The METs 4E3, 4E4, and 6: Their Correlations with the University Entrance Examination (English Part) 2014*

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1. Introduction

Maki, Wasada, and Hashimoto (2003) developed the original version of the Minimal English Test (MET), which requires the test taker to write a correct English word with 4 letters or fewer into each of the 72 blank spaces of the given sentences, while listening to the CD. Since then, the Maki Group has found statistically significant correlations between the scores on the MET, a 5-minute English test, and the scores on the English Part of the University Entrance Examinations in Japan administered by the National Center for University Entrance Examination (.53 < r <.72).1 We call the University Entrance Examination (English Part) the Center Test (CT) in this paper. See Maki (2010) and Goto, Maki, and Kasai (2010) for the details of the MET.

Maki et al. (2010) developed a new version of the MET, the MET 6, where every 6th word was a target word. Maki et al. (2012) then created another version of the MET, the MET 8, where every 8th word was a target word. Furthermore, Maki et al. (2013) developed yet another version of the MET, the MET 10, where every 10th word was a target word.

Maki et al. (2013) examined the correlation coefficients between the scores on the METs 6, 8, and 10 and the total scores on the CT 2012, and found that they were almost identical (.57 < r < .58). Maki et al. (2014) then examined the correlation coefficients between the scores on the METs 6, 8, and 10 and the total scores on the CT 2013, and found that the correlation coefficients between the scores on the METs 6 and 10, and the total scores on the CT 2013 are almost identical (.60 < r < .62), although the correlation coefficient between the scores on the MET 8 and the total

scores on the CT 2013 was lower than the other two correlation coefficients (r = .44). These results indicate the possibility that there will be a significant correlation between the scores on the CT of a year and the scores on the other versions of the MET than the METs 8 and 10, as well as the MET 6.

The purpose of this paper is then to create two new versions of the MET, which we call the METs 4E3 and 4E4, and examine the correlations between the scores on the METs 4E3, 4E4, and 6, and the scores on the CT 2014. The METs 4E3 and 4E4 are just like the MET 6, except the fact that the target words are restricted to those 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 those with a certain number of letters or fewer in the METs 4E3/4E4, while the MET 6 is free from such a restriction. We put the restriction on the number of letters for the target words in the METs 4E3/4E4, because in the past study, we used to use the MET 4, in which the target words have 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.

The organization of this paper is as follows. Section 2 presents the materials (the Minimal English Tests (METs) 4E3, 4E4, and 6, and the University Entrance Examination (English Part) 2014 (CT 2014)). Section 3 reports the results, and Section 4 concludes the paper.

2. Materials

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

The Minimal English Tests (METs) 4E3, 4E4, 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, or 6.
        b.   Japanese words, years, and unpronounced words in parentheses are ignored.

Rule (1a) guarantees that the MET X has the form of a cloze test, where every Xth word is left blank.

The METs 4E3, 4E4, 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, and 6 have 73, 55, and 65 questions in total, and are illustrated in (2), (3), and (4), 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 (　　　)[1] at least one (　　　)[2] at some (　　　)[3] in their life.

02.　Sometimes (　　　)[4] relationship between a pet (　　　)[5] or cat (　　　)[6] its owner

03.　is (　　　)[7] close that they begin (　　　)[8] resemble each other in their appearance

04.　(　　　)[9] behavior. On the other (　　　)[10], owners of unusual pets

05.　(　　　)[11] as tigers or snakes sometimes (　　　)[12] to protect themselves

06.　from their (　　　)[13] pets. Thirty years ago (　　　)[14] idea of (　　　)[15] inanimate pet first arose.

07.　This (　　　)[16] the pet (　　　)[17], which became a craze in (　　　)[18] United States

08.　and spread to other countries (　　　)[19] well. People paid large (　　　)[20] of money

09.　for ordinary rocks (　　　)[21] assigned them names. They (　　　)[22] a leash around the (　　　)[23]

10.　and pulled it (　　　)[24] the street just (　　　)[25] a dog.

11.　(　　　)[26] rock owners even talked (　　　)[27] their pet rocks.

12.　Now (　　　)[28] we have entered (　　　)[29] computer age, we (　　　)[30] virtual pets.

13.　The Japanese *Tamagotchi*---(　　　)[31] imaginary chicken egg---

14.　was (　　　)[32] precursor of many virtual (　　　)[33] .

15.　Now there are (　　　)[34] ever-increasing number of such virtual (　　　)[35]

16.　which mostly young people are adopting as their (　　　)[36] .

17.　And if your virtual (　　　)[37] dies, you (　　　)[38] reserve a permanent resting place

18.　on (　　　)[39] Internet in a virtual (　　　)[40] cemetery.

19.　Sports are big business. Whereas Babe Ruth, (　　　)[41] most famous athlete of (　　　)[42] day,

20.　was well-known (　　　)[43] earning as much (　　　)[44] the President

21.　of (　　　)[45] United States, the average salary of today's professional baseball players

22.　(　　　)[46] ten times that (　　　)[47] the President. And (　　　)[48] handful of sports superstars

23.　earn (　　　)[49] hundred times more through their contracts with manufacturers

24.　(　　　)[50] clothing, food, and sports equipment. (　　　)[51] every generation produces

25.　one or (　　　)[52] legendary athletes who rewrite the record books,

26.　(　　　)[53] whose ability and achievements are remembered (　　　)[54] generations.

27.　In the current generation Tiger Woods (　　　)[55] Michael Jordan are two (　　　)[56] legendary figures,

28.　both of (　　　)[57] have achieved almost mythical status.

29.　The (　　　)[58] that a large number (　　　)[59] professional athletes earn huge incomes_

30.　(　　　)[60] led to increased competition throughout (　　　)[61] sports world.

31.　Parents send their children to sports training camps (　　　)[62] an early age.

32.　(　　　)[63] kids typically practice three to (　　　)[64] hours a day,

33.　(　　　)[65] weekend and during their school vacations in order (　　　)[66] better their chances

34.　of eventually obtaining a well-paid position_(　　　)[67] a professional team

35.　(　　　)[68] they grow (　　　)[69] . As for (　　　)[70] many young aspirants

36.　who (　　　)[71] not succeed, one wonders (　　　)[72] they will regret having (　　　)[73] their childhood.

(3)   The Minimal English Test 4E4 (The MET 4E4)

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

1. The majority of people have (   )^1 least one pet at (   )^2 time in their life.

2. Sometimes (   )^3 relationship between a pet dog (   )^4 cat and its owner

3. (   )^5 so close that they begin (   )^6 resemble each other in their appearance

4. and behavior. (   )^7 the other hand, owners of unusual (   )^8

5. such as tigers or snakes sometimes (   )^9 to protect themselves from their own (   )^{10}.

6. Thirty years ago the idea (   )^{11} an inanimate pet first arose.

7. This (   )^{12} the pet rock, which became (   )^{13} craze in the United States

8. and spread (   )^{14} other countries as well. People paid large (   )^{15} of money

9. for ordinary rocks and assigned (   )^{16} names. They tied a leash around (   )^{17} rock

10. and pulled it (   )^{18} the street just like (   )^{19} dog.

11. The rock owners (   )^{20} talked to their pet rocks.

12. Now (   )^{21} we have entered the computer (   )^{22}, we have virtual pets.

13. (   )^{23} Japanese *Tamagotchi*---the imaginary chicken egg---

14. was (   )^{24} precursor of many virtual pets.

15. (   )^{25} there are an ever-increasing number of (   )^{26} virtual pets

16. which mostly young people are adopting as their (   )^{27}.

17. And if your virtual (   )^{28} dies, you can reserve (   )^{29} permanent resting place

18. on the Internet in (   )^{30} virtual pet cemetery.

19. Sports are big business. Whereas Babe Ruth, (   )^{31} most famous athlete of his (   )^{32},

20. was well-known for earning as (   )^{33} as the President of (   )^{34} United States,

21. the average salary of today's professional baseball players

22. is (   )^{35} times that of the President. (   )^{36} a handful of sports superstars

23. earn (   )^{37} hundred times more through their contracts with manufacturers

24. of clothing, (   )^{38}, and sports equipment. But every generation produces

25. one (   )^{39} two legendary athletes who rewrite the record books,

26. (   )^{40} whose ability and achievements are remembered for generations.

27. (   )^{41} the current generation Tiger Woods and Michael Jordan are (   )^{42}

28. such legendary figures, both of (   )^{43} have achieved almost mythical status.

29. The fact (   )^{44} a large number of professional athletes earn (   )^{45} incomes

30. has led to increased competition throughout (   )^{46} sports world.

31. Parents send their children to sports training camps at (   )^{47} early age.

32. Such kids typically practice three (   )^{48} four hours a day,

33. (   )^{49} weekend and during their school vacations in order to better their chances

34. (   )^{50} eventually obtaining a well-paid position on a professional (   )^{51}

35. when they grow (   )^{52}. As for the (   )^{53} young aspirants who do not succeed,

36. (   )^{54} wonders if they will regret having (   )^{55} their childhood.

(4)   The Minimal English Test 6 (The MET 6)

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

1.   The majority of people have (   )[1] least one pet at some (   )[2] in their life.

2.   Sometimes the (   )[3] between a pet dog or (   )[4] and its owner

3.   is so (   )[5] that they begin to resemble (   )[6] other in their appearance

4.   and (   )[7]. On the other hand, owners (   )[8] unusual pets

5.   such as tigers (   )[9] snakes sometimes have to protect (   )[10] from their own pets.

6.   Thirty (   )[11] ago the idea of an (   )[12] pet first arose.

7.   This was (   )[13] pet rock, which became a (   )[14] in the United States

8.   and (   )[15] to other countries as well. (   )[16] paid large sums of money

9.   (   )[17] ordinary rocks and assigned them (   )[18].

10.   They tied a leash around (   )[19] rock and pulled it down (   )[20] street just like a dog.

11.   (   )[21] rock owners even talked to (   )[22] pet rocks.

12.   Now that we (   )[23] entered the computer age, we (   )[24] virtual pets.

13.   The Japanese *Tamagotchi*---the (   )[25] chicken egg---

14.   was the precursor (   )[26] many virtual pets.

15.   Now there (   )[27] an ever-increasing number of such (   )[28] pets

16.   which mostly young people (   )[29] adopting as their own.

17.   And (   )[30] your virtual pet dies, you (   )[31] reserve a permanent resting place

18.   (   )[32] the Internet in a virtual (   )[33] cemetery.

19.   Sports are big business. (   )[34] Babe Ruth, the most famous athlete of (   )[35] day,

20.   was well-known for earning (   )[36] much as the President of (   )[37] United States,

21.   the average salary (   )[38] today's professional baseball players

22.   is (   )[39] times that of the President. (   )[40] a handful of sports superstars

23.   (   )[41] one hundred times more through (   )[42] contracts with manufacturers

24.   of clothing, (   )[43], and sports equipment. But every (   )[44] produces

25.   one or two legendary (   )[45] who rewrite the record books,

26.   (   )[46] whose ability and achievements are (   )[47] for generations.

27.   In the current (   )[48] Tiger Woods and Michael Jordan are two such legendary (   )[49],

28.   both of whom have achieved (   )[50] mythical status.

29.   The fact that (   )[51] large number of professional athletes (   )[52] huge incomes

30.   has led to (   )[53] competition throughout the sports world.

31.   (   )[54] send their children to sports (   )[55] camps at an early age.

32.   (   )[56] kids typically practice three to (   )[57] hours a day,

33.   all weekend (   )[58] during their school vacations in (   )[59] to better their chances

34.   of (   )[60] obtaining a well-paid position on (   )[61] professional team

35.   when they grow (   )[62]. As for the many young (   )[63] who do not succeed,

36.   one (   )[64] if they will regret having (   )[65] their childhood.

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

Hideki MAKI, Megumi HASEBE, Yong-Xin GAO, Toshiro UMEZAWA,
                   Shigeki TAGUCHI, Satoshi OKU, Yukiko UEDA, Masao OCHI,
                        Kosuke NAGASUE, and Jessica DUNTO

1.   Write the score on the University Entrance Examination (English Part) that you took this year.

2.   Fill an English word into each of the 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 were given, the volume of the CD was checked, and the METs 4E3, 4E4, and 6 were administered.

2.2. The University Entrance Examination (English Part) 2014 (CT 2014)

The University Entrance Examination Center (2014) provides the summary of the CT 2014 results shown in (5) and (6).

(5)   The Reading Section of the CT 2014

Observations	525,217
Full mark	200
Number of questions	50
Average score	118.87
Standard deviation	41.06
Time limit	80 minutes
Date	January 18th, 2014

(6)   The Listening Section of the CT 2014

Observations	519,172
Full mark	50
Number of questions	25
Average score	33.16
Standard deviation	9.40
Time limit	30 minutes
Date	January 18th, 2014

The reading section of the CT 2014, contains questions about pronunciation, grammar, reordering of sentences, and reading comprehension, and the listening section of the CT 2014, contains questions

about listening comprehension.

3. Results

The METs 4E3, 4E4, and 6 were administered at seven institutions during the period from mid-April to the end of June of 2014. The total number of the data was 549 for the MET 4E3, 573 for the MET 4E4, and 573 for the MET 6. There was no significant difference among the average scores on the CT 2014 of the three groups, as shown in (7).

(7)   The Average Scores on the CT 2014 of the Three Groups

Year	MET	n	Average Scores on the CT 2013
2014	MET 4E3	549	146.67/200 (Reading)
			38.42/50 (Listening)
			185.08/250 (Reading and Listening)
	MET 4E4	573	144.88/200 (Reading)
			37.46/50 (Listening)
			182.34/250 (Reading and Listening)
	MET 6	573	146.87/200 (Reading)
			38.35/50 (Listening)
			185.22/250 (Reading and Listening)

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

(8)   The Average Scores on the METs 4E3, 4E4, and 6

Year	MET	n	Number of Questions	Average Scores on the MET	Rate of Correctness
2014	MET 4E3	549	73	34.94/73	47.86%
	MET 4E4	573	55	28.99/55	52.71%
	MET 6	573	65	24.77/65	38.11%

The rates of correctness for the three versions of the MET show a variation from 38.11% to 52.71%. 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, and 6 and the scores on the CT

Hideki MAKI, Megumi HASEBE, Yong-Xin GAO, Toshiro UMEZAWA,
Shigeki TAGUCHI, Satoshi OKU, Yukiko UEDA, Masao OCHI,
Kosuke NAGASUE, and Jessica DUNTO

2014) by a simple regression analysis (correlation analysis). The results are shown in (9). The significance level was set at .05 for each analysis.

(9)   Results of the Analyses of the Scores on the METs 4E3, 4E4, and 6 and the Scores on the CT 2014

Year	MET	Observations	Correlation Coefficient (R)	Regression Line
2014	MET 4E3	549	.56 (Reading)	$y = 1.54x + 92.72$
			.51 (Listening)	$y = .35x + 26.14$
			.59 (Reading and Listening)	$y = 1.90x + 118.85$
	MET 4E4	573	.55 (Reading)	$y = 1.79x + 93.00$
			.57 (Listening)	$y = .50x + 22.85$
			.59 (Reading and Listening)	$y = 2.29x + 115.85$
	MET 6	573	.58 (Reading)	$y = 2.00x + 97.39$
			.51 (Listening)	$y = .45x + 27.15$
			.61 (Reading and Listening)	$y = 2.45x + 124.54$

The results of the analyses show (i) that the correlation coefficients between the scores on the METs 4E3, 4E4, and 6, and the scores on the reading section of the CT 2014 are almost identical ($.55 < r < 58$),   (ii) that the correlation coefficients between the scores on the METs 4E3, 4E4, and 6, and the scores on the listening section of the CT 2014 are almost identical ($.51 < r < .57$), and (iii) that the correlation coefficients between the scores on the METs 4E3, 4E4, and 6, and the total scores on the CT 2014 are also almost identical ($.59 < r < .61$). This indicates that there is little difference among the three versions of the METs in terms of the predictability of the scores on the CT 2014.

We then examined whether there was a statistically significant difference among the three correlation coefficients for each of the Reading Section, the Listening Section, and 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 (2014). According to VassarStats: Web Site for Statistical Computation (2014), 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, ra and rb, found in two independent samples. The results of the analyses show that there was no statistically significant difference among the three correlation coefficients of each of the Reading Section, the Listening Section, and the sum of the Reading Section and the Listening Section. This indicates that there was no difference among the METs 4E3, 4E4, and 6 in terms of the predictability of the scores

on the CT 2014.

4. Conclusion

In this paper, we examined the correlations between the scores on the METs 4E3, 4E4, and 6, and the scores on the CT 2014, and found that the correlation coefficients between the scores on the METs 4E3, 4E4, and 6, and the total scores on the CT 2014 were almost identical (.59 < r < 61). We then examined whether there was a statistically significant difference among the three correlation coefficients for each of the Reading Section, the Listening Section, and the sum of the Reading Section and the Listening Section, and found that there was no statistically significant difference among the three correlation coefficients of each of the Reading Section, the Listening Section, and the sum of the Reading Section and the Listening Section, which indicates that there was no difference among the METs 4E3, 4E4, and 6 in terms of the predictability of the scores on the CT 2014.

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Note

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
$0 \leq r < |.2|$	almost no correlation
$|.2| \leq r < |.4|$	weak correlation
$|.4| \leq r < |.7|$	moderate correlation
$|.7| \leq r < |.9|$	strong correlation
$|.9| \leq r < |1|$	extremely strong correlation