

CHAPTER II

REVIEW OF RELATED LITERATURE

This chapter presents the result of reviewing some literature related to the topic of the study covering: general concept of English proficiency, definition of Statistic (Mathematic) and previous study.

A. General Concept of English Proficiency

English Language Proficiency is the ability of Students to use English to create and communicate meaning in oral and written contexts while completing their study program. English Proficiency is one's ability to understand and produce English, including reading and writing if applicable. Normally linguistic communication proficiency appraisals should incorporate reading, composing, hearing, and speech production exercising. For this survey, merely the basic reading and analytic accomplishments in English will be assessed.

There are three types of English Proficiency: proficiency in listening, proficiency in speaking, proficiency in reading and proficiency in writing.

a. Proficiency in Listening

Krashen (1982) states that listening is the most important thing in language learning and that the ability to speak and write fluently will come naturally over time. This means that communication will not function properly without listening because listening is a basic language acquisition skill. Besides listening is also a difficult skill in learning a second language. Listening encourages second language learning because it

provides input which is a major factor in the learning process as stated by Krashen. This means that listening is a significant skill during the process of acquiring language. In listening, the listener must distinguish between sounds, understand vocabulary and grammatical structures, interpret stress and intention, maintain, and interpret this in the larger social and cultural context of speech (Wipf, 1984).

Rost (2002) defines listening, in a broad sense, as the process of accepting what the speaker actually says (receptive orientation); construct and represent meaning (constructive orientation); negotiating meaning with the speaker and responding (collaborative orientation); and, creating meaning through involvement, imagination, and empathy (transformative orientation).

It is important to recognize all the language components that are required to understand the message because it is a fact that students encounter these language components when they are exposed to the real and unreal context. In addition, listening skills are processes that allow the listener to understand the messages that determine and identify the parts that contain the speech. This also allows the listener to be an active participant in the community that is involved with it.

Listening is considered a major component of language learning and teaching because it is a basic skill that must be mastered in English. Listen normally spends more time in acquiring than other language skills and

requires some learning process. A broader understanding of listening will lead to pleasant learning and easier acquisition of other skills such as speaking, reading and writing.

b. Proficiency in Speaking

Speaking is one of the important skills in English as well as literary skills, both in the first and second languages. For most people, mastering speaking skills is the single most important aspect of learning a second or foreign language, and success is measured by the ability to communicate in that language. Speaking is also an instrument to express messages to the listener whether the listener understands or not (Tarigan: 1986) and as quoted in (Šolcová: 2011), speaking has its own patterns and structures that are different from writing. In addition, speaking is also a process of building and sharing meaning through the use of verbal and non-verbal symbols, in various contexts (Chaney: 1998).

So, talking is the key in communication because it is the basic point for communication. This is an interactive process for constructing meaning that involves the production, reception, and processing of information. Speaking a second language or a foreign language is often considered the most demanding skill.

c. Proficiency in Reading

Reading is one of the English skills besides speaking, listening and writing. This is a way to understand the written message. According to

Nuttal (2000: 2) reading means the result of interaction between the writer's mind and the reader's mind. This is the way the reader tries to get the message or the intended meaning of the writer. In this process, the reader tries to make the meaning intended by the writer; the reader can get the message, and the meaning of the writer.

According to Pang (2003: 6) reading is defined as understanding written texts. He said that reading consisted of two related processes: word recognition and understanding. Word recognition is defined as the process of getting how written symbols are according to a person's spoken language, while understanding is the process of making the meaning of words, sentences and texts connected. He added his statement that readers who have background knowledge, vocabulary, grammar knowledge, experience with texts and other strategies can help them understand written texts. Based on the two definitions above the reading can be interpreted as an instant recognition of various written symbols with existing knowledge and can also be defined as an understanding of information and ideas being communicated. It can also be said that reading is not only the process of getting written symbols in accordance with the language someone uses but also the process of making meaning of connected words, sentences and text that can be called comprehension.

d. Proficiency in Writing

Writing is one of the important skills needed in learning a foreign language. Brown (2001: 34) states that trends in teaching writing Second

English and other languages are integrated with teaching in other skills, especially in speaking and listening. When teachers ask students to find ideas in writing, students will try to find their sources on the internet, newspapers, magazines, radio and television. While searching for information, they not only use one skill but they apply several skills such as listening, speaking and writing.

Spratt, Pulverness, and William (2005: 26) state that writing is a productive skill. They say that it produces language rather than accepting it. Hayland (2004: 09) also states that writing is a way to share personal meaning. That is, can share ideas or goals in written form. People build their own views about certain topics.

"Writing skills exist on several different aircraft independently" (Kroll, 1990). This conception of writing correlates with the fact that these skills are generally the last language domains developed for native-English and English learners (Saville-Troike, 1984). In their analysis of essays using automated tools, Coh-Metrix, McNamara, Crossley, and McCarthy found higher-quality essays displaying text difficulties and language sophistication, specifically "complex syntax, greater lexical diversity, and less frequent words" (2011). Another analysis found that writers had to manage sophisticated syntactic and linguistic features, such as those discovered by Coh-Metrix, while also operating "in complex rhetorical discourse systems and rules." The demands to operate in complicated linguistic systems namely English, when meeting the

demands of academic rhetoric, often produce essays that vary greatly in their strengths and weaknesses, ranging from what is called Kroll weak syntax weak rhetoric, weak syntax strong rhetoric, weak syntax strong rhetoric , or the strong syntax of strong rhetoric (1990). Researchers have found that many well-intentioned students may only pretend to use academic discourse by focusing on surface elements such as formatting, spelling, and conventions (DeVere Wolsey et al., 2012).

Apart from the challenges of writing, it is very important for students to achieve competence in this field. "Writing provides the ability to articulate ideas, refute opinions, and synthesize various perspectives [making it] important to communicate persuasively with others, including teachers, peers, colleagues, coworkers, and the community." As mentioned earlier, language choices regarding syntax and word choice function to reflect the sophistication of linguistic skills, the competence of writers, and even socioeconomic status (McNamara, Crossley, & McCarthy 2011)

B. Definition of Mathematics (Statistics).

Mathematics is taught using English as a teaching medium. Launio (2015) shows that the teaching media used in teaching influence student mathematics achievement. According to Launio (2015), teaching Mathematics in English added by Hiligaynon is better than teaching subjects in English only. Thus, students learn when taught in two languages.) and second (English) language students in South Africa and

did not find a significant difference between their Mathematics performance after both received the same lecture but different learning media were used.

According to Anderson & Bancroft, Statistics is the science and art of development and the most effective methods for gathering, tabulating, and interpreting quantitative data in such a way that errors in conclusions and estimates can be estimated using inductive reasoning based on mathematical probabilities (opportunities).

Mathematics is a pillar of almost all schools in the academic sector. Given the important role of mathematics in tertiary education and most careers, it is not only beneficial but also important to establish several factors that facilitate achievement in mathematics in disadvantaged schools. Johnson (1984) states that black people in the United States underperform in mathematics and as a reason for this lack of achievement he blames factor-related culture as:

- Inability to see the usefulness of mathematics for their lives, both now and future;
- Lack of success in previous math courses;
- Failure to receive positive career counseling;
- Absence of role models;
- Lack of significant other people, such as parents, who show interest mathematical achievement;

- Mathematical views as subjects suitable only for white men (Maree, 1994).

C. Review of Previous Study

Previously, the writer reviews some preview studies which have a correlation with this study in order to avoid unnecessarily replication. They are useful for the reference and comparison to the researcher's study since they have similar topic with the study. The previous studies give links between TOEFL and Statistics.

The first, previous study is "*The Correlation between Students' Score in Toefl and Gpa*" by Annisa Amanda Putri (2018). Her study results show that English Department students' TOEFL score has a significant positive correlation with their CGPA, 7th semester GPA, and 8th semester GPA, as indicated in the correlation coefficient value is 1. According to Coolidge (2012), a strong positive correlation happened when the correlation coefficient value is close to +1 or greater than 0.50.

The second study is entitled "*The Relationship of English Proficiency and Mathematics Achievement*" by A.S. RAMBELY, R.R. AHMAD, N. MAJID & S.H. JAAMAN (2015) The results showed that good mastering of English is needed to nurture and understand mathematics subject to achieve excellent results. Furthermore, low English proficiency resulted in students experiencing a shortage in mathematics learning and obtained a lower grade in a mathematics course.

The third study is entitled “*Mathematics Performance and its Relation to English Language Proficiency Level of Bilingual Arab University Students*” by B. Yushau and M. Hafidz Omar (2015). The finding in his study indicates that the students’ proficiency levels in English are a factor affecting their performance in mathematics. However, we found a mixed response among student perceptions on whether the change of language of instruction from Arabic to English has any impact on their mathematics understanding and performance.

The fourth study is entitled “*The Relationship of Mathematics Score and English Proficiency of Mathematics Teachers*” by MARSAM A. SALOMON. The results showed that there was a weak positive correlation ($r = 0.20$) between Mathematics scores and English language proficiency of Mathematics teachers at the Parañaque National High School, Parañaque City, but this relationship was not statistically significant ($p > 0.05$, 0.53). The results of this study show insufficient evidence to confirm the relationship between Mathematics scores and English proficiency.

Referring to the previous study above, the writer used English Department Students as sample of the study. It is realized that English proficiency and statistics competence are suitable for them. Furthermore, this study differs from the previous studies above because some researchers did not use English students as samples, while the researcher used English students as samples.