



EFL Learners' Ability in Reading Scientific Text in TOEFL

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ABSTRACT

TOEFL is commonly used to measure learners' English proficiency. TOEFL consist of reading comprehension, listening, structure and written expression. However learners got difficulties to do reading section, especially in reading scientific text due to its condensed information and different terms with general English. The aim of this research was to find out EFL learners' ability in reading scientific text of TOEFL. Descriptive quantitative method was applied to the research. The subject of the research was 8 learners of the fourth semester of 2019/2020 academic year STBA Persada Bunda Pekanbaru. The instrument used to collect the data was reading test. The data were analysed by using descriptive statistics to find the level of learners' ability in reading scientific text in TOEFL. After analyzing the data, it was found that their average score was 62,81. In brief, it could be concluded that EFL learners' ability in reading scientific text were in low level.

Keywords: TOEFL, Reading, Scientific Text.

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INTRODUCTION

Test of English as A Foreign Language (TOEFL) as one type of test is commonly used to measure learners' English proficiency, especially for them who use English as a foreign language. Indonesia as a nonnative speaker country uses English as a foreign language. TOEFL is also applied by many institutions in Indonesia for various purposes such as job vacancy, scholarship, and so on. In education field, most of universities in Indonesia use this test as one of requirement to accomplish their degree. The test is not only for learners who study in English department, but also all learners who take the degree. Regarding the importance of TOEFL in education field, so it is important to study about the test well.

As one of Indonesian college, Sekolah Tinggi Bahasa Asing (STIBA) Persada Bunda Pekanbaru also use TOEFL test as requirement to accomplish the degree. Learners who had passed the score, which had been determined about 450, would be awarded a certificate. The test applied in STIBA Persada Bunda focused in reading comprehension, listening, structure and written expression. Those basic skills tested have represented learners' competence in English.

In English Language Teaching (ELT), the students' capability in reading section of TOEFL has been a serious issue for nonnative learners. Octavia & Jufri (2020) found that the third semester students of State University of Padang had a poor ability due to less comprehension in reading TOEFL. Then, Adib Nazri et al (2020) revealed that the fourth

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semester students of Hamzanwadi University had low score in TOEFL reading section. Furthermore, Herdi (2016) investigated students' ability in reading TOEFL in Lancang Kuning University and found out that the seventh semester students' ability was in weak category. So, it can be concluded that nonnative learners' ability in reading section of TOEFL were still low, even for English department students.

Reading as a part of TOEFL occupied large portion in the test. Snow (in Rosari et al., 2016) defines it as the process of simultaneously extracting and constructing meaning through interaction and involvement with written. It can be inferred that people must be able to decode the printed word and comprehend it in their mind. This process needs two steps, by decoding and comprehending. Then, Moat (2005) adds that to be able to read properly, people have to recognize the symbols that form or make up words. From those statements, it can be said that reading is thinking process started by decoding symbol in printed word then comprehend it in mind.

Reading in TOEFL needs a complex skill. It is reasonable because it covers academic text in English which have wide range abilities and difficulties (Barry in Herdi, 2016). He also added that learners who had high ability usually have a very good command of academic vocabulary and grammatical structure. They also able understand and connect information, make appropriate inferences and synthesize ideas, even when the text is conceptually dense and the language is complex. Then, they able to recognize the expository organization of a text and the role that specific information serves within the larger text, even when the text is conceptually dense. Lastly, they are able to abstract major ideas from a text, even when the text is conceptually dense and contains complex language.

There are several technique of reading which can be applied based on the readers' purpose. Grellet (in Gustadevi, Ngadiso, 2014) underlined technique of reading as skimming, scanning, extensive reading, intensive reading, receptive reading, responsive reading. Moreover, Mikulecky and Jeffries (in Sonia & Fisher, 2016) emphasized the technique for skills in reading include Skimming, Scanning, Previewing and Predicting, Making Inference and Summarizing. Sharpe (2004) specified nine techniques in reading TOEFL such as:

Previewing

Previewing is the process to see the passage quickly to form the general idea of a text about. It can be done by reading the first sentence of each paragraph and the last sentence of a passage. It should be done as quickly as possible. This process helps the learners' to form general idea in their minds. In previewing, the learners are not intended to read for specific information, but for topic impression

Reading for specific idea

Reading for specific idea intended the learner to read main idea, then identify authors' point of view, thesis statement, and purpose. The question of reading for specific purpose usually asking for the same information such as : (1) What is the main idea? (2) What is the subject? (3) What is the topic? (4) What would be a good title?

Using context for vocabulary

A context can be recognized as the combination of vocabulary and grammar which surrounds a word. Context can be state as a sentence or a paragraph or even a passage. Context helps to make a prediction about the meaning. If learners understand the general meaning of a sentence, they would easily find out the general meaning of the words in the sentence. Making predictions from contexts is very essential in reading a foreign language. By predicting, learners would be able to read and understand the meaning of a passage.

Scanning for the detail

Scanning for the detail was done by deep reading to find specific information. The simple way for scanning for the detail, learners directly read the question and find the content words. Content words were commonly used such as nouns, verbs, or adjectives. The content words contain the content or the meaning of the sentence.

Making inferences

Inferences are logical conclusion based on evidence. Evidence is a direct statement or fact was found in a passage. However, sometimes in a passage, the direct statement was not found. Peterson (2007) called it as information which not stated in the passage. So, the learners should use evidence to make inferences. The inferences can be about the passage or about the author's point of view.

Identifying exception

Exception is a choice of information which was not mentioned in the passage. In a reading passage, learners have to choose one of four possible answers and one of that not mentioned in the passage. Scanning skill was needed to locate related words and phrases in the passage and the choices.

Locating reference

Reference is a word or a phrase which refers prior or after the text. The pronouns which were commonly used in the passage such as "it", "its", "them", and "them". To locate the reference, learners need to read the passage and find the pronoun. Then, try to replace the pronoun with the four answer choices. When the correct pronoun was correctly substitute, the meaning of the sentence were not change

Referring the passage.

Learners will be asked to find specific material in the passage and identify it by line number or paragraph after reading the passage on the TOEFL. First, take a look at the question. Then scan the answer choices for the information in the question using the line and paragraph numbers.

Reading faster

Use the skills that learners have learnt to read the passage. For vocabulary, preview, read for core ideas, and use contexts. Read phrases rather than words to speed up the reading. When learners focus their attention on the paragraph, they try to see the complete line of text. Scan for specifics and facts. Furthermore, Johan (in Mahfuzah, 2019) reading comprehension in TOEFL focus on how to be advanced reader. Advanced reader means that the students try to get the information exactly and can use the time as effective as possible.

In TOEFL, reading section measures the learners ability to understand university level academic texts and passages (Takido in Lestari, 2017) In academic settings, learners are expected to read and understand information from textbooks and other academic materials written in English. The learners are demanded to be able to comprehend various text. One of them is scientific text. Scientific text which is Halliday & Martin, (1993). Halliday called as "scientific English" refers to text which its content consist of specific field. The specific field can be in the form of scientific reading engineering. Bio-technology, architecture, and so on. The characteristics of scientific text also different from other text. One of them is condensed information. Halliday (in Maspufah, 2017) said that scientific text is put in writing mode in different linguistic aspects. Further, he explained that there are five characteristics of scientific text: objective, impersonal, scientific reading, practical/abstract, and written language.

Objective means that one which perceived similar by all people regardless of the surrounding elements, such temporal, spatial, and manner characteristics. For example, when someone values something by the term "good, better, and excellent", those terms can be made to objective by defining each term being "good". It means that almost eighty percent of the things are favorable. The next characteristic is impersonal. Ideas or concepts in scientific texts are impersonal regard to the involvement of the writer in the text. The involvement of the writer in the text made the text seemed like an opinion. That is why, the word such as I, we, s/he and the writer is avoided.

Scientific text refers to a linguistic form which conveys meaning of a number of other linguistics forms. It means that scientific text contain condensed meaning of words. Scientific text is always used in scientific study in any discipline as the term codes specify in the discipline. Whereas, practicality of scientific text indicates that words or linguistic resources used are economical and unambiguous. Several information or idea presented in one sentence by using phrases.

Scientific texts are presented in the grammar of written language. Written language is different from spoken language. The different is not only in medium that spoken language is delivered by sounds or phonemes and that written language is delivered by script, but also in lexico grammatical aspects. In written language the active sentence is changed into the passive one. The vocabulary used in the text is commonly low size vocabulary and their meanings are different with general English. The reader who wants to gain the information must have sufficient background knowledge and context of vocabulary used which are designed for native speaker.

Mastering scientific text is important for learners who study in English department. They must have a good skill in mastering every type of text. Besides that, they are also demanded to have high score in TOEFL, because scientific text usually appear in both of reading and listening section. By mastering this kind of text, hopefully, learners are able to pass the minimum score of TOEFL.

However, most of learners faced difficulties in understanding scientific text due to some problems. First, they had limited vocabulary to understand some words or phrases used in scientific text. In scientific reading material, especially in scientific text, the vocabulary is different from general English. They are chosen for specific purposes which are also called scientific reading vocabulary. For example the word "saw" will be translated as a hand tool for cutting wood or other material. It will be wrongly to be translated as the past verb of "see".

Second, they were confuse with the fact density or condensed information. Since the scientific reading material consist of fact density, scientific reading writing seem crowded with information and difficult to read. Learners who lack of background knowledge with the related field will have problem to sense the context. They cannot imagine the object because the writer mostly presents fewer description about it. For example, Nutmeg is a spice derived by grating the kernel of the fruit produced by nutmeg tree. This tree belongs to the nutmag family. *Mysris ti caca*, genus *Mysrisca*, species *M. Fragrance*.

In scientific text, the meaning of a word or phrase can be different. It defends to the field of the text. However, most of learners of Persada Bunda Foreign Language college seemed not around with the scientific text and rely their understanding to general English. Therefore, they face big problem in understanding scientific reading material. The fourth semester learners were chosen because they have English Proficiency lecture which use TOEFL as their object of study. While, scientific reading material was chosen for this research due to its condensed information which words had been selected into specific purpose. So, the vocabulary used is different from general English form.

Most research in Reading section of TOEFL included all types of text which tested in Reading section. While the research about reading section which focus only on technical text relatively scarce. Because of the reason, this research was conducted to fill the gap by finding the EFL learners' ability in reading scientific text of TOEFL.

From the previous description, the purposes of the research were formulated: "How is the EFL learners' ability in inferring scientific reading text of TOEFL?"

METHOD

This study was descriptive quantitative research. It was intended to find out the learners' ability in reading scientific text in TOEFL. Best (in Maspufah, 2021) said that descriptive research describes the situation or thing that exists at the same time of the study. It means that this research does not tend to find a new theory but only verify and describe the existing one. By implementing quantitative approach, it attempt to find out EFL learners' ability in reading scientific text in TOEFL.

This research was conducted at STIBA Persada Bunda Pekanbaru, Jalan Diponegoro number 42 Pekanbaru. The population of this research was the fourth semester semester learners of 2019/2020 of STIBA Persada Bunda. The population of this research was the fourth semester semester learners of 2019/2020 of STIBA Persada Bunda. There were 2 paralell classes, namely regular A and B. The sample was taken by using purposive sample from regular A which consist of 8 learners. Arikunto (in Maspufah, 2018) stated that if the population is less than 100, the sample will be all population number. So, all the learners were taken as the sample.

In this research, the instrument used to collect the data were reading test. The test was taken from the site https://www.examenglish.com/TOEFL/TOEFL_reading8.htm. The test consisted of 40 items in objective form. It means that every item was scored 2.5. The indicator of the test can be seen in the following table:

Table 1 The Indicator of the Test

No	Indicators	Items	Score
1	Previewing	5	12.5
2	Reading for main ideas	5	12.5
3	Using context for vocabulary	5	12.5
4	Scanning for detail	5	12.5
5	Making inference and identifying exception	5	12.5
6	Locating reference	5	12.5
7	Refering the passage	5	12.5
8	Reading faster	5	12.5
Total		40	100

The data were analysed by tabulated and formulated raw scores. And then, it compared again with the standard level of ability to determine the level of ability in reading scientific material text in TOEFL. The following is the table of standard level of ability taken from ETS Paper based in Herdi (2016)

Table 2. Level of Ability

No	Scale	Level
1	84-100	High
2	71-83	Intermediate
3	56-70	Low
4	<55	Weak

FINDINGS AND DISCUSSION

The test administered to the fourth semester students of 2019/2020 academic year with total number 8 students. The test consisted of 40 items of multiple choice tests. The test was administered to answer the research question about how is EFL learners' ability in reading scientific text. To find out the answer of the research question, the test papers were submitted and scored. The score of each item was 2.5 which meant that the lowest score was 0 and the highest score was 100 for the total from 8 indicators. The first step was the individual score calculated.

After calculating the score, it was found out that there were two learners got 85 or 34 out of 40 questions answer correctly, one learner got 77,5 or 31 out 40 questions answer correctly, one learner got 75 or 30 out of 40 questions answer correctly, one learner got 65 or 26 out of 40 questions answer correctly, one learner got 35 or 14 out of 40 questions answer correctly, and one learner got 27,5 or 11 out of questions answer correctly. The learners' highest score was 85 and the lowest score was 27,5. Then, the learners' score were classified into ability scale to determine the level. After that, the percentage of rating scale was count to find out the level of learners ability in reading technical text. The following table showed the percentage of rating scale of learners' score:

Table 3. The Percentage of Rating Scale

Scale	Level	Frequency	Percentage
84-100	High	2	25%
71-83	Intermediate	2	25%
56-70	Low	1	12,5%
<55	Weak	3	37,5%

From the table, it can be seen the learners' rating scale which was ranging started from weak level up to high level. From the percentage, it was found out that there were two learners or 25% in high level, two learners or 25% in intermediate level, one learner or 12,5% were in low level, and 3 learners or 37,5% in weak level. Their average score was 62,81 or in low level.

The distribution of learners' ability in reading scientific text based on the reading test indicator such as: previewing, reading for main ideas, using context for vocabulary, scanning for detail, making inference and identifying exception, locating reference, referring the passage, and reading faster were depicted in the following table:

Table 4. Rating Scale of Reading Technical Text

Scale	Level	Indicator	Average Score
84-100	High	-	-
71-83	Intermediate	Referring Passage	78,00
		Locating reference	73,00
		Reading Faster	73,00
56-70	Low	Using Context for Vocabulary	70,00
		Scanning for Detail	60,00
		Previewing	57,50
		Reading for Main Ideas	57,50
<55	Weak	Making Inferences	35,00

From the table, it was found that there were three indicators which had average score in intermediate level. They were referring passage with average score 78,00, then locating

reference and reading faster with average score 73,00. Then, there were four indicators in low level. They were using context for vocabulary with average score 70, scanning for detail with average score 60, previewing and reading for main ideas with average 57,50. And one indicator was in weak level. It was making inferences with average score 35.

The purpose of the research about to find out EFL learners' ability in reading scientific text of TOEFL. The findings which had been obtained from data analysis showed that the learners' average score was 62,82 or in low level. In other words, the learners were still lack ability in comprehending scientific text of TOEFL. It was proven from the table 4 which indicated learners' ability in making inferences and identifying exception were weak with average score 35. It can be said that learners had weak ability in using their logic to find evidence to make inference and low ability to comprehend an argument or idea which implied, or not stated in the scientific text. They also were not able to identify information which not stated in the passage (Peterson, 2007:103). Then, learners also had a low comprehension in using context for vocabulary (70), scanning for the detail (60) Previewing and reading for main ideas (57,50).

Meanwhile, the highest average score gained by students were referring passage (78), locating reference and reading faster (78) that was in intermediate level. It meant that the learners were able to find specific material and identify it by line number of paragraph (Sharpe, 2004: 207) Learners were also able to find it because the sentence and passage in technical text is simple and unambiguously. It is in line with the characteristics of scientific texts, practicality, which used words or linguistics resources economically and unambiguously (Halliday in Maspufah, 2017).

So, it can be concluded that the lowest score in reading technical text of TOEFL was in making inferences (35). This finding was in line with the result of the research conducted by Herdi (2016) that the most difficult skill in reading section of TOEFL was making inferences and identifying exception. And the highest score was in referring passage (78)

CONCLUSIONS

Based on the data analysis, it was found out that the learners average score was 62,81. It can be concluded that EFL learners' ability in reading scientific text was in low level. Learners' gained three indicators which had average score in intermediate level; referring passage (78), locating reference and reading faster (73). Then, four indicators were in low level; using context for vocabulary (70), scanning for detail (60), previewing and reading for main ideas (57,50). And one was in weak level; making inferences (35). To solve the problem of achieving low ability, In term of teaching-learning process, it is suggested that lecturers are expected to be give more various text such as scientific reading text to discuss in reading comprehension. So, learners would be around with the term used in scientific text. It is also suggested other indepth study to discover more about gaining a good score in TOEFL.

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