

## **CHAPTER IV**

### **RESEARCH FINDING AND DISCUSSION**

This chapter will present and explain findings from the result of statistical analysis of internal consistency reliability value of TOEFL Equivalent Test.

#### **A. Findings**

##### **1. TOEFL Equivalent Test Sections**

TOEFL Equivalent Test used by Center for Language Development in State Islamic University Sunan Ampel Surabaya consists of 3 sections: listening, structure and written expression, and reading section. This categorization follows Cliff's TOEFL Preparation standardization by Michael A. Pyle<sup>1</sup>.

##### **a. Listening Section.**

The listening section measures ability to understand spoken English. There are total 50 questions in this section that can be done 40 minutes. It can be seen on Appendix I: Section I. Listening section itself is split into two parts:

##### **1) Part A: Dialogue**

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<sup>1</sup> Michael A. Pyle. (2001). Cliff's Test Preparation. New York: IDG Books Worldwide. Page: 39.

These are brief conversations between at least two people. Sometimes each speaker speaks only once, and sometimes one or both speakers speak more than once. After the conversation, test takers are asked a question. Dialogue questions are in Appendix I: Section I Item 1-30.

## 2) Part B: Conversations and Talks

The conversations in this section are longer than in Part A. Short lectures and academic discussion are included as well. Each conversation or talk is spoken only one time. Several questions are asked after each. Test takers will hear two or three conversations in this section: each lasts less than one minute. After each conversation, test takers answer two or more questions. Test taker also hear four to six short lectures (approximately 2 minutes half each) and academic discussion (2 minutes or less each). There are generally three to seven questions for each short lecture and academic discussion. The questions can be seen in Appendix I: Section I Item 31-50.

### b. Structure and Written Expression

The Structure and Written Expression tests test takers understand and usage of standard written English. There are 40 questions that can be done in 25 minutes. This section consists of

sentence structure, word order, and word choice. It can be seen on Appendix I: Section 2

#### 1). Sentence Structure

The sentence structure questions test more than a word or two: they test test-taker ability to make a sentence complete. A sentence must have a subject, verb, and sometimes a complement. Sentence structure questions also test test-takers understand of subordinate clauses, which must not be independent clauses. The questions are in Appendix I: Section 2 Item 1-15.

#### 2) Word Order and Word Choice

Word order questions are generally more detail-oriented than sentence structure questions. They test, for example, your understanding that an adjective should appear before the noun it modifies, not after it.

The word choice types of question tests your understanding of idiomatic expressions, of which prepositions to use with certain words of problem that are sometimes confusing, and so on. Both questions of word order and word choice can be seen in Appendix I: Section 2 Item 16-40.

### C. Reading Section

The Reading section measures ability to read and understand academic passages. There are 50 items with provided 50 minutes. Test takers will encounter various question types in this section. Test takers understanding of vocabulary is also tested. The questions can be seen in Appendix I: Section 3 Item 1-50.

## **2. Data Analysis**

### **1. Data Score Identification**

The data of this research is 183 answer sheets. Each answer sheet consists of 140 items. Every single correct answer is valued as 1. Therefore, the maximum score of each answer key is 140, while the minimum is 0. For specific details, see Appendix 2

### **2. Split-Half Method**

After the total score of the data is found, the 183 answer keys must be split by half. The splitting is done by classifying the odd and even numbers. The odds consist of 92 answer keys, while the evens are 91.

Table 4.2

**Odd and Even Answer Keys Splitting**

<b>ODDS</b>	<b>EVENS</b>
1,3,5,7,9,11,13,15,17,19,21,23, 25,27,29,31,33,35,37,39,41,43, 45,47,49,51,53,55,57,59,61,63, 65,67,69,71,73,75,77,79,81,83, 85,87,89,91,93,95,97,99,101,1 03,105,107,109,111,113,115,1 17,119,121,123,125,127,129,1 31,133,135,137,139,141,143,1 45,147,149,151,153,155,157,1 59,161,163,165,167,169,171,1 73,175,177,179,181,183.	2,4,6,8,10,12,14,16,18,20,22,24 ,26,28,30,32,34,36,38,40,42,44, 46,48,50,52,54,56,58,60,62,64, 66,68,70,72,74,76,78,80,82,84, 86,88,90,92,94,96,98,100,102,1 04,106,108,110,112,114,116,11 8,120,122,124,126,128,130,132 ,134,136,138,140,142,144,146, 148,150,152,154,156,158,160,1 62,164,166,168,170,172,174,17 6,178,180,182.
Total 183 Answer sheets	

**3. Pearson Product Moment Analysis**

Pearson Product Moment Analysis could be done after the data is split half. The next step is counting the correct answers of each answer key. See Appendix 3: Helper Table for more complete details.

Table 4.3

**Helper Table**

$\Sigma X$	$\Sigma Y$	$\Sigma X^2$	$\Sigma Y^2$	$\Sigma XY$
4661	4529	241281	230775	230232

. The helper table shows the total correct answer of  $\Sigma X$  (Odds Answer Key): 4661, and the total correct answer of  $\Sigma Y$  (Evens Answer Key): 4529. Afterwards, every total of Odds and Evens is squared:  $\Sigma X^2$ : 241281 and  $\Sigma Y^2$ : 230775. The last counting is timing odds and evens answer key correct answer:  $\Sigma XY$ : 230232.

The total score is already gained from the data. However, before applying the Spearman-brown Formula, analysis of Pearson Product Moment is required. This is the Pearson Product Moment formula:

$$r_{XY} = \frac{n \sum XY - \sum X \sum Y}{\sqrt{n \sum X^2 - (\sum X)^2} \sqrt{n \sum Y^2 - (\sum Y)^2}}$$

$$r_{XY} = \frac{183(230232) - (4661)(4529)}{\sqrt{\{183(241281) - 21724921\}\{183(230775) - 21462075\}}}$$

$$r_{XY} = 0.97$$

#### 4. Spearman-Brown Formula

This is the last step of obtaining the internal consistency reliability value of TOEFL Equivalent Test. After the  $r_{xy}$  is obtained from Pearson Product Moment analysis, the formula of Spearman-Brown can be applied. There is a simplification:  $r_{xy} = r$ .

$$\rho = \frac{2r}{1+r} =$$

$$\rho = \frac{1,94}{1+0,97}$$

$$\rho = 0.98$$

From those formulation, it can be concluded that the internal consistency reliability value of TOEFL Equivalent Test is 0,98.

#### B. Discussion

Recalling Jeremy Harmer statement, reliability takes important aspect in test quality<sup>2</sup>. Reliability means test consistency and dependability. Reliability also plays a role as test quality maintenance tool.

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<sup>2</sup> Harmer, J. (2006). The Practice of English Language Teaching. Essex: Pearson Education Limited. Page 322.

The analysis of reliability in this research is internal consistency aspect. Internal consistency reliability uses split-half method in this study. The data must be analyzed with the requirements of Pearson Product Moment.

Table 4.4

PPM Requirements	
Pearson Product Moment Requirements	Data
1.The data is gathered by random sampling technique	The data is split half by its odd and even. The split was already in random
2. The data must be homogeny	The whole data is answer keys. There is no other shape of data.

Table 4.5

Test Items Identity	
TOEFL Equivalent Sections	Item Numbers
Listening: Dialogue	1-30
Listening: Conversations and Talks	31-50
Structure and Written Expression: Sentence Structure	51-75
Structure and Written Expression: Word Order and Word Choice	76-90



Reading Section:	91-140
Passage Questions	

As stated in the *Findings: TOEFL Equivalent Test Sections*, there are many sections on the TOEFL. However, during the data analysis, all items in the whole sections are generalized as the same data. This requires the requirements of Pearson Product Moment: Homogeny. The counting based on the sections for obtaining internal consistency value is considered as incorrect steps.

After the data is processed with the method, the correlation coefficient is obtained as 0,97. The value generates internal consistency value as 0,98.

Gay states that the accepted reliability coefficient value is in the range of 0, 00 - 1, 00<sup>3</sup>. Meanwhile, Usman and Setiady has more specific rubric for the internal consistency reliability value criteria. The criteria that can be followed is reliability coefficient with more than 0, 81. Normal coefficient reliability moves in the interval of 0, 00 – 1, 00 with description 0, 01 – 0, 20 considered as very low, 0, 21 – 0, 40 is low, 0, 41 – 0, 60 is quite low, 0, 61 – 0, 80, is medium, 0, 81 – 0,99 is high, and 1, 00 is very high<sup>4</sup>.

<sup>3</sup> Gay, L. R. (1987). *Education Research Competencies for Analysis and Application Third Edition*. Columbus: Merrill Publishing Company. Page 142.

<sup>4</sup> Usman, H and R. Purnomo Setiady Akbar (2000). *Pengantar Statistika*. Jakarta: Bumi Aksara. Page 138.

Table 4.6

**Standard Criteria**

<b>R</b>	<b>Interpretation</b>
0	No correlation
0,01 – 0,20	Very low correlation
0,21 – 0,40	Low correlation
0,41 – 0,60	Quite low correlation
0,61 – 0,80	Quite correlation
0,81 – 0,99	High correlation
1	Very high correlation

Source: Pengantar Statistika, Usman H. and Setiady A.

The result of this study shows that TOEFL Equivalent Test has reliability coefficient value 0, 98 which interpreted very high internal consistency value. This test is well maintained and dependable.

Even though the TOEFL Equivalent Test is compilation of some difference TOEFL resources, such as Cliff's TOEFL, and Longman<sup>5</sup>, the result of this study shows that the test has very high internal consistency reliability. Moreover, previous research conducted by Qorry Aina which identifies the construct validity of the test positively supports an outstanding result as well.

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<sup>5</sup> Aina, Q. (2016) *AN ANALYSIS OF CONSTRUCT VALIDITY OF TOEFL-LIKE TEST IN ENGLISH INTENSIVE COURSE PROGRAM OF UIN SUNAN AMPEL SURABAYA*. Undergraduate thesis, UIN Sunan Ampel Surabaya. Page 57

The result stated only minor items are not valid<sup>6</sup>. The items are 20, 102, 111, 106, 112, 62, 66, 67, 85, and 83 which counted total as 10 out 140. In conclusion, TOEFL Equivalent Test conducted by Center Language Development has been entirely examined from both construct validity and internal consistency reliability analysis, subsequently generates satisfying results.



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<sup>6</sup>Ibid... Aina. Page 57

