

## **CHAPTER II**

### **THEORITICAL REVIEW**

In this chapter some theories and literatures described to give more investigation of reading, especially about matters that are related to the readability. More specifically it will discuss about the definition of reading, reading comprehension, affective reading, reading materials, the definition of readability, the factors of readability, and how to measure readability.

#### **A. Reading**

##### **1. The Definition of Reading**

In line with the development of science and technology is growing rapidly, especially in printing technology, then more and more information stored in books. At all levels of education, reading skills are a priority scale that students must be mastered. So, by reading the readers will obtain a variety of information that was not previously ever got. According to Alderson (2001) reading is an interaction between the text and the reader of the text. Reading activities are carried out and used by readers to get information that will be conveyed by the author in words or in a text (Tarigan 2008:7). Therefore, reading is a non-verbal communication (Nurhayati, 2018:34). In the reading text, the readers combining the informations from a text from their own background knowledge to build the meaning (Nunan, 2003:68). In other words, reading is a process that comprises physical activity and mentally.

One of the physical activities in reading is when the reader moving the eye along the lines of writing in a reading text. Reading involves

mental activity which guarantees acquisitions understanding to be maximized. Reading is not just affecting the eye ball from the left to the right but away from it that is the activity of thinking for understanding the text. More specifically, reading is a process of constructing meaning (Caldwell: 2008). The reader not just to know the correct articulation of words but the reader will not be able to understand what they read without a correct understanding the meaning. Reading must be interactive process that makes the readers and text process the strategies and background knowledge (Lems, Miler, and Soro, 2010). Reading is essentially something complicated that involves many things, not only pronouncing the writing, but also visual, thinking, metacognitive and psycholinguistic activities (Rahim, 2008:2). Reading is a type of receptive written language ability. It is called as receptive because by reading the reader will be able to obtain information, gain knowledge and new experiences. Reading enables students to understand and comprehend language through form like text passage, but some students thought that reading is perhaps the most difficult language skill to learn (Nurhayati, 2018). All of that are obtained through the reading will allow the person to be able to enhance their thinking power, sharpen views and broaden their insight.

The process of reading include of some aspects, such as (1) *Sensory aspect*, is the ability to understand written symbols, (2) *Perceptual aspect*, is the ability to interpret what is seen as symbol. (3) *Schemata aspects*, is the ability to relate written information to existing knowledge structures. (4) *Thinking aspect*, is the ability to make inference and evaluation of the

material being studied. And (5) *Affective aspect* is the aspect relating to interests that affect reading activities (Santosa, 2003:6). The interaction between the five aspects will give the good results in reading comprehension that is the creation of good communication between the writer and the reader.

Readers take a great role in comprehending the text. They are the ones that concept the meaning. By constructing the meaning, the reader also have some purpose in reading. According to Tarigan (2008:9-11) there are seven purposes, they are reading for facts and detail, reading for main ideas, reading for arrangement or organization, reading for inference, reading to classify, reading to evaluate, and reading to compare and contrast. Some of the purposes above are specific. The general purpose of reading is to find information deeply, including content and to understand the meaning that contained in the text (Nurhayati, 2018)

As a reader, they are also need to permit them to be able to translate associated and to develop the meaning of the content. They require both of skills to allow them to be able to decode connected and to construct the meaning of the text. To be clearer, Harmer (2001) in bottom-up processing, the reader understands the text by stringing detailed elements together to build up as a whole. The bottom-up models regularly comprise of lower-level reading processes. The reader starts with the elemental essential of letter and sound acknowledgement, which in turn permits for morpheme acknowledgement taken after by word acknowledgment, building up the recognizable proof of linguistic

structures, sentences, and longer texts. Letters, letters cluster, words, phrase, sentence, longer text and at long last meaning is arranged in accomplishing comprehension (Nunan, 2003:70). Then, in the top-down skills, the reader gets a general view of the reading by absorbing the overall picture. The reader starts with the thought that comprehension resides in the reader. The more students read, the better they read, and the better they read the more they read (Nuthayati, 2019). They are utilizing the background knowledge, make expectation, and look the text to affirm or dismiss the expectation that are made (Nunan, 2003:69).

It is critical to the reader to master both bottom-up skills and top-down skills. Both skills can total each other when the reader is reading a content. In some cases it is detailed elements that help a reader to understand the text as whole but sometimes, it is the general overview that helps the reader to process the details. Combining these two skills can help the reader to understand what they read to be better. Hence, it can be seen that reading isn't as it were looking at the word within the word into graphic symbols but too getting meaning from word to word or line to line to get it what we read. It implies that reading is a process to understand the content to get information.

## **2. The Purpose of Reading**

Everyone may read for numerous reasons, which reason offer the readers to more understand what is examined by them. If they are reading for delight, enjoyment, they may read either quick or slowly based on the way they like or feel. But if they are reading for study or find some

information such as news, science, which are portion of their study or assignment it do very slowly and carefully (Lado, 1964:1540). Readers are usually slight(Gordon, 1972:64). Readers know that they are reading either because they need to or because they have to and they are aware of the differences in their approaches for each of these reason.

According to Anderson (1992:90) stated that there are seven purposes of reading, those are (a) *reading for details*; reading to know what is finished by the subject of the story, (b) *reading for main ideas*; means that reading to catch the problem statement, (c) *reading for sequenze of sequence*; reading to know every part of the story, (d) *reading for inference*, reading to recognize what is meant by the writer in the story, (e) *reading for classifying*, reading to find uncommon thing, (f) *reading for evaluating*, the reading to know the importance of the story, and (g) *reading for comparing a contest*, reading to compare the way of the story from the way to the story and from the way life of the reader.

Besides, Grabe (2009:8) also stated six major purposes of reading, those are:

a) Searching Information

When a reader needs to discover particular information, a reader ought to engage in search process that ordinarily incorporates scanning and skimming. The combination of it can construct a straightforward understanding of the text allow the reader to search around for information and recognizing a particular form.

b) Quick understanding

A reader scans when they want to decide what a text is about and whether or not a reader wants to spend more time reading it.

c) Reading for Study

A reader reads to study when the information in the text is recognized as crucial aspect and when the information will be used for some task or maybe needed in the next time.

d) Integrating information

This purpose is signifying a more complex and more challenging task than reading for study.

e) Evaluating, critique, and use information

Occasionally readers are inquired to assess and critique information for multiple texts, required to create decision about which viewpoints of the text are more vital, the most influential or the most questionable.

f) General comprehension

Within the most common reason for reading among fluent readers and it is default suspicion for the term reading comprehension. It takes places as a reader reads a great novel, an curious magazine, etc.

### **3. Kinds of Reading**

There are several sorts of reading that people can do. Seen from the hearing or not hearing the voice of the reader, the process of reading divided into reading aloud and silent reading. Tarigan (2008:23) reading

aloud is a movement that used as a tool for the teacher, students, reader, other people, or hearer to grasp and understand the author's information, thoughts, and feelings. Then, silent reading is reading in silence. It is used to capture the main thoughts contained in reading in a way concentrate physically and mentally, read as quickly as possible understand the content, appreciate content, and re-express the content of the reading.

Furthermore, it is said that silent reading divided into two, that is extensive reading and intensive reading. According to Nunan (2003:72), extensive reading means reading many books (or longer segments of texts) without a focus on classroom exercise that may test comprehension skill. Extensive reading is read as much as possible in the shortest possible time (Tarigan, 2008:32). The purpose of extensive reading is to understand the important content quickly and efficiently. Extensive reading covers survey reading, skimming, and superficial reading. Extensive reading can be compared with intensive reading.

Intensive reading is reading carefully to understand a text precisely and accurately. Intensive reading includes a brief reading section taken after textbook activities to create comprehension and/or specific reading skill (Nunan, 2003:71). It means the ability is to comprehend details correctly, fully, and judgmentally to the truths, concepts, thoughts, viewpoint, experiences, messages, and sense that occur in written discourse. Of course, the purpose of intensive reading is to improve reading skills in detail by emphasizing understanding of words, sentences, developing vocabulary, and also understanding the entire content of

discourse. Intensive reading include of literal comprehensions skill, inferential understanding, critical understanding and creative understanding.

#### **4. Reading Comprehension**

In reading a text, the readers need understanding to be able to obtain information precisely. Reading comprehension is the process of developing meaning including the written language by interpreting textual information within the light of prior knowledge end experiences using suitable and efficient comprehension procedures (Snow, 2002:11). The process of constructing meaning is the process in which the reader combines their prior knowledge with the additional from a text, draw the meaning of words, and connect it to reach the clear understanding of the written text (Pang, 2003:14). It means the reader uses his understanding to understand his reading with the process of constructing meaning and interpreting textual information.

Furthermore, according to Snow (2002) views reading comprehension as a meaning getting process, in this manner it needs an understanding. Understanding a written text implies extricating the desired data from it as proficiently as conceivable (Brown, 2003:54). The readers utilize the words extracting and constructing to emphasize both the importance and insufficiency of the text as determinant of reading comprehension. Considering Snow's, it can be seen that comprehending a text implies getting meaning from the text. The goal is to gain general understanding of what is depict within the content instead of to obtain



meaning from confined words or sentences (Woolley, 2011:15). Subsequently, the reader attempt to extricate the most focuses of the content and emphasize which things are vital and not from the text.

Getting meaning from the text is not as simple as it said. Readers frequently had troubles in finding implicit clues or inferred implications. The most variables that influence their continuance in overcoming the troubles are their inspiration and mindfulness, and their life encounters as foundation information. Hence in maximizing the results, the should be in appropriated level of uneasiness, and be given with the correct substance of text.

From the definition above, reading comprehension can be characterized as the method in which the reader develop meaning from a content associated to the background knowledge they had to induce the clear understanding of the writer's message. In this process, the reader utilized their earlier knowledge about the subject, language structure, and content structure. Within the handle of understanding the message that's expressed or implicit within their content, the reader moreover required to utilize different procedure such as foreseeing, clarfying, and affirming. Those were all methodologies utilized by the reader for the arrangement of meaning.

## **5. The Levels of Reading Comprehension**

According to Kennedy (1981:218) define the levels of reading comprehension as follows:

- a) *Literal comprehension*, means reading to understand, remember or recall the information obviously comprise in a passage. It states that the readers are capable to know what a writer says. This understanding focuses on the reader's ability to find clear information.
- b) *Inferential comprehension*, means reading in arrange to discover a few data which isn't explicitly expressed in the passage, utilizing the reader's experience and instinc. It refers that the readers ought to be able to create thinking or finding information that are not expressed on the text or certain information.
- c) *Critical or evaluative comprehension*, means reading in organize to compare information in a passage with the readers' own knowledge and values.

Based on the explanation before, generally it can be concluded that reading comprehension is the method extrictaing and understanding the information of written text which has components for considering of reading. The inside components could be a reader, text, activity, while the outside elements are content and socio-cultural.

## **6. Factors Affecting Reading Ability**

There are many factors that affect reading ability both beginners and advanced readers. According to Alderson (2001) stated that there are two factors that affecting in reading those are reader variables and text variables. The reader is the one who are doing the activity of reading whereas the content is the materials that the reader read (Nurhayati, 2019).

### **a. Reader Variables**

The reader's background knowledge is the key factors that disturb the reader in reading. This aspect does not only impact the process of reading but also the end of the process and their understanding of the text. The reader's background knowledge gives the expectation about what will they examined by reading the tittle as it were. Schemata concept is one of the theory that clarifies almost what the reader knows will influence almost what they get it. According to Brown (2001:299) states that the reader brings the information, knowledge, feeling, involvement, culture to the printed word. The text itself does not carry a meaning some time recently the reader gives their understanding on their knowledge that they have.

Schemata theory divided into two classes those are formal schemata and content schemata. Formal schemata includes of linguistic agreements and language. It also covers the knowledge and how texts are systematized and specific structures or different text genre. It is often said that formal schemata is connected to people knowledge about discourse structure. Little bit different from formal schemata, content schemata implies knowledge of the world, containing this that matter to the text.

### **b. Text Variables**

According to Sadoski (2004:75) stated that the content, could be a conspicuousness perspective here since that's where the message encode. He moreover accepts that the content is like an entrance that the

reader must pass. The substance of the content can influence the reader on how to handle the data. The reader will expect that the unique content will be to get it that the concrete one. The more possible, concrete and the genuine thing within the content it makes more discernible the content for the reader. The reader moreover has more understanding in case the substance is commonplace with the things around them.

Moreover, the content of the text will also relate with the sort of the text. Expository texts are more likely to be harder to process than descriptive text. This also happens to narrative text. Students will likely understand a narrative text better than an explanation one. It is better to select the content and sort of the text based on the interest of the students, however, it not always necessary. The higher the level of them, the more complicated text types and contents that they can handle.

One thing that cannot be cleared out from the text is linguistic variables. It is additionally to be an imperative figure that influences reading. For a second language reader, linguistic variable can be such a problematic matter to deal with, such as syntactic, lexical, vocabulary, etc. Besides, since reading is connected to the human visualization, it is also significant to consider typography features and the medium where the text is presented. The appearance and the medium of the text can impact the reader whether they will read it or not, such as features of print, font, layout can be vital causing reading ease or difficulty.

Another perception about factors affecting reading ability comes from Arnold & Lamb (1976) as follows:

**1) Physical Factor**

Physiological factors include physical health, neurological considerations, and sexual orientation. weakness is additionally an unfavorable condition for children to learn, particularly learning to read. Some experts suggest that neurological limitations (such as various brain defects) and physical immaturity are among the factors that can cause children to fail to improve their reading comprehension skills. The disorders of the speech, hearing, and sight devices can slow down the progress of learning to read.

**2) Intelligence Factor**

Intelligence factor is the global individual's ability to act according to goals, think rationally, and act effectively on the environment. In general, children's aptitude does not completely influence the achievement or disappointment of children in the beginning of reading. The other aspects such as teacher teaching methods, procedures, and teacher abilities also influence children's pre-reading abilities.

**3) Environmental Factor**

The environmental factors also affect the development of students' reading skills. This factor includes students' backgrounds and experiences at home, and family socio-economic factors. The environment can figure out the childrens personality, attitudes,

values and language skills. The situations at home affect the personality and adjustment of children in society. While socioeconomic factors, parents, and the area are factors that shape the home environment of students.

#### **4) Psychological Factor**

Another factor that also affects the improvement of children's reading skill is psychological factors. These factors include of interests, social maturity, motivation, emotions, and adjustment. Motivation is a key factor in learning to read. The key to motivation is simple, but not easy to achieve. The key is that teachers must demonstrate to students teaching practices that are relevant to children's interests and experiences so that children understand learning as a need.

From the factors that affect reading ability, all of the factors before will be analyzed by the researcher. The reasons are those are cannot be separated from the students aspects, and it can support the understanding about the students' abilities.

### **B. Readability**

#### **1. The Definition of Readability**

Readability basically comes from the word "*readable*" which relates to the ease of reading a text. Readability is one of the most crucial aspects that should be measured in selecting a good passage for students (Walter, 1979:190). Since readability could control the achievement of the goal in teaching reading, some experts defined the term readability of a

text differently. According to Richards & Smith (2002:442) stated that readability is the way to make a text easier to read than others. In another words, the term of readability is an aspect that made text easy to be read and understood by certain readers.

Actually, readability is not only determined by the length of the passage or words, but it is also determined by how interestingly and attractively the text is written (Dubay, 2004:3). Good writing should be highly readable in order to be obviously understood by an extensive audience. Readability has the interaction between writers and readers as its vital concern as well, actually readability research looks exclusively and specially at how readers and writers interact in a text, and it examines ways to increase and improve factors which connect reader and writer in a text. Also it is a matter of choosing a right reading text for a certain reader. The suitable reading text for the reader will give them success on the extent understanding, by reading it in an optimal speed, and find it interesting. Westwood (2001:64) trusts that the readers should at least understand 97% of words on the page so that they can certainly understand the text. Therefore, a text is said to be highly readable if it is easy to understand. Conversely, the text is said to have low readability if it is difficult to understand.

## **2. The Factors of Readability**

As a parameter of written language, many factors that can be affected the readability. It is additionally critical to consider the complexity of the text. The readability could be a complex, not a basic,

precise measure is reflected in a statement from the Board of Directors of the International Reading Association. More complex, many factors enter into deciding the readability of materials, including syntactic complexity of sentences, text organization, density of concept, page format, abstractness of ideas, coherence and sequence of ideas, length of line type, length of paragraphs, intricacy of punctuation, and the use of illustrator and color. In addition, research has appeared that student attention within subject matter plays an important role in determining the readability of materials (Pikulski, 2002:2).

Besides, Richards & Schmidt (2002:42) state readability is affected by many factors including the average length of sentences in passage, the number of new words a passage comprises and the grammatical complexity of the language use used. A bit differences from Richards & Schmidt, Johnson (1998) does not only states factors from within the text that influence readability of a text. Other than complexity of words and sentences, he also asserts that readability also can be influenced by the attention and incentive of the reader and the legibility of the prints.

Day (1994) proposes in his article stated that there are six factors which are more detail and can cover both texts' variables and readers' variable. These six factors are lexical knowledge, background knowledge, syntactic appropriateness, organization, discourse phenomenon, and length. Those factors further will be clarified.

#### **a) Lexical Knowledge**



In order to process all the information that is known about words and the relationships between them, lexical knowledge is very important to the reader. Then, it is also a vital aspect because when the number of unidentified lexical item in reading passage increase, students get more difficult in understanding the text. A passage that covers familiar words must be easier to understand than the one that contains unfamiliar words. Readers' will find it more difficult to read and understand a reading text when the number of lexical items in the text increases

**b. Background knowledge**

Background knowledge is basic within the readability of a text. It is since the readers' background knowledge has an imperative part in comprehending section. To make the extra quickly and accurately the reader can read the passage, they must understand the particular topic deeply. For a teacher, it is better to give a reading text with familiar subjects to their students to support them to comprehend the text well.

**c. Syntactic appropriateness**

Syntactic constructions in a text can also move the readability. If a text comprehends with the grammatical construction that the learners do not know, they might have a difficult time to comprehend the text. The way to support the students to understand a text accurately is by giving the simple grammatical construction.

#### **d. Organization**

Organization alludes to the explanatory organization of the text and the clarity of the organization. A passage that is not well organized might presents issue for students, particularly within the starting stages. Students that recognize the organization of the passage will have a small trouble to understand the passage than they who do not.

#### **e. Discourse phenomenon**

Textual phenomena at the level of discourse contain the organization of topics, reading passage, comments also the thoughts of cohesiveness and coherence. The teacher ought to be able to know whether the students will be able to handle the performance of thoughts and opinions in the passage, whether the cohesion indicators and transition strategies are within the linguistic competence of the students, and whether they can follow the line of cognitive used by the writer of the passage. If these aspects within the students competence, a passage can be used a reading material.

#### **f. Length**

The last factors of readability concern to length of potential reading passage. The teacher should be able to control the suitable measurement of the passage for their students. It takes more times to finish a long text. If the students do not success in finishing the text in a given time, it will make prolong lesson. A long text also

makes the students feel bored and frustrated when reading it. Besides, the most common mistakes of inexperienced teacher or teacher who are not able to judge the students reading abilities is to select passage that is too long (Day, 1994).

### **3. Measuring Readability**

In measuring the readability, some methods can be applied to control the readability level of a text. The purpose of measuring the readability is to help someone in understand the readability level of text for sure reader. According to Ulusoy (2006) divided the major of readability methods as quantitative, qualitative and combined quantitative/qualitative. Then, Alderson (2001:72) defined that the readability of of the text can be measured by using three approaches; they are cloze procedure, readability formula, and expert judgment.

#### **a) Expert Judgment**

According to Pikulski (2001) believes that the good judges of readability of the text are teachers and the librarian. However, the assumptions may not be reliable and truthful. Judgment is such a subjective matter and may differ from one person to another. It is possible to get different outcomes if a text is judged by different people or judges. The readability of the text will be questionable if the results difference too.

#### **b) Cloze Procedure (Cloze Test)**

According to Richards & Schmidt (2002) defines cloze test or cloze procedure is a method for calculating reading comprehension

as well as general language ability. Cloze Procedure firstly developed by Taylor in 1953 of the university Illinois stated that cloze procedure is a tool for measuring readability. Cloze procedure test was a readability test which used the students' ability in comprehending text. It is more accurate readability since it measures the readability of the text by readers' involvement in processing the text (Alderson: 2001). Taylor argued that the words were not the best measure of difficulty but how they related to one another. He proposed using deletion tests for measuring an individual understanding of a text (Dubay, 2004:27). In addition, it wants a test constructed by deleting words from a selection and requiring students to fill in the blanks. It means that the readers are given a passage that has blanks in places of some of the words deleted from the passage.

There are two common ways to create the blanks in the text. The first is called rational deletion and the second called fixed ratio deletion. The rational deletions which are the words are deleted on the basis of some rational choice, whereas fixed ratio deletion or nth word deletion where every "nth" word is deleted. The deleted words could be at random or mechanical procedure (every "n" word) where "n" usually a number five or above (Perekema, 2012:92). Then fill in the correct words of the reading in the blanks text.

According to Oller in Kurniawan (2008:25) gives the recommendations on how to construct a cloze test, as follows:

- 1) Selecting material for the task, means if books divided into some chapter, it might make sense to require at least one test from each chapter.
- 2) Deciding on deletion procedure. Some researchers missing a certain amount of one or more un-mutilated sentences at the end of the text
- 3) Managing the test, means if the test is gauged appropriately in difficult, it is usually possible for the slowest students to have ample time to attempt every item of a 50 item cloze test within a 50 minutes class period.
- 4) Scoring procedures.

A cloze test can be modified for a certain purpose. According to Brown (2004:195) stated that a better contextualized format is to offer a modified cloze test adjusted to fit the objectives being assessed. He also stated that it is possible if the cloze test can be arranged into multiple-choice format. It indicates that some variations on standard cloze test can be used even it involves providing the some choices of key answer. In scoring the cloze test, there are two ways that can be used; those are exact word method and acceptable word method. In the exact word method, the words filled in the blanks have to be the same exact words as from the original words, whereas in the acceptable word method the test taker can fill in the blanks with the appropriate words or acceptable words according to the context.

After the score of cloze test is given, Based on the result of the test then the text can be analyzed and classified whether the text is at independent, instructional, or frustration level for the reader. Based on Caldwell (2011:22-23) the result can be seen whether the text is at independent, instructional or frustration level for the students. The level will give the impact whether the text is appropriate or not for the intended readers. The percentage of words correctly entered was the cloze score. Below is the table according to Bourmouth (Kurniawan, 2008:26) of judgment of cloze procedure test score as follows:

**Table 1.1**  
**Bourmouth's Reading Level**

<b>Reading Level</b>	<b>Percentage of the Correct Answer</b>
Independent Level	Over 53%
Instructional Level	44%-53%
Frustration Level	Up to 44%

First, the independent level the students can read successfully by themselves. At this level, students do not need anyone to assist them. This level can be identified as an easy level for students because they should be able to give at least 90% correct answers from the questions related to the passage within this level. Second, instruction level the students need help from the teacher to comprehend a passage. It will be the more challenging level because the students were expected to give at least 70% correct answers

from the questions related to the passage within this level. This level can be identified as moderate level. The last is frustration level or called as difficult level. The students will not be able to give more than 70% correct answer because they will have a hard time to understand the passage. So, the teacher should avoid the materials in this level.

The percentage of words correctly entered was the cloze score. The cloze score's is the more difficult test. Because even advanced readers could not correctly complete more than 65% of the deleted was correctly in a simple text, and texts for assisted reading require a cloze score of 35% or more. From the explanation, among those three levels, the independent level is considered as the most appropriate level for students because the reading materials can help them to improve the students reading comprehension.

Besides, Dubay (2004) also categorized reading level based on the purpose of the reading level from his own suggestion. Dubay categorized the reading level.

**Table 1.2**  
**Dubay's Reading Level**

<b>Reading Level</b>	<b>Percentage of the Correct Answer</b>
Unassisted reading (Independent Level)	Over 50-60%
Assisted reading (Instructional Level)	35-50%
Frustration Level	below 35%

Those two tables give different percentage score from the same level in each reading level. The Dubay's reading level has a lower percentage score than Bourmouth reading level.

#### **4. Readability Formula**

Readability formula is an instrument to predict the difficulty of the text (Langeborg, 2010:2). Readability formulas measured certain textual appearances are usually described as “semantics” and if they concern the words used and “syntactic” if they have to do with the length or structure of sentence (Pikilski, 2002:5). basically, readability formula is an instrument to gauge the difficulty level in understanding reading text by analyzing the reading then uttered as a reading grade level. Amount the difficult of words, word of sentences, and the length of sentence got the readability score based on the formula in the reading text.

The easiest formula to read only explains a number of factors, especially word lengths, sentences, and syllables since these factors best indicates ease of reading. The factors here include of content, structure, style and layout and design. According to Dubay (2004:20-25) there are some formulas to measure the readability level of the text, as follows:

##### **1) The SMOG Formula**

The SMOG (Simple Measure of Gobbledygook) readability formula was developed by Harry McLaughlin in 1969 through an article “*SMOG grading – A new readability Formula in the Journal of Reading*”. This is a tool that designed to estimate the readability level of the texts by taking the sample word and sentence length. The



measurement of readability by using SMOG formula is intended to measure the suitability between the reading text and the age of the reader. This formula is simpler because it does not use graphics and only considers the number of sentences and difficult words (Abidin, 2012:54). In using this formula in readability research, researchers usually use this formula at the beginning, middle and the end to confirm that there is a significant increase in score. Researchers can interpret the results of the legibility manually or by using computer (McLaughlin, 1969:639-646).

The SMOG formula examines 10 consecutive sentences from the beginning, middle, and the end of the text (Falcouner, 2011:3). To ensure the text in reading is readable and clear, there are some ways to use the SMOG formula to measure reading level, and those are:

- a) Count 10 sentences in a row near in the beginning, 10 in the middle, and 10 in the end, so totally there are 30 sentences.
- b) Count every word with three or more syllables in each group of sentence, even if the same words appear more than once
- c) Calculate the square root of the number arrived at in step 2 and round it off to nearest 10
- d) Estimate the square root of the number polysyllabic words counted. This is done by taking the square root of the nearest perfect square.

- e) Add 3 to the approximate square root. This gives the SMOG grade.

## 2) Flesch Reading Ease Scale Formula

The Flesch Reading Ease Scale formula was created by Rudolf Flesch. This formula calculates an index score of a text sample based on number of words, the number of syllables, and sentences length (Dubay, 2004:22). Flesch Reading Ease Scale formula is one of the most reliable, tested also the most used formula outside (Chall, 1974). It measured reading from 100 to 0 means that from the easy to read until difficult to read. This formula measures length; the longer the words and sentence, the harder the passage to read. There are some procedural to count the readability by using Flesch Reading Ease Scale formula, as follows:

- a) Count a sentence of full units of speech marked by dash. Period, colon, semicolon, question mark, or exclamation point as one sentence.
- b) Count the words, count each word in the up to 100
- c) Count the number of syllables as the reader are pronounced
- d) Find the readability score.

From the procedures above, in case we were to draw a conclusion from the formula, at that point the most excellent content ought to contain shorter sentences or words. Other than, on the off chance that we discover a result of readability with the other score, at that point we will compare it with other criteria.

According to the Zakaluk (1988) there is formula to analyze the score to obtain the data:

$$\text{RE} = 206.835 - (84.6 \times \text{ASW}) - (1.015 \times \text{ASL})$$

Details information:

RE : Reading Ease Score

ASW : Number of syllable per 100 words (i.e the number of words divided by the number of sentence)

ASL : Average number of words per sentence (the number of syllables divided by the number of words).

**Table 1.3**  
**Reading Ease Scale of the Flesch Formula**

Score	Categorize Level	Estimated School Grade Complete	Estimated Reading Grade
0-30	Very difficult	College	College graduate
30-50	Difficult	High School or some college	13 <sup>th</sup> -16 <sup>th</sup> grade (college)
50-60	Fairly difficult	Some High School	10 <sup>th</sup> -12 <sup>th</sup> grade
60-70	Standard	7 <sup>th</sup> Grade	8 <sup>th</sup> -9 <sup>th</sup> grade
70-80	Fairly Easy	6 <sup>th</sup> Grade	7 <sup>th</sup> grade
80-90	Easy	5 <sup>th</sup> Grade	6 <sup>th</sup> grade
90-100	Very easy	4 <sup>th</sup> Grade	5 <sup>th</sup> grade

### 3) Flesch Kincaid Grade Level Formula

The Flesch Kincaid grade level was created for technical documents and it is mostly applicable to forms and manual, rather than schoolbooks text or literary works. This formula translated the

0-100 to a grade level, making it easier for teachers, parents, librarians, and other people to judge readability level of various books and text. The grade level was calculated with the following formula:

$$\text{FKGL} = (11.8 \times \text{ASW}) + (0.39 \times \text{ASL}) - 15.59$$

Details information:

FKGL : Flesch Kincaid Grade Level

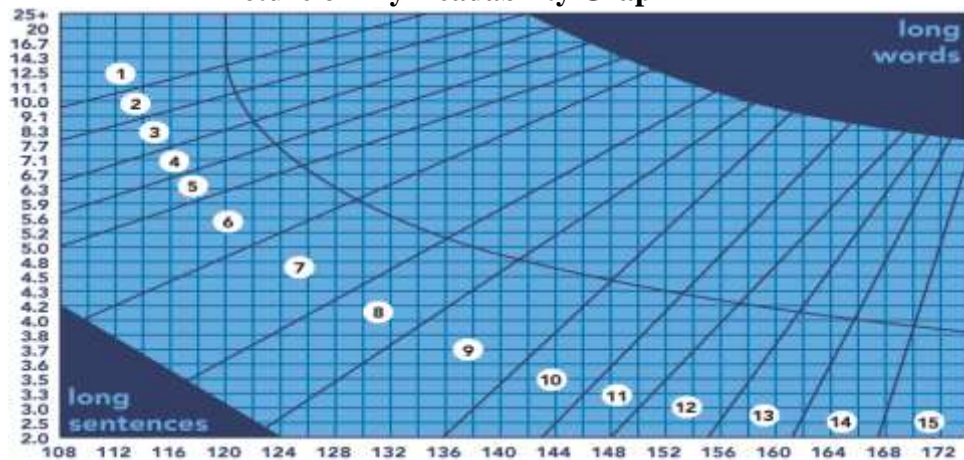
ASW : Average number of syllables per word

ASL : Average Sentence Length.

#### 4) Fry Readability Graph

The Fry readability graph is a legibility formula that emphasizes the use of word difficulty variables and grammatical complexity. This formula include of simple instruments and quite efficient in determining the legibility of a text. By using a chart teacher could write down his own criteria. According to Dubay (2007:20) the graph was extended to predict the readability of materials meant for primary and college levels.

**Figure 1.1**  
**Picture of Fry Readability Graph**



To make more understandable, here are some directions for computing Fry's formula, as follows:

- a) Select 100 words from the passage that will be measured.
- b) Count the total number of sentences in each 100-word passage
- c) Count the number of words in every passage containing three or more syllables
- d) Plot the calculation into fry graph.

### 5) Gunning FOG (FOG Index) Readability Formula

The Gunning FOG or FOG index was created by Robert Gunning in 1944 then published in a book *"The Technique of Clear Writing"* in 1952. This formula is easy to use thus becomes very popular formula. This formula only uses two variables those are Average Sentence Length (ASL) and the number of words with more than two syllables for each 100 words. Gilliland (1975:93) this formula uses by some steps, as follows:

- a) Choose 100 words systematically
- b) Calculate the average sentence length (the number of words divided by the number sentence)
- c) Count the complex words (consisting of 3 or more syllables).
- d) Add up the two factors (average sentence length and percentage of the complex words.
- e) Then multiply 0.4.

Here is the FOG index formula.

$$0.4 \left[ \left( \frac{\text{words}}{\text{sentences}} \right) + 100 \left( \frac{\text{complex words}}{\text{words}} \right) \right]$$

This formula is considered one of the easier methods because based on a short sample word (100) no need to count syllables of all the words, and the rules are simple too (Spadero in Bastable, 2002:172). However, over the time, this formula was eventually shifted with the discovery of new and more practical formulas.

## 6) FORCAST Formula

This is the one of formula that not created for running narrative, therefore it is suitable for multiple-choice quizzes, entrance forms, applications, etc. According to Fold (1992) this formula calculates the US grade level of a text sample based on its number of monosyllabic words. Besides, this test does not consider sentence length into account, so the result little bit

different from other test. If the documents is arranged mostly with lists and tables then expected there to be some variance between the the other grade level and FORCAST grade level. This formula was validated at only 35% score on comprehension tests and only focuses on the one syllable word. Here is the FORCAST formula that can be used:

$$GL = 20 - (M/10)$$

Detail information:

GL : US grade level  
M : Number of monosyllabic

#### 7) Dale-Chall Readability Formula

This formula was created by Edgar Dale and Jeanne S. Chall in 1948. Originally the Dale-Chall Formula was developed for adults and childrens' above the 4th grade. In this formula, the readers typically find it easier to read, process and recall a passage if the words are familiar. This formula applied only to books appropriate for students in the 4th grade or more. According to Gilliland (1975:92) this formula uses by some steps, as follows:

- a) Select approximately 100 words from the text to be researched
- b) Calculate the average sentence length by words (divide the sum words with the number of sentences

- c) Calculate the percentage of words that are not on Dale and Chall word list of 3000 easy words
- d) Then calculate with this equation

$$\text{RAW score} = 0,1579 \times \text{PDW} + 0,0496 \times \text{ASL}$$

Detail information:

PDW : Percentage of difficult words

ASL : Average Sentence Length in words.

Like the previous formula, this formula is still considered too complicated for done, so that there are new formulas and more complete findings.

#### 8) Linsear Write Readability Formula

The Linsear Write readability formula is generally recommended for technical manuals and it is primarily used by the U.S Air force. This formula calculates the U.S grade level of a text sample based on the sentence length and number of complex word (the word that contains of 3 or more syllables). This formula uses by some steps to apply, as follows:

- a) Count the number of easy words that contains two or less syllables
- b) Count the number of hard words that contains three or more syllables
- c) Multiply the number of hard words by three
- d) Add these number together



- e) Divide this sum by the number of sentence from the sample
- f) Divide into 2 if the result larger than 20
- g) It will be different if the result less than or equal to 20 then minus 2 and divide into 2.

### **9) Rix Formula**

Anderson (in Crawley and Mountain, 1995: 26) explains that Rix formulas are one of the readability formulas that may be required. The calculation of the readability level with the Rix formula is done by steps as follows:

- a) Count the number of sentences by randomly selecting from the whole book and the number of long words (more than 7 characters).
- b) Divide the number of long words by the number of sentences. The calculated score can be interpreted, so it can be seen the level of readability of the text.

## **C. The Nature of Textbook**

### **1. Definition of Textbook**

One of the factors causing the low quality of learning is that learning resources have not been maximally utilized. Learning resources that can come from humans, materials, environment, tools, equipment, and activities should be able to supply comfort for students in getting a number of information, knowledge, experience, and internal skills teaching and

learning (Mulyasa, 2003:48-49). One of the sources that can be used as a learning resource as well as a medium learning is a book. There are four kinds of books that used in the school, those are textbook, reading book, handout, and sources book.

Richard (2001:254) stated that textbook is the most common form used of teaching materials in language teaching. Then Hornby (1995) defines textbook is an instructional utilized as direction in the teaching and process. Textbook is in principle to be followed systematically as the basis for a language course (Ur:1996). Textbook is important because it sets the content, direction, and to certain level how the lesson is to be taught (McGratch: 2002). It can be concluded that textbook is instructional material that used as control of teaching and learning process usually in written form.

Textbooks have a special function in learning. It is because they present the subject function, reflects the point of view, provides an orderly source, presents remedial and evaluation materials, presents pictures, and provides various methods and learning tools. Although capable of being a timeless source of information, textbooks also have several limitations. Tarigan (1990: 28) states that the limitation of textbooks is that they are not taught and their contents are artificially combined. In addition, the limited space that is owned causes inadequate exercises and tasks, teaching facilities are lacking, and evaluation assistance is only suggestive. Basically, there are two main factors that influence the understanding of textbooks, namely the reader factor, is influenced by several things such as

background knowledge, motivation, maturity, and intelligence. The level of understanding is measured in terms of readers can do with comprehension tests. Meanwhile, in terms of materials read are influenced by print factors, illustrations, concept difficulties, vocabulary and sentences.

Textbooks are indeed conventional teaching materials as well as learning resources for students. However, even though it is conventional and has been used for a long time and many consider it traditional, textbooks are still quite capable of making a good contribution for learning. Some learning materials cannot be taught without the help of textbooks. Textbook sources and authors can come from a variety of sources. The essence of textbooks is to provide information and material for students through printed materials. Textbooks contain subject matter coupled with relevant information thoroughly and completely so that the use of textbooks can be used side by side or without learning resources or other learning media.

## **2. Functional of Textbook**

According to Greene & Petty (in Tarigan, 1986:21) describes some roles or function of textbook as follows:

- a) Describes a strong and modern perspective on teaching and demonstrates its application in the teaching materials which is present
- b) Provides a rich source of subject matter, easy to read, varied and according to student interests and needs

- c) Provides a neatly structured and incremental resource on expressional skills addressing major communication problems
- d) Presents a variety of learning methods and tools
- e) Presents variations as initial support for exercises and practical tasks
- f) Provide materials as an appropriate evaluation tool.

Besides, Thompson (2000:175) defines the function of textbooks, those are individualization of instruction, organization of instruction, improvement of teaching, and tutorial contribution. A textbook makes difference students to individualize instruction by empowering them to continue at their own rate and to a limited extent, according to what they are interested in studying. The instruction can be by providing students' experiences, suggesting some activities, recommended reading and giving or asking question. Besides, the function of textbook for teacher is to help their students learn how to read better, to weigh evidence, study, and to solve the problem. Therefore, by using textbook the teacher can improve their skill in teaching.

### **3. Textbook Classification**

Tarigan and Djago Tarigan (2009) classify textbook into 4 groups, namely:

- a) Classification based on subjects fields of study

Textbooks can be classified into specific subject field. This classification applies to books for elementary school, junior high

school and senior high school. Usually the name of the book is adjusted according to the subject. Textbook can also be classified by level of education, either level of school and class. The same subjects will have a different textbook for each level of education although based on the same curriculum

b) Classification based on subjects fields of study for college student

c) The classification is based on how the textbook is written

How the textbook is written such as single text book, bound textbook and textbook series. Single textbook means a book that consists of one book only, no further volumes and no series. Bound text means textbooks for a particular class or for one particular school level. Then textbook series means bound textbook that includes several levels of school

d) Classification based on the number of authors

The classification based on the number of authors such as single textbook and team textbook. A single textbook are a textbook written by one author while team textbook is the brainchild of two or more authors incorporated in a team.

#### **4. The Criteria of Good Textbook**

Based on the Tarigan & Djago Tarigan (2009:27:28) there are some criteria of good textbook that must be understood. These criteria can help the evaluator to make textbook evaluation instrument which will be used to assess the aspects being evaluated. Some criteria of good textbook are:

- a) It should be relevant with curriculum and has principle, base, and certain viewpoint which base on the concepts that used in the textbook clearly.
- b) It is interesting and increasing the reader enthusiasm
- c) It can give motivation to the reader and can stimulate students activity
- d) The understanding should be preceded by correct communications
- e) It has interesting illustrations for the reader
- f) The content of the book supports the other subject
- g) It appreciates individual diversity
- h) It has clear viewpoint, and tries to reinforce the value that is applied in society.

Another perception come from Brown (2001:142) stated that there are 12 criteria to have a good textbook, as follows:

- a) The goals of the course, it means that the goal of the course here related to how the textbook will help the users to accomplish the course's goal
- b) The background of the students. It is related to the suitability of the book with the student's background, including their age, educational background, native, and their motivation or in learning English.
- c) The approach that is reflected in the textbook.

- d) Language skills. It evaluates the integration of four skills, the proportion of four skills, and which skill that the textbook emphasize more.
- e) The general content that deals with the authenticity of the language, the appropriateness of the topics, situation and context, and the proficiency of the right level.
- f) The criteria of the quality practice of material that consists of the variety of the exercise, the clarity of directions, and the review of material.
- g) The sequence of material in the textbook. It evaluates about how how the materials are sequenced and the rules used in sequencing the materials.
- h) Vocabulary. It talks about sufficient attention that is given to words in the textbook
- i) General sociolinguistics factor. It deals with the existences of dialect or international varieties of sociolinguistics and the existence of cultural bias in the materials that are presented in the textbook.
- j) The format of the textbook that related to the clarity of the illustration, the general layout, the size of the book, the quality of editing, including the index, table of content, and topic heading
- k) Accompany in materials for the textbook that consist of tapes, audio/video, posters, flash cards, a set of text, etc.

## 5. The Advantages and Disadvantages of Using Textbook

Harmer (1991:257) states that there are obvious advantages of textbook for both teacher and students.

“Good textbook often contain lively and interesting material; they provide a sensible progression of language items, clearly showing what has to be learnt in some cases summarizing what has been studied so that students can revise grammatical and functional points that they have been concentrating on. Textbook can be systematic about the amount of vocabulary presented to the student and allow to the study on their own outside the class. Good textbook also relieve the teacher from the pressure of having to think of original material for every class. Indeed there is a greater variety of published material for teaching and learning English than ever before”.

Moreover, Harmer also mentions some disadvantages of textbooks.

“But textbooks can also have an adverse effect on teaching for a number of reasons. As we have already said they tend to concentrate on the introduction of new language and controlled work: a teacher relying too heavily on the textbook will often not be encouraged to provide enough tuned input or output practice. Textbooks also tend to follow the same format from one unit to the next. There are good reasons why this should be the case: they are thus easier to get to know” and to handle, both for teacher and student, and they are also easier to design and write. But this match of format generally involves an unbending sequence. Reading and listening mostly have a set place in the classification and each unit looks more or less like those that come before and after it”.

Apart from its advantages and disadvantages, textbooks in circulation, both mandatory and supporting text books found many oddities. The oddity here means:

- a) There are text books that do not match the contents of curriculum
- b) There is a text book that contains the subject matter
- c) There are textbooks with very technical descriptions
- d) There are textbooks that don't fit the pattern think of learners, and



- e) There are text books that are less applicable.

## **6. The Quality of Textbook**

According to Tarigan (1986) mention ten categories that a textbook must fulfill in order to make a good quality of textbook, as follows:

- a) Textbooks must attract the readers, those are the students who use it
- b) Textbooks must be able to motivate the students who use it
- c) Textbooks should contain attractive illustrations students who take the advantage of it.
- d) Textbooks should consider these aspects linguistics so that it fits the ability students
- e) The content of the textbook must be closely related to the other lessons, even better if you can support him with a plan so that everything is a complete and unified whole
- f) Textbooks must be stimulated private students activities
- g) Textbooks should be consciously and firmly avoided vague and unusual concepts, in order does not confuse the student
- h) The textbook must have a clear opinion
- i) Textbooks must be able to provide confirmation, emphasis on child and adult values
- j) Textbooks must be able to appreciate the personal differences of the users.

## **7. The Role of Textbook in English Language Teaching**

In English language teaching process textbook plays an important role. It is because of the textbook can help language learners to improve their linguistics and communicative abilities. Luis (2010:332) states that the most teachers depend on textbook often as require tool because they deliver content and activities that describes what happen in the classroom. In addition the role of textbook provided available source of ELT materials for teachers to focus on doing the real work of teaching and not having their energy discrete by preparation of teaching materials. It means using textbook was more effective with readily material and available source for their students.

Making textbooks in accordance with the functions, goals and benefits is certainly enough to make textbooks the right teaching material. Teachers and students also do not have to mess around with choosing learning resources to use. Of course, the selection of textbooks as learning resources must pay attention to specific things and the components that make up learning resources.