet rock, which became ( ) craze in the United States
   and spread ( ) other countries as well. People paid large ( ) of money
   for ordinary rocks and assigned ( ) names. They tied a leash around ( ) rock
   and pulled it ( ) the street just like ( )
5. The rock owners ( ) talked to their pet rocks.
6. Now ( ) we have entered the computer ( ), we have virtual pets.
7. Such legendary figures, both of ( ) have achieved almost mythical status.
8. Sports are big business. Whereas Babe Ruth, ( ) most famous athlete of his ( ),
   was well-known for earning as ( ) as the President of ( ) United States,
9. the average salary of today's professional baseball players
10. is ( ) times that of the President. ( ) a handful of sports superstars
    earn ( ) hundred times more through their contracts with manufacturers
11. of clothing, ( ), and sports equipment. But every generation produces
12. one ( ) two legendary athletes who rewrite the record books,
13. whose ability and achievements are remembered for generations.
14. The fact ( ) a large number of professional athletes earn ( )
    has led to increased competition throughout ( ) sports world.
15. Parents send their children to sports training camps at ( ) early age.
16. Such kids typically practice three ( ) four hours a day,
17. ( ) weekend and during their school vacations in order to better their chances
18. when they grow ( ). As for the ( ) young aspirants who do not succeed,
19. wonders if they will regret having ( ) their childhood.
Please fill an English word into each blank spot, while listening to the CD.

1. The majority of people have at least ( ) pet at some time ( ) their life.
2. Sometimes the relationship between a pet ( ) or cat and its owner
3. ( ) so close that they begin to resemble ( ) other in their appearance
4. and behavior. On the other ( ), owners of unusual pets
5. such as tigers ( ), snakes sometimes have to protect themselves
6. from their own ( ). Thirty years ago the idea of ( ) inanimate pet first arose.
7. This was the ( ) rock, which became a craze in the United States
8. ( ) spread to other countries as well. People paid large ( ) of money
9. for ordinary rocks and assigned them names. ( ) tied a leash around the rock
10. ( ) pulled it down the street just ( ) a dog.
11. The rock owners ( ) talked to their pet rocks.
12. Now that ( ) have entered the computer age, we ( ) virtual pets.
13. The Japanese Tamagotchi---the imaginary chicken egg---
14. ( ) the precursor of many virtual pets.
15. ( ) there are an ever-increasing number of such virtual ( )
16. which mostly young people are adopting as their own.
17. And ( ) your virtual pet dies, you can reserve ( ) permanent resting place
18. on the Internet in a virtual ( ) cemetery.
19. Sports are big business. Whereas Babe Ruth, the most famous athlete ( ) his day,
20. was well-known for earning ( ) much as the President
21. of ( ) United States, the average salary of today's professional baseball players
22. is ten times ( ) of the President. And a handful ( ) sports superstars
23. earn one hundred times more through their contracts with manufacturers
24. ( ) clothing, food, and sports equipment. But every generation produces
25. one ( ) two legendary athletes who rewrite the record books,
26. and whose ability ( ) achievements are remembered for generations.
27. In the current generation Tiger Woods ( ) Michael Jordan are two such legendary figures,
28. both ( ) whom have achieved almost mythical status.
29. The fact ( ) a large number of professional athletes earn huge incomes
30. ( ) led to increased competition throughout the sports world.
31. Parents send their children ( ) sports training camps at an early age.
32. Such ( ) typically practice three to four hours a day,
33. ( ) weekend and during their school vacations in order to better their chances
34. of eventually obtaining ( ) well-paid position on a professional team
35. when ( ) grow up. As for ( ) many young aspirants
36. who do not succeed, ( ) wonders if they will regret having lost their childhood.
The test takers are verbally given the following three instructions in advance.

1. Fill an English word into each of the blank spaces, while listening to the CD.
2. The CD lasts about 5 minutes.
3. There is about a three-second interval between Line 18 and Line 19.

After the above instructions were given, the volume of the CD was checked, and the METs 4E3, 4E4, 4E5, and 6 were administered.

2.2. The Test of English for International Communication (TOEIC®)

The TOEIC used in this study is the TOEIC® Listening and Reading test. According to ETS (2016b), the test content is as follows.

"The TOEIC® Listening and Reading test is a paper-and-pencil, multiple-choice assessment. There are 2 timed sections of 100 questions each.
Section I: Listening

Test takers listen to a variety of questions and short conversations recorded in English, then answer questions based on what they have heard (100 items total).

Part 1: Photographs
Part 2: Question-Response
Part 3: Conversations
Part 4: Short Talks

Section II: Reading

Test takers read a variety of materials and respond at their own pace (100 items total).

Part 5: Incomplete Sentences
Part 6: Error Recognition or Text Completion
Part 7: Reading Comprehension

Test Length

The test takes approximately 2½ hours, with:

45 minutes for Section I
75 minutes for Section II
approximately 30 minutes to answer biographical questions”

The full marks on the two sections are 495 points each. (6) summarizes the test content of the TOEIC.

(6) The Test Content of the TOEIC

<table>
<thead>
<tr>
<th></th>
<th>Listening</th>
<th>Reading</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Questions</td>
<td>100</td>
<td>100</td>
<td>200</td>
</tr>
<tr>
<td>Full Mark</td>
<td>495</td>
<td>495</td>
<td>990</td>
</tr>
<tr>
<td>Time Limit</td>
<td>45</td>
<td>75</td>
<td>120</td>
</tr>
</tbody>
</table>

See ETS (2016c) for more information about the TOEIC.

3. Results

The METs 4E3, 4E4, 4E5, and 6: Their Correlations with the TOEIC IP*

The METs 4E3/4E4/4E5/6 and the TOEIC IP were administered at one institution in May of 2015. The TOEIC IP was administered on May 11 of 2015, and the METs were administered within a week after the TOEIC IP was administered. In this paper, we call the TOEIC IP administered on May 11 of 2015 the TOEIC 2015. 58 participants took part in this survey, and all were female, with an average age of 18 years and 9 months old. The total number of the participants was 14 for the MET 4E3, 14 for the MET 4E4, 14 for the MET 4E5, and 16 for the MET 6. The average scores on the TOEIC 2015 of the four groups are shown in (7).
The Average Scores on the TOEIC 2015 of the Four Groups

<table>
<thead>
<tr>
<th>Year</th>
<th>MET</th>
<th>n</th>
<th>Average Scores on the TOEIC 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>MET 4E3</td>
<td>14</td>
<td>377.14/990 (Reading and Listening)</td>
</tr>
<tr>
<td></td>
<td>MET 4E4</td>
<td>14</td>
<td>428.21/990 (Reading and Listening)</td>
</tr>
<tr>
<td></td>
<td>MET 4E5</td>
<td>14</td>
<td>452.50/990 (Reading and Listening)</td>
</tr>
<tr>
<td></td>
<td>MET 6</td>
<td>16</td>
<td>424.69/990 (Reading and Listening)</td>
</tr>
</tbody>
</table>

There was a slight difference in the average scores on the TOEIC 2015 between those who took the MET 4E3 and those who took one of the METs 4E4, 4E5, and 6.

The average scores on the four versions of the MET are shown in (8).

The Average Scores on the METs 4E3, 4E4, 4E5, and 6

<table>
<thead>
<tr>
<th>Year</th>
<th>MET</th>
<th>n</th>
<th>Number of Questions</th>
<th>Average Scores on the MET</th>
<th>Rate of Correctness</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>MET 4E3</td>
<td>14</td>
<td>73</td>
<td>35.00/73</td>
<td>47.94%</td>
</tr>
<tr>
<td></td>
<td>MET 4E4</td>
<td>14</td>
<td>55</td>
<td>30.43/55</td>
<td>55.32%</td>
</tr>
<tr>
<td></td>
<td>MET 4E5</td>
<td>14</td>
<td>43</td>
<td>31.71/43</td>
<td>73.75%</td>
</tr>
<tr>
<td></td>
<td>MET 6</td>
<td>16</td>
<td>65</td>
<td>23.13/65</td>
<td>35.58%</td>
</tr>
</tbody>
</table>

The rates of correctness for the four versions of the MET show a variation from 35.58% to 73.75%. The fact that the rate of correctness for the MET 6 was the lowest, seems to be attributed to the fact that no restriction is put on the number of letters for the target words, so that the MET 6 contains those that are as long as 12 letters, such as *relationship*.

We analyzed the data (the scores on the METs 4E3/4E4/4E5/6 and the scores on the TOEIC 2015) by a simple regression analysis (correlation analysis). The results are shown in (9). The significance level was set at .05 for each analysis.¹

Results of the Analyses of the Scores on the METs 4E3/4E4/4E5/6 and the Scores on the TOEIC 2015

<table>
<thead>
<tr>
<th>Year</th>
<th>MET</th>
<th>n</th>
<th>Correlation Coefficient (R)</th>
<th>p-Value</th>
<th>Regression Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>MET 4E3</td>
<td>14</td>
<td>.73 (Reading and Listening)</td>
<td>&lt;.05</td>
<td>y = 8.09x + 94.03</td>
</tr>
<tr>
<td></td>
<td>MET 4E4</td>
<td>14</td>
<td>.69 (Reading and Listening)</td>
<td>&lt;.05</td>
<td>y = 8.35x + 174.28</td>
</tr>
<tr>
<td></td>
<td>MET 4E5</td>
<td>14</td>
<td>.63 (Reading and Listening)</td>
<td>&lt;.05</td>
<td>y = 11.22x + 96.79</td>
</tr>
<tr>
<td></td>
<td>MET 6</td>
<td>16</td>
<td>.73 (Reading and Listening)</td>
<td>&lt;.05</td>
<td>y = 10.84x + 174.00</td>
</tr>
</tbody>
</table>

The results of the analyses show that the correlation coefficients between the scores on the METs 4E3/4E4/4E5/6 and the total scores on the TOEIC 2015 are almost identical (.63 ≤ r ≤ .73). This indicates that there is little difference among the four versions of the METs in terms of the predictability of the total scores on the TOEIC 2015.

We then examined whether there was a statistically significant difference among the four correlation coefficients for the sum of the Reading Section and the Listening Section using the Fisher r-to-z transformation provided by VassarStats: Web Site for Statistical Computation (2016). According to VassarStats: Web Site for Statistical Computation (2016), the Fisher r-to-z transformation calculates a value of z that can be applied to assess the significance of the difference between two correlation coefficients, $r_a$ and $r_b$, found in two independent samples. The results of the analyses show that there was no statistically significant difference among the four correlation coefficients of the sum of the Reading Section and the Listening Section. This indicates that there was no difference among the METs 4E3, 4E4, 4E5, and 6 in terms of the predictability of the total scores on the TOEIC 2015.
4. Conclusion

In this paper, we examined the correlations between the scores on the METs 4E3/4E4/4E5/6 and the total scores on the TOEIC 2015, and found that the correlation coefficients between the scores on the METs 4E3/4E4/4E5/6 and the total scores on the TOEIC 2015 were almost identical (0.63 ≤ r ≤ 0.73). We then examined whether there was a statistically significant difference among the four correlation coefficients for the sum of the Reading Section and the Listening Section, and found that there was no statistically significant difference among them, which indicates that there was no difference among the METs 4E3, 4E4, 4E5, and 6 in terms of the predictability of the total scores on the TOEIC 2015.

References

ETS (2016a) https://www.ets.org/about/what/ (Retrieved on September 5, 2016)
ETS (2016b) https://www.ets.org/toeic/test_takers/listening_reading/about/content/ (Retrieved on September 5, 2016)


Kawana, Norihiito and Stuart Walker (2002) This is Media.com, Seibido, Tokyo.


Maki, Hideki, Megumi Hasebe, Yong-Xin Gao, Toshiro Umezawa, Shigeki Taguchi, Satoshi Oku, Yukiko Ueda, Masao Ochi, Kosuke Nagasue, and Jessica Dunton (2015) “The METs 4E3, 4E4, and 6: Their Correlations with the University Entrance Examination (English Part) 2014,” Bulletin of the Faculty of Regional Studies, Gifu University 37, 45-54.


Maki, Hideki, Megumi Hasebe, and Toshiro Umezawa (2010) “A Study of Correlation Between the Scores on the Minimal English Test (MET) and the Scores on the Test of English for International Communication (TOEIC),” Bulletin of the Faculty of Regional Studies, Gifu University 27, 53-63. (Maki et al. (2010a))

Maki, Hideki, Sarenqimuge, Juri Yoshimura, Yuki Makino, Megumi Hasebe, Kenichi Goto, Takane Ito, Yoko Yumoto, Saotshi Oku, Michiyo Hamasaki, Yukiko Ueda, Kosuke Nagasue, Hironobu Kasai, Takashi Munakata, and Jessica Dunton (2010)


**Notes**

* We are grateful to Michael Sevier for useful comments on an earlier version of this paper. All errors are our own.

1. According to ETS (2016a), ETS was Founded in 1947, and develops, administers and scores more than 50 million tests annually in more than 180 countries, and at over 9,000 locations worldwide.

2. The content of the TOEIC IP is identical to that of the TOEIC, and consists of both listening comprehension and reading comprehension. However, the participant in the TOEIC is provided with an official record by ETS, while the participant in the TOEIC IP is not.

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

<table>
<thead>
<tr>
<th>Correlation Coefficients</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 &lt; r &lt;</td>
<td>0.2</td>
</tr>
<tr>
<td>0.2</td>
<td>≤ r &lt; 0.4</td>
</tr>
<tr>
<td>0.4</td>
<td>≤ r &lt; 0.7</td>
</tr>
<tr>
<td>0.7</td>
<td>≤ r &lt; 1.0</td>
</tr>
<tr>
<td>0.9</td>
<td>≤ r &lt; 1.0</td>
</tr>
</tbody>
</table>