

**MATCHING TEXTBOOKS TO THEIR READERSHIP: A CASE STUDY OF
GOVERNMENT-APPROVED ENGLISH TEXTBOOK FOR BASIC FIVE**

By

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**A thesis submitted to the Department of Publishing Studies,
Faculty of Art, College of Art and Built Environment,
Kwame Nkrumah University of Science and Technology
in partial fulfilment of the requirements for the degree of**

MASTER OF ART PUBLISHING STUDIES

March, 2019

DECLARATION

I hereby declare that this submission is my own work towards the MA. Publishing Studies and that to the best of my knowledge, it contains no material previously published by another person nor material which has been accepted for the award of any other degree of the university, except where due acknowledgement has been made in the text.

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ABSTRACT

One of the necessary requirements of all educational structures is the adequate supply of relevant reading and other supplementary materials for use by learners and teachers. The availability and access to good textbooks is very crucial towards building a strong foundation for basic education especially in developing countries like Ghana. However, for textbooks to perform their function effectively as a primary tool for learning, they should be readable and easily understood by their users. It is imperative to ensure that the language used in textbooks matches their readership because if pupils are frustrated by the text in a particular textbook, they are less likely to be motivated to continue reading that book, and this would adversely affect their academic performance too. Despite the fact that both reading and academic achievements are interconnected and dependent on each other, there has been a growing concern about the decline in reading among Ghanaian school pupils; and also statistics on candidates' performance in the Basic Education Certificate Examination (BECE), has revealed a decline in the performance of students in English Language. This fuels the need to investigate what pupils at the basic level read to find out whether what have been recommended for them to read match them or not because what they read can influence their academic achievements. To encourage reading and make it more exciting for young readers in Ghana, and to also enhance the academic performance of pupils in English Language at the basic level, it is important to be mindful of the materials they are given to read in school. Based on this, the researcher sought to investigate the readability of government approved English textbook used by primary schools in Ghana.

The researcher reviewed literature pertinent to the study. The mixed method design was used to provide both qualitative and quantitative dimensions to the study. Under the qualitative aspect, the researcher used the Flesch Reading Ease Formula to measure the readability level of the textbook

purposely selected for the study (*English Language for Primary Schools—Pupils Book 5, 2012 Edition*); and the editor of the textbook was interviewed to investigate the major issues considered in order to ensure the textbook is readable to its targeted users. From the quantitative dimension too, a Cloze survey was used to ascertain how well the pupils who use the selected textbook understood what they read. A population of 292 basic five pupils from five selected schools in the Akuapem-South District was considered under the survey. The simple random sampling technique was used to sample 150 pupils for the Cloze test (survey), 30 from each school.

The study revealed that the language used in the English textbook was above the grade level of most of its users; thus, the predicted grade level for the textbook did not match the pupils using it. The research also showed that though the editor of the selected textbook understood the need to ensure the language used in the textbook matches their readership and also knew how to achieve this, the textbook was difficult for the pupils to understand and most of them would have difficulties in reading it even with the assistance from their teachers.

The researcher therefore, recommended that it is necessary to pay critical attention to what is recommended for pupils to read in schools. Authors and Editors also need to ensure that language used in textbooks matches their targeted readers; they could take advantage of new technologies to help them determine the readability levels of their publications. Also it is imperative for institutions in charge of the development of textbooks (Curriculum Research and Development Division, the Procurement Division, the National Council for Curriculum and Assessment, and the Ministry of Education) to be critical and have a particular interest in the readability levels of textbooks produced or recommended for pupils at various stages, in schools.

DEDICATION

This study is dedicated to my family and friends. They have shown me that relationship is everything.

ACKNOWLEDGEMENTS

My profound gratitude to the Almighty God for the wisdom, understanding, and the grace that sustained me to complete this work.

A special thanks to Mr. Francis Kofi Nimo Nunoo for the supervision of this thesis. He demonstrated true leadership in the supervision of this project: he also provided guidance, encouragement, constructive and insightful suggestions towards the success of the study, and he was also patient. May God richly bless you!

Sincerest appreciation to all the lecturers of the Department of Publishing Studies, and my colleagues. God bless you all.

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CHAPTER ONE

INTRODUCTION

1.1 OVERVIEW

This chapter considers the background of the study, the statement of the problem, the research objectives and the research questions, the importance and the scope of this study, operationalizing of terms used in this study and how the study has been organised.

1.2 BACKGROUND TO THE STUDY

Education, which is the primary function of books, is the basis for all development (Hasan, 1972; Ozturk, 2001). According to Smith (2005), a nation cannot develop without books because without education, development can never happen and without books too, education cannot be successful. “I have never heard of a country that has been able to develop without an educated population” (UK news, The Observer, 2005).

One of the necessary requirements of all educational structures is the adequate supply of relevant reading and other supplementary materials for use by learners and teachers. These reading supplies are the major tools that educational institutions use to transfer to learners the knowledge and skills needed (Oakes & Saunders, 2002).

The availability and access to the right teaching and learning materials is very crucial towards building a strong foundation for basic education especially in developing countries like Ghana (Agbeme, 2014). At this stage, pupils are encouraged to develop knowledge, cultivate attitudes and learn skills from the concrete experiences acquired through reading. This in the long run, leads

to high achievements in education and life. In effect, this stage makes or unmakes the future of the child or pupil (Anamuah-Mensah, Effah & Sarkodie, 2002).

According to the Education Sector Performance Report of the Ministry of Education (MoE) of Ghana, from 2007 to 2010, an estimated value of GH¢60 million which was more than 80% of the procurement budget of the ministry was expended on buying of textbooks (MoE, 2003; 2005; 2007). In effect, the Government of Ghana spent a huge sum of money on the acquisition of textbooks.

Textbooks, are the most efficient and the most effective instruments for the transfer of knowledge (Escarpit, 1966). However, for textbooks to perform their function effectively as a primary tool for learning, they should be readable and easily understood by their users. Ziriki (2009) defines readability as the ease at which a material is read, usually as a result of the style the author used in writing the material. Besides, it means the complexity level at which a publication (e.g. a textbook) selected for a particular class matches their reading and learning abilities. A textbook readability level can either enhance or otherwise pupils' understanding of a particular subject.

It is the primary responsibility of authors and editors to ensure that textbooks are readable because according to Essuman (2009), textbooks are an alternative to the teacher in the teaching and learning environment. Learning can take place with textbooks even when there is no teacher. A number of studies conducted in developed countries have established that among the numerous learning materials, a greater number of teachers heavily depend on the textbook as their major teaching resource (UNICEF, 1996).

A readable textbook is of no use if it contains serious errors (Montagnes, 1991). Likewise, an error-free textbook, which is not readable and comprehensible, will do the reader a great disservice. The

vital question ‘What makes a recommended book readable for its intended readers?’ needs to be answered. This question becomes very significant when one comes to appreciate the strong relationship between understanding contents of publications and the readability level of those publications (Fletcher, 1975).

Researchers have identified that the main factors that affect the readability of a writing are the sentence length, the number of unfamiliar words in the text, the difficulty of the language used, the grammatical complexity of the language and the style the author uses to write (Hargis et al., 1998; Richards, Platt & Platt, 1992) and have developed mathematical equations that strive to relate a text to the comprehension level of the readers of that particular text. These equations are referred to as readability formulas.

There are over 200 readability formulas (Mesmer, 2008); however, some of the well known ones used for academic research are Flesch Reading Ease Formula, Flesch Kincaid, Dale-Chall Formula, Gunning formulas, Fry Readability Graph, SMOG (Simple Measure of Gobbledygook) formula, Coleman-Liau, etc.

Most of the publications (i.e. textbooks, storybooks, etc.) children read are in printed form. It is therefore very essential to examine how difficult or easy it is for them to read these printed materials (Woods & Scharff, 2005). Instead, many publishing houses follow guidelines which are often based on what other firms are doing and not empirical data gathered from researches which have been conducted on readability (L. Gerbrandt, Personal Communication, May 16, 2000 as cited in Woods, Davis & Scharff, 2005).

However, it is very important to understand that the complexity of text determines how motivated pupils will be to read it. Kane and Warner (1997) controvert that the more complex a text is, the

more likely pupils are going to get frustrated with what they are reading. As a result, when pupils are frustrated by a text, they are less likely to be motivated and this would adversely affect their academic performance too (Bashir & Mattoo, 2012). Statistics on candidates' performance in the Basic Education Certificate Examination (BECE), revealed a decline in the performance of students in the English Language subject. In a period of three years - 2015, 2016, 2017 - 68.2% out of 869 students, 67.9% out of 919 and 64.4% out of 948 students had *pass* respectively, in the BECE English Language (Basic Education Certificate Examination (BECE) Analysis Report- Akuapem South District Education Office, 2015; 2016; 2017). This should be an issue of concern. There is the need to investigate whether texts read by pupils (especially in basic schools) suit their level of understanding (Allington, 2005) because the quality of text a child reads in the long run, leads to his or her high achievements in education and ultimately, in life (Anamuah-Mensah et al., 2002) but when they do not have manageable books, they will all the time fall behind their peers (Stanovich, 1985). All these previous researches point to the incontrovertible fact that textbooks are indispensable or vital 'tool' in education and that they must be tailored to the readability capacity of the pupils who they are intended for.

To encourage reading and make it more exciting for young readers in Ghana, and to also enhance the academic performance of pupils in English Language at the basic level, it is important to be mindful of the materials they are given to read in schools. Therefore, it is important to investigate the readability of government approved textbooks used by primary schools in Ghana.

1.3 STATEMENT OF THE PROBLEM

There were developing concerns that the reading culture among students in schools in Ghana was declining and the academic performance of students in English Language subject during the BECE was falling:

To enhance reading, the government initiated moves to encourage children to cultivate the habit of reading. The re-launching of Mobile Libraries in Ghana may probably be a response to the growing concerns for attitudinal change in reading extensively, especially among pupils in the public basic schools. The introduction of this programme did not in any way suggest the total nonexistence of any programme that aimed at developing children's interest and abilities in reading. The Junior High School English Language teaching syllabus, categorically apportioned a slot on the teaching timetable for Library activities, in effect, creating an extensive reading programme (Curriculum Research Development Division [CRDD], 2007). Pastor Edward Quansah, a retired educationist, also advised the Ghana Education Service (GES) to design a course that would encourage reading in schools. He stated that the course should make teachers obligated to teach reading to pupils, especially pupils in the early grades, to enable pupils understand what they are taught in class (Kingsley, 2013). Though all these and a host of other measures have been put together to encourage pupils to read, the challenge still persists.

There is also enough evidence that in an attempt to address the poor academic performance of students in BECE-English, the social, environmental, teacher and learner factors, which according to El-Omari (2016) and Iroegbu (2017) are key factors that affect students' performance in English were all given some considerable level of attention, and even parents were called on board to help solve the issue. However, its reflection in the long run has not been seen, as indicated by the examination reports. Statistics revealed that the percentage of students (in the Akuapem-South

District) who passed in BECE-ENGLISH declined from 2015 to 2017 (Basic Education Certificate Examination Analysis Report-Akuapem South District Education Office, 2015; 2016; 2017).

A crucial issue which needs to be critically looked at with regards to addressing the issue of poor reading culture and poor academic performance in BECE-English is whether the language used in English textbooks recommended for learners, suits their understanding. Research has established that there is a clear relationship between the readability of a textbook and the reading and academic performance of the users of that particular textbook. If pupils are frustrated by the text in a particular textbook, they are less likely to be motivated to continue reading that book, and this would adversely affect their academic performance too (Bashir & Mattoo, 2012). Examining the readability of the English textbooks learners use at the infantile stage even becomes more crucial because the quality of text a child reads in the long run, leads to his or her high achievements in education and ultimately, in life (Anamuah-Mensah et al., 2002) but when they do not have manageable books, they will constantly fall behind their peers (Stanovich, 1985).

Therefore, this study sought to use readability measuring tools to examine whether the language used in English textbooks at the basic level matches the understanding of the readers.

1.4 OBJECTIVES OF THE STUDY

The study sought to

1. measure the readability level of the Government approved English textbook for basic five (5) pupils.
2. assess how easy or difficult the pupils are able to understand what is in their textbook.
3. identify factors the editor considered in ensuring the readability of the selected textbook.

1.5 RESEARCH QUESTIONS

1. What is the readability level of the Government approved English textbook for basic five (5) pupils?
2. How easy or difficult is it for the pupils to understand what is in the textbook recommended for them by Government?
3. What are the factors the editor of the textbook considered to ensure its readability?

1.6 SIGNIFICANCE OF THE STUDY

This academic research will add to the body of knowledge in the area of measurement of readability of publications: textbooks, supplementary readers, course books, novels, etc. The main significance of this study is to measure the readability level and the comprehensibility of government approved textbooks. It will also inform the Government and other stakeholders in

charge of selection and approving of textbooks for use in schools and this will in the long run facilitate effective education. It will also inform publishers on the factors to consider when making their publications readable to their targeted audience.

1.7 SCOPE OF THE STUDY

This research was limited to the Publisher and/or Editor of the selected textbook and five (5) schools in the Akuapem-South District of Ghana. The schools include

1. Demonstration Primary, Aburi
2. Presbyterian Primary “A”, Aburi
3. Presbyterian Primary “B”, Aburi
4. Methodist Primary, Aburi
5. Anglican Primary, Aburi

The study used two readability measurement devices:

1. The Flesch Readability Ease Formula
2. The Cloze Test

1.8 DEFINITION OF KEY TERMS

Textbook: A book on a specific subject that is used in the teaching and learning of that subject, usually in schools.

Readability: It is the ease with which a reader can read and understand a piece of writing.

Readability Formula: A tool for measuring or predicting the readability level of a book by analysing sample passages.

Flesch Readability Ease Formula: A readability formula that rates passages on a 100-point scale; the higher the score, the easier it is to understand the text. The Flesch Reading Ease Readability Formula is $206.835 - (1.015 \times \text{ASL}) - (84.6 \times \text{ASW})$

Where, ASL is the Average Sentence Length (the number of words divided by the number of sentences), and ASW is the Average of Syllables per Word (the number of syllables divided by the number of words).

Cloze Test or Procedure: It is a test comprising of passages with certain words deleted (Cloze passages), where the participants are required to fill in the blanks created by the deletion, with the missing words.

Pupils: Children (learners) in basic schools who are in the charge of a tutor or an instructor.

Mono-syllabic Words: Words with one syllable.

Di-syllabic Words: Words with two syllables.

Poly-syllabic Words: Words with more than two syllables.

1.9 ORGANISATION OF WORK

The Chapter One introduces the study and the Chapter Two also reviews related literature pertinent to the study: textbook, readability and readability formulas. The Chapter Three discusses the methodology; the research design, the method of data collection and analysis.

The Chapter Four is dedicated to analysis and interpretation of the data collected and the final chapter (Chapter Five) consists of the summary, conclusions drawn from the findings, and recommendations.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 OVERVIEW

This Chapter reviews literature on the readability of textbooks. The chapter considers literature related to the study under the following headings:

- The Concept of a Textbook
- The History of Textbook Publishing in Ghana
- Importance of Textbooks in Basic Education in Ghana
- Readability defined
- The Development of Readability Formulas
- Readability Formulas
- Flesch Reading Ease Readability Formula
- Cloze Test or Procedure

2.2 THE CONCEPT OF A TEXTBOOK

Textbooks aside being vital to the political and educational development, are also essential tools for forming acceptable ideologies, philosophies and beliefs and also reflect the history, knowledge and cultural values and traditions deemed significant by a particular community. (Crawford, 2003)

Textbooks are “... conceived, designed and authored by real people with real interests” and are “... published within the political and economic constraints of markets, resources and power” (Apple, 1993, p.46). They are written based on the social norms, cultural principles and political philosophies of a group. They have the tendency to uphold and encourage togetherness among

members of society. Books and teaching aids used in our educational system shall be products of our society with most of their contents drawn from Ghanaian, African and other relevant experiences (The Cultural Policy of Ghana, 2004).

Inherently, a textbook is defined as a work of an author containing a standard body of knowledge on a particular subject, designed usually for use in the classroom, having appropriate vocabulary, illustrations and exercises for students to try their hands on. It contains all of the core contents, exercises and study questions at the end of sections or chapters (Crossley & Murby, 1994). Therefore the textbook can be a replacement of the teacher in the classroom. Heyneman and Jamison (1980) opined the textbook as the single most essential instructional material, especially in a setting of limited learning resources and poorly trained teachers.

A textbook as a teaching material should reflect the content of a curriculum. Therefore textbooks play a pivotal function; they mirror the content of different customs infused into the curriculum, and also consider development of knowledge and fresh priorities as time surges on (Marsden, 2001). The subject matter and content of textbooks change as the curriculum evolves.

Arthur (1990) and Farrell (2001) claim that a textbook is that printed and bound artefact one has to be provided with or had to buy for a course of study. In their definition of what a textbook is, they emphasise on its physical appearance; they stated that a textbook should be a number of printed text on sheets of papers bound together. Although most textbooks are in the conventional printed format, with the help of technology, textbooks can currently be in the electronic format known as e-textbooks.

In a nutshell, a textbook is defined as a work of an author containing a body of knowledge of a particular course or subject reflecting the culture of philosophies of the society or the nation in

which it is used, usually used by teachers to aid in giving instructions in the classroom and/or can be used by students. It can either be in a conventionally printed form or in an electronic format.

2.3 THE HISTORY OF TEXTBOOK PUBLISHING IN GHANA

The history of textbooks can be traced from the period where writing and some form of schooling commenced. In that era, textbooks existed in the form of clay tablets, scrolls, vellum, parchment or papyrus sheets that had been bound (Altbach, & Kelly, 1988; Woodward, 1990; Farrell, 2001).

The most primitive textbooks were discovered in the 16th Century written in Latin which was the common language of schooling, probably to enable students to become proficient in the use of the Latin language (Ellsworth, Hedley, & Baratta, 1994). The earliest writings for education were presumably from the Bible and some other poetic writings. However, there are records which indicate textbooks used in schools in ancient Greece, Rome, China, India, and Egypt which were hand-written and was available and accessible to the few privilege people, before that era (Altbach, 1989; Farrell, 2001).

In the fifteenth century the invention of the movable types made way for the proliferation of textbooks in Europe. The textbooks of colonized nations followed the models used by their colonial masters while those of non-colonized nations were modelled after cultural and technological borrowings from the rest of the world (Essuman, 2009). After gaining independence, colonized countries like the United States, Latin America and Canada locally produced and indigenized their textbooks to reflect their local views (Encyclopedia of Education, 2008a). Similarly, during the wave of decolonization in Africa and Asia, the newly independent nations attempted to revise their textbooks to mirror their culture.

The history of the development and the use of textbook in Ghana is similar to the story of the rest of the world as discussed above, It begins with the inception of formal education in the 16th Century by the Portuguese in Elmina and other coastal areas, in their quest to promote trade with the indigenous people and also the Bible. The textbooks used then in the educational process were shipped into Ghana from the homeland of these traders and missionaries. By 1850, the Basel and the Wesleyan Methodist missionaries extended western education from the coastal areas to the other parts of the country to promote their missionary works (Saphir, 2001). Schools were usually operated and financed by European missionaries until Dr. Kwame Nkrumah came into office in 1951 and presented the Accelerated Development Plan for Education (AEDP).

At the genesis of independence, the overseas multinationals were still in charge of textbook publishing apart from that of Ghanaian languages. In 1961, the AEDP outdoored by the Dr. Kwame Nkrumah government saw the need to localize the publishing industry. As at the time, the Bureau of Ghana Languages established in 1951 was the only indigenous publishing house. The Bureau was in charge of the development of textbooks and it did this through the Curriculum Research and Development Division herein-after refer to as (CRDD) (Essuman, 2009).

Currently in Ghana, the Ministry of Education herein-after refer to as (MoE) manages the development of textbooks for Pre-School, Primary, JHS, SHS and Technical Vocational Institutes (TVI) including Special and Integrated Schools. The CRDD and the procurement division assists the MoE to evaluate, adopt and select different textbooks for the schools. For instance, following the revision in the basic school curriculum, all textbooks used by the basic schools were revised by the MoE to reflect the curriculum objectives before they were procured. The textbooks used by the basic school level encompasses, Language and Literacy, Mathematics, Natural Science, Information and Communications Technology (ICT) and Creative Art—for lower primary and

Mathematics, English Language, Ghanaian Language and Culture, Integrated Science, Creative Art, ICT and Citizenship Education—for upper primary (MoE, 2013).

2.4 IMPORTANCE OF TEXTBOOKS IN BASIC EDUCATION IN GHANA

Essuman (2009) indicated that a number of studies conducted in developed countries have established that among the wide range of learning materials, a greater number of teachers or instructors heavily depend on the textbook as their major teaching resource. Teaching and learning will be grossly affected if textbooks are not sufficiently supplied to schools.

This shows that the role of textbook in education cannot be underestimated. The textbook expedite effective teaching in the classroom, therefore, the necessity to publish quality textbooks for primary school education in Ghana. Čeretková, Šedivý, Molnár, & Petr, (2008) stated the followings function of textbooks:

- **Motivational function:** A well-authored textbook arouses the interest of the learner and he or she is attracted to such a textbook and is excited and motivated to read it.
- **Communications function:** It helps to build vocabularies including words that are terminologies.
- **Regulatory function:** A textbook breaks down the curriculum into various parts and arranges them in logical sequence.
- **Application function:** It consists of ideas making the subject matter practical; it gives real life examples.
- **Integration function:** A textbook goes far more than its subject; it allows for relating of concepts from different disciplines, which lead to complex cognition processes.

- **Innovative function:** Textbook presents newer knowledge of science, economy or technique.
- **Control and correction function:** Learners use the text, questions and other assignments to assess themselves. They find out what they did not previously understand and so revision.

Textbooks are also essential tools for forming ideologies and beliefs since they reflect the culture of a particular group of people (Apple, 1991). School textbooks have their grounds from the cultural, philosophical and political ideologies of the people. They tend to put in force cultural similitudes through the advancement of shared values and the establishing of shared historical memories. Although, sometimes textbooks are individually or co-authored, they present bigger cultural view which is in consonance with the government policies (De Castell, Luke & Luke, 1991; Pervan, 2011). The National Commission on Culture shall collaborate with the Ghana Education Service and the Ministry of Education to ensure that the content of education shall be made more relevant to the realities of Ghanaian and African society (The Ghana Cultural Policy, 2004, Section 7.01)

A textbook is very fundamental at the initial developmental growth of the cognitive, the affective and the psychomotor domain of children. The pupils are exposed to new concepts, new values and virtues, and new ways of performing certain tasks in the textbook. With the help of the textbook, learning does not only happen in the four walls of a classroom but continues after school giving the pupil the opportunity to try their hands on activities and exercises in the textbook.

The single most significant investment developing countries can make to facilitate the education of their children is to increase and ensure the availability and accessibility of quality textbooks (Heyneman, 1989; Stephen, 1989). Ensuring that quality and readable textbooks are adequately

supplied to pupils is paramount to the development of education. Stein et al., (2001, p. 3) opine, “Meticulously edited and readable, well designed and laid out instructional materials would most probably have their greatest impact on low-performing students or those students who need special attention”.

In order for the textbook to perform its rightful role in the education of children, it should be easily read and understood by their readers or users, however, very little has been done in the area of readability of books, especially textbooks in Ghana and even West Africa; therefore, the place of this research in scholarship—the need to assess the readability level of government approved English textbooks for basic schools in Ghana.

2.5 READABILITY DEFINED

It would be important to understand the concept of readability and how studies on readability have evolved over time in order to best appreciate the significance of the terminology. Richards et al. (1992, p. 306) defined readability as "how easily written materials can be read and understood. This depends on several factors including the average length of sentences, the number of new words contained, and the grammatical complexity of the language used in a passage." Hargis et al. (1998) has a similar opinion, he stated that readability, the “ease of reading words and sentences,” is a quality of lucidity. Thus, readability is the ease at which a person can read; it is greatly influence by the author’s writing style (Ziriki, 2009; Klare, 1963). This definition focuses on writing style as separate from issues such as content, coherence, and organization. Therefore the factors that influence the readability of a text is the sentence length, the number of unfamiliar words in the text, the difficulty of the language used and not forgetting that the style the author uses to write can also hugely affect the readability of that text.

Considerably, definition of readability given by Dale and Chall's (1949, p.26) may be the most exhaustive:

The sum total (including all the interactions) of all those elements within a given piece of printed material that affect the success a group of readers have with it. The success is the extent to which they understand it, read it at an optimal speed, and find it interesting.

The originator of the SMOG readability formula, McLaughlin (1969) defined readability as: “the degree to which a given class of people find certain reading matter compelling and comprehensible.” This definition also focuses on some other important factors that affect readability; the connection between the text and the category of readers who may possess some peculiar attributes such as reading skill, prior knowledge, and motivation.

From the above, readability simply is what makes a particular text easier to read than others and the readability of text is determined by its content (the difficulty of its vocabulary and grammar), and its organisation and appearance (such as typographic characteristics like font size, line depth, and line length). However, usually readability is used interchangeably with legibility, which is more concerned with typefaces and layout. According to Farley (2010), while readability is how easy it is to read text or publications such as a book, an article, etc; legibility is a measure of how easy it is to identify or differentiate one character from another in a specific typeface. Readability and Legibility are both vital to communicating with type. When one studies the ease (speed and comfort) at which an individual reads and comprehends text (readability), it is essential to first consider legibility, the ability of an individual to distinguish one letter from the other (Erdmann & Neal, 1968). Thus, the legibility of text influences its readability.

2.6 THE DEVELOPMENT OF READABILITY FORMULAS

Dale (1972 cited in Mosenthal & Kirsch, 1998) asserted that, "Readability is as old as the hills and the written stories that have described them." The history of readability formulas is far dated in the 19th Century in the United States when schools had not adopted the system of routinely grading students. The need for Junior High School teachers to teach scientific facts and methods in simple English instead of teaching complex and technical science vocabularies necessitated the opening of the first graded school in Boston where a series of books were prepared for each grade (Dubay, 2004; Zamanian & Heydari, 2012). Instructors, teachers, library keepers and academics began to create their own primeval readability formulas to enable them distinguish between what was readable to students and what was not.

Thorndike (1921) produced *The Teacher's Word Book*, the first comprehensive listing of words in English by rate of recurrence which paved way for all readability formulas. That was the first time, an outstanding researcher suggested a technique of gauging the complexity of vocabulary using formulas that are scientific. This led to the proliferation of other lists of word and reading strategies improved to measure how difficult a word is. Chall and Dale (1995, .84) argued, "It is no accident that vocabulary is also a strong predictor of text difficulty." Indeed, the word is a major factor to consider in measure of how easy it is to read and understand a text.

Lively and Pressey (1923) promulgated the firm readability formula to save teachers from spending all lesson hours in explaining many technical words to their students (Dalecki & Lewis, 2009). They argued that their readability measuring tool which used five variable inputs and six constants would help reduce the vocabulary burden of textbooks. It took usually three hours to

apply this formula to a book: for every thousand words, it checked the number of uncommon words not on the Thorndike word-frequency list; and the median number of words found on the list.

Thorndike (1934) published another readability formula which considered the reality that the teacher can introduce new words and repeat them frequently. Subsequently, other scholars (Patty and Painter, 1931; Klare, 1968) reviewed Thorndike's formula and developed new ones out of it.

Rudolf Flesch is also another famous scholar who has contributed to the development of instruments for measuring readability. His formula called the Flesch-Kincaid Grade Level uses the number of syllables per 100 words and the average number of words per sentence. Flesch (1948) stated that authors can make their works easier to read by using shorter words and shorter sentences.

A couple of noteworthy scholars who have contributed to the readability formulas discussion include Edgar Dale, Jeanne Chall, Robert Gunning, Ed Fry, Tom Trabasso, and J. Peter Kincaid, etc.

Currently, there are more than 200 instruments for measuring readability, having their various degrees of accurateness and success rate. There have been several academic debates on which readability formula is the best. It had been observed that these formulas have their advantages and shortfalls and even the level or category of the targeted readers such formula can be applied to guarantee the success of its usage.

At the genesis of readability studies and development of readability formulas, researchers paid much attention to complexity and newness of vocabularies (Chall, 1988). However, the later days of 1920 saw the shift of focus towards various factors discovered to be variables influencing readability; "semantic and syntactic factors", giving less attention to the author's writing style

(Klare, 1988). Langeborg (2010) argued “still today, the majority of the established readability formulas test the comprehension of a text by using only a combination of the two components—syntactic and semantic difficulty”, usually gauged by the average sentence length and word length (counting letters or syllables) or frequency of unfamiliar words (Gilliland, 1972; Fry, 2002; Gunning, 2003).

2.7 READABILITY FORMULAS

Scholarships on readability basically consider that information transferred by authors are suitable to and comprehended by their target audience. Readability studies focus on the linguistic issues, specifically, word length and sentence length to measure the comprehensibility of a piece of written text and to avoid inaccuracies, educators have adopted tools or formulas for such measurements.

According to Chall (1981, p. 4), “Readability formulas are the most useful tools for the important task of measuring the difficulty of reading materials”. These formulas offer unbiased grades that educators and teachers can have confidence in to predict the level of reading difficulty, hence to assist them when deciding whether the text is appropriate for an entire class or not. The ability to accurately measure the readability of a text is needful because it helps educators to choose the right texts for learners and authors too to write to suit their targeted readers.

There are several readability formulas available for measuring the readability levels of the written materials. All these formulas have their merits and demerits, however, some are more widely used than others in academia.

Some major advantages of readability formulas are; their comparatively easy of use enabling their integration in computer applications (Burns, 2006); their high recommendation through several research works (Fry, 1977; Fry, 2002) and their objectiveness in usage (DuBay, 2004; Fry, 2002).

Despite the fact that most well-known readability formulas correlate well with each other, they sometimes mismatch the grade levels—as far as three grade levels (Gunning, 2003). The discrepancy between formulas is somewhat elucidated by the variance in their starting points (Klare, 1988). Although, formulas may not offer accurate difficulty levels for different texts, they are perfect at showing the increase of complexity level between texts (Gunning, 2003).

It is important to indicate that readability formulas are unable to measure all the parameters key to understanding (Gilliland, 1972).

Well-known and reliable readability formulas were proposed based on long period of research and extensive studies. Kondru (2006) stated that, "their predictions correlate very well with the results of the actual readability measurements of expert judgments, comprehension tests, and the Cloze procedures" (p. 9).

There are more than 1000 studies which have been conducted on issues of readability and over 200 such formulas are in existence, out of which only twelve at most, are famous and widely used (DuBay, 2004; Gunning, 2003). These are

1. Flesch Formulas
2. Dale-Chall Formula
3. Gunning formulas
4. Fry Readability Graph

5. SMOG (Simple Measure Of Gobbledygook) formula
6. Coleman-Liau
7. Powers-Sumner-Kearl
8. The FORCAST formula
9. The John Bormuth formulas
10. The Lexile framework
11. CohMetrix psycholinguistics measurements
12. ATOS readability formula for books

(DuBay, 2004; Gunning, 2003)

The most publicized and the most widely used readability formula was ascribed to Flesch (1948) and this made Rudolf Flesch arguably, the leading authority of readability.

2.8 FLESCH READING EASE READABILITY FORMULA

Flesch Reading Ease Readability Formula has been integrated in Microsoft Office Word application. Beside spell-and grammar-check, Microsoft office Word can display information about readability. Currently, the measurement of readability can be done on a computer with most grammar and text-editing applications having the capability to show the readability level of the written text.

In 1943, Rudolf Flesch put out his first formula for predicting the readability level of adult reading materials. His second readability formula, the Flesch Reading Ease Formula which uses three variables originally came out in 1943 and was later modified and published in 1948. It was revised again in 2006.

The new formula which was to match the grade level of students with their comprehension of texts with a given individual score correlates .70 with the McCall-Crabbs' Standard test lessons in reading and .64 with the 1950 version of the same tests" (Dubay, 2004).

The Flesch Reading Ease formula uses two major indicators: *average sentence length* in words, which according to earlier studies revealed is a good and an indirect indicator of sentence complexity; and *average number of syllables* in words, which studies have also confirmed indirectly measures word complexity (Flesch, 2006).

A readability formula that rates passages on a 100-point scale; a higher readability score means the text is not difficult and it is easy to read. Most standard passages have approximately a readability score of 60 to 70.

The Flesch Reading Ease Readability Formula is:

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

Where, ASL is the Average Sentence Length (the number of words divided by the number of sentences), and ASW is the Average of Syllables per Word (the number of syllables divided by the number of words).

The score ranges from 0 to 100, with 0 corresponding to the highest reading difficulty and 100 corresponding to the lowest reading difficulty. Table 2.1 provides interpretation of the Flesch Reading Ease Score.

Table 2. 1 **Flesch Reading Ease Score and its interpretation**

Reading Ease Score	Description	Predicted Reading Grade
0-30	very difficult	college graduate
30-50	Difficult	college grade
50-60	fairly difficult	10th-12th grade
60-70	Standard	8th-9th grade
70-80	fairly easy	7th grade
80-90	Easy	6th grade
90-100	very easy	5th grade

(Flesch, 1949)

Owu-Ewie (2014) made a case that since in Ghana, according to educational policy, the teacher is legally allowed to use English as a medium of instruction in class four (4), it is prudent and fair to add three (3) to the reading age or the grade level. Thus, for example, “a C-Liau index measure of a material meant for 8th Grade will be 11th Grade, a SMOG grade level of 6 will be 9 and ARI measure of a reading text for 11-13 year olds will be 14-17 year olds” but “there will be a subtraction of three (3) from the figures of the Flesch Reading Ease Formula (FREF) since the higher the FREF figure the easier the text.”

This suggestion makes it fair because the readability measurement tools were originally designed for publications (text) of native speakers of English so when using it to measure the readability

level of publications use by non-native speakers, the tool should be adapted to suit the situation of non-native speakers too.

Researches have confirmed that the Flesch Reading Ease Readability Formula is the most tested and reliable readability formula (DuBay, 2007), it has been validated against other formulas and against expert results (with correlations of .61-.84) (Gilliland, 1972). It has also been discovered to have correlated better with the Dale-Chall Readability Formula (Gilliland, 1972), which has been widely accepted in the world of scholarship and has been one of the commonly used formulas in schools for a long time (Klare, 1988). Scholars (Guo, Zhang, & Zhai, 2011; Bravo, 2010) suggested that the most reliable, especially when used to measure text difficulty for upper elementary to secondary materials is the Flesch Reading Ease Readability Formula. Also, one of the studies of Klare revealed that there is a high level of consonance between The Flesch Reading Ease and the Flesch-Kincaid Formula; they do not differ more than two grades and frequently agree within a grade (Klare, 1988).

Arguably, the Flesch Reading Ease Readability Formula has become the most well-known among the formulas, precisely for academic purposes (Klare, 1988) and would be suitable and appropriate for the measuring of the readability of textbooks for basic schools; and it would guarantee reliable and a valid outcome.

Popular readability formulas are born out of extensive researches, and "their predictions correlate very well with the results of the actual readability measurements of expert judgments, comprehension tests, and the Cloze procedures" (p.9) as argued by Kondru (2006) so the scores generated by Flesch Reading Ease Readability Formula would be compared with the score of a Cloze Procedure that will also be carried out in this research.

2.9 CLOZE TEST OR PROCEDURE

Cloze Procedure introduced by Taylor in 1953 became popular when Bormuth's research (1968) established its credibility as a predictor of reading comprehension. It compared its score rankings of passages of different complexity with readability levels of the same passages by the two common readability formulas, Flesch formulas and Dale-Chall. Taylor (1953) debated that words in themselves are not the best indicators of the complexity of a sentence but how these words are closely related and connected together. The term 'Cloze' originated from the idea of "closure" in Gestalt psychology; which denotes the human natural psychological inclination to fill in gaps in uninformed patterns (Hinofotis, 1987).

In Cloze Procedure or Test (Taylor, 1953), learners read a passage or passages from which words have been systematically omitted; that is, every nth (usually the fifth) word has been intentionally deleted. Usually, every nth word after the first complete sentence is replaced with a blank. Cloze Testing hinges on the theory that readers are better able to supply the deleted words as their reading skills improve. The tool is usually used as a complement of the Flesch formulas and Dale-Chall in rightly predicting the readability of texts. Sadden and Reid (1985) stated that while filling in the words for the blanks of a Cloze Passage, the reader automatically pays attention to the content of the passage and the sentence structures—both semantic and syntactic technicalities of the writer.

A lower score in the test is interpreted that the text is difficult and a higher score also indicates that the text is easy to read and comprehensible. Scores attained in Cloze Tests are compared with locus points of various levels of comprehension. Rye (1983) proposed the following to be used to group learners under different comprehension levels based on the scores they attain from a Cloze Procedure: Attaining a score of 0-40% implies that the learner was able to read the passages in the book at a frustration level, thus the language is difficult to handle. Having a score between 41 and

60% indicates the text was read at an instructional level, thus the learner is able to cope with the text but some help is needed. A score of 61 to 100% also implies that it was read at an independent level. Thus, the reader could cope with the language and would not require any assistance.

Bormuth (1968) compared Cloze Procedure and multiple-choice comprehension test scores and adopted the ensuing criterion to interpret the scores. Having a score below 44% implies reading at the frustration level, between 44 and 57% for the instructional level and more than 57% for the independent level. The Bormuth (1968) levelling scores are not too far from the one proposed by Rye (1983) which pegged between 44% and 57% (instructional) as ideal for textbooks.

The validity of the Cloze procedure is well ground in academic research (Carroll, 1971). In fact, studies (Jones & Pikulski, 1974; Rankin & Culhane, 1969) have shown that the percentages of correct words readers are able to fill in a Cloze passage provide a credible basis as much as other sophisticated tools to gauge the comprehension of readers.

This study adopted the Flesch Readability Ease formula to measure the readability level of a selected Government approved English textbook used in the primary schools and also use the Cloze Procedure to test the comprehension level of the pupils who read this textbook.

The Cloze Procedure was used because aside being very complementary of the Flesch Readability Ease Formula, it also serves these three major purposes: *Placement purposes*—this means the formula helps to group the readers of a particular text under three reading level: independent, instructional, or frustration reading level; *Diagnostic purposes*—this means it helps to assess how well the reader understands the contextual meaning of the text; *Language-improvement purposes*—this means the formula also helps to improve the reader's syntax and semantics.

CHAPTER THREE

METHODOLOGY

3.1 OVERVIEW

This chapter gives a detailed account of the research design and method that were used. It also provides a discussion on the population, the sampling technique, the sample size, primary and secondary sources of data, the data collection instruments used and how data was analysed and interpreted. The methodology of the study has been diagrammatically represented in Figure 3.1 below.

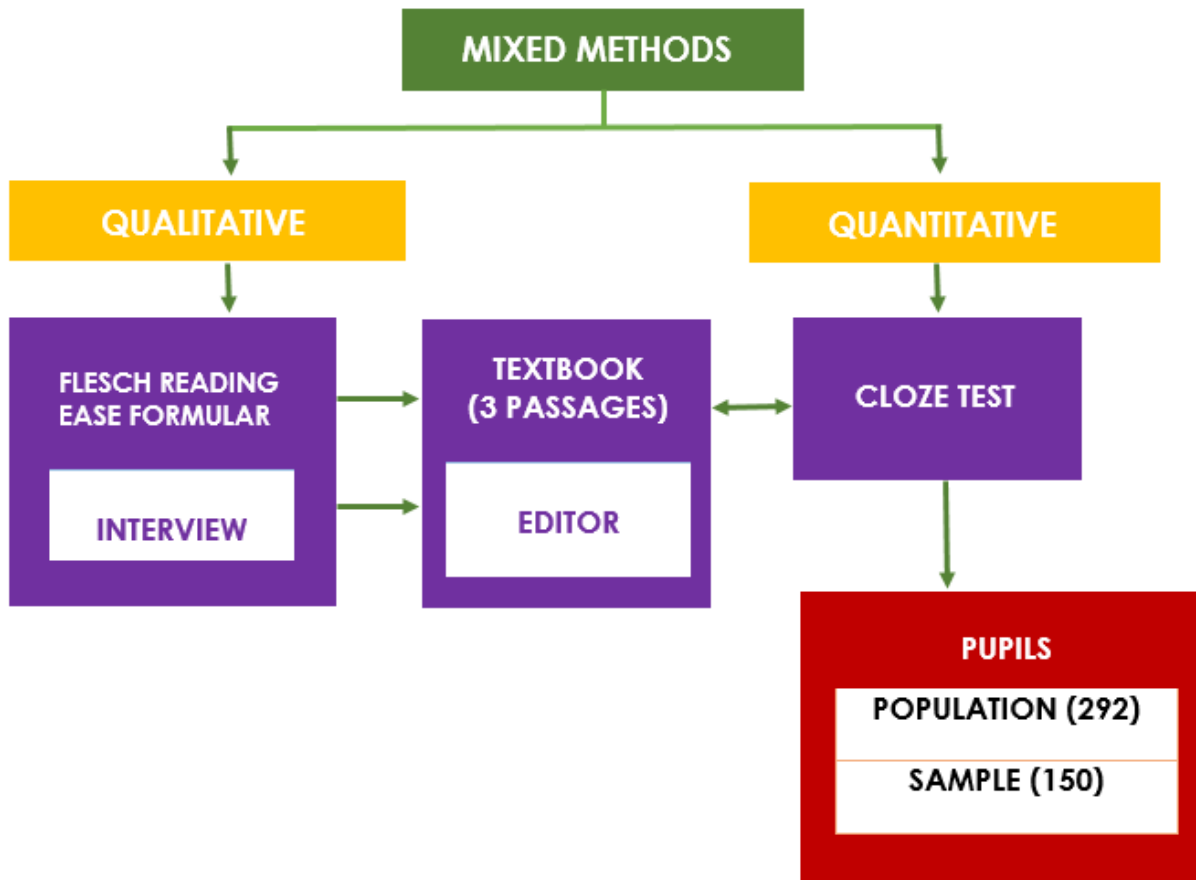


Figure 3.1 Research Methodology

3.2 RESEARCH DESIGN

The research design is the general plan for the study, providing the overall framework for data collection and also clarifying how the research questions will be answered. The design requires clear objectives derived from the research questions and specifies the sources from which data will be collected and analysed to achieve these objectives (Saunders, 2011).

The researcher employed the mixed methods design for the study. This design incorporates both quantitative and qualitative data collection techniques and analysis procedures either simultaneously (parallel) or subsequently (sequential) (Saunders, 2011; Kemper, Springfield & Teddlie, 2003). According to Opoku-Amankwa and Graham (2009), the qualitative method uses data collection technique (such as an interview) or data analysis procedure (such as categorising data) to generate or use non-numerical data, while the quantitative method also seeks numerical data which is used to establish and describe the numerical patterns and relationship that exist in the data; and often involves some form of measuring.

Measuring the readability level of the selected Government approved English textbook (using the Flesch Reading Ease Formula), and interviewing the editor of the selected textbook to investigate the major issues considered to ensure the textbook is readable and easily understood by the pupils, required qualitative data. The Cloze test was used to survey how well pupils from the various schools understood what they read in their textbook, also constituted the quantitative dimension.

The researcher used both methods to provide an advantage by compensating the weaknesses of each method. The mixed methods design also enabled triangulations which enhances the validity of a study and also ensures greater confidence in inferences drawn (Sale, Lohfeld & Brazil, 2002).

3.3 RESEARCH METHOD

The researcher used the case study method for this study. Robson (2002) defines case study as ‘a strategy for doing research which involves an empirical investigation of a particular contemporary phenomenon within its real life context using multiple sources of evidence’. This method allows for systematic and in-depth review of an instance of a particular phenomenon, in order to generate knowledge (Denscombe, 2007; Saunders, 2011). Although case study is mostly considered as qualitative, the method is not targeted at any particular data collection technique (Creswell, 2009; Hartley, 2004).

This method was employed to provide in-depth knowledge of an isolated case, in this instance, the government approved English textbook for basic five pupils. The method was also flexible and permitted the use of a combination of several data collection techniques, hence “multiple sources of evidence”. Triangulating the data from the two readability measuring tools (Flesch Reading Ease Formula and the Cloze survey) together with that gathered from the interview with the editor meant that the strength of one data collection method or source would offset the weakness of the other (Plano, Clarke & Creswell, 2008), providing another great advantage.

3.4 POPULATION

This research was conducted at the Akuapem-South District located in the Eastern Region of Ghana. The study considered the class five pupils of five basic schools as the population; all these five schools are Government (Public) schools. The selected schools were;

1. Demonstration Primary, Aburi (68 pupils)
2. Presbyterian Primary “A”, Aburi (71 pupils)
3. Presbyterian Primary “B”, Aburi (56 pupils)

4. Methodist Primary, Aburi (57 pupils)
5. Anglican Primary, Aburi (40 pupils)

The total population of the study was 292. These schools were purposely selected because of the large size of their pupils' population and their easy access to Government approved textbooks, and also the researcher had easy access to these schools. The researcher observed in the course of the research that all the schools were quiet, peaceful and conducive for studies; and all the pupils were present in their classroom perhaps, because they were all writing exams on the week of the data collection. Albeit, these schools had quite poor facilities probably because they are all government-funded schools.

Only English textbooks which were approved by Government for use by the pupils in these selected schools were considered under the study.

3.5 SAMPLING

Broadly, all research samples fall under these two main categories: probability and non-probability samples. Probability sample is where each element in the sampling frame or population has an equal chance of being selected while with the non-probability sample, each element of the population has an unequal chance of being selected (Berzofsky, Williams & Biemer, 2009; Opoku-Amankwa & Graham, 2009).

The simple random sampling technique was used in this study. This sampling technique is a form of probability sampling where subjects in the population are sampled by a random process, using either a random number generator or a random number table, so that each person remaining in the population has the same probability of being selected for the sample (Saunders, Lewis & Thornhill,

2007). Pupils were assigned numbers and the researcher had some small sheets of papers with these numbers boldly printed on them. These sheets were poured into a polythene bag, thoroughly mixed and 30 sheets with the assigned numbers were randomly selected and mentioned so that pupils with these corresponding numbers were selected for the study. A sample of 150 pupils was selected from the population of 292 pupils; that is, 30 basic five pupils from each of the selected schools were sampled for the study. The sample of 30 pupils from each class was representative of the population because it constituted more than 30% of the class size. According to Saunders et al., (2007), this would result in not less than 95% level of certainty and not more than 6% margin of error. The age ranges of the pupils considered as the sample was from 8 years to 16 years with an average age of 11 years.

Table 3.1 **Population and Sample**

SCHOOL	POPULATION (PUPILS)	SAMPLE (PUPILS)
Demonstration Primary, Aburi	68	30
Presbyterian Primary “A”, Aburi	71	30
Presbyterian Primary “B”, Aburi	56	30
Methodist Primary, Aburi	57	30
Anglican Primary, Aburi	40	30
TOTAL	292	150

To ensure confidentiality, the names of the schools were replaced with letters in the English alphabet: School “A”, “B”, “C”, “D”, and “E”.

3.6 SELECTION OF TEXTBOOK

The Government approved English textbook for basic five, *English Language for Primary Schools—Pupil's Book 5, 2012 Edition*, published by Afram Publications (Ghana) Limited was purposefully selected for the study because it is the approved textbook for use in the district and also it's editor was willing to participate in the study.

3.7 PRIMARY AND SECONDARY DATA

Primary or raw data are data collected at source for specific research problem at hand, using procedures that are appropriate and best fit the research problem. This type of data is obtained directly from first hand sources by means of surveys, observations and experimentation and not subjected to any processing or manipulation (Hox, & Boeije, 2005). Results from the use of the two readability measuring tools (the Flesch Reading Ease Formula and the Cloze Test or Procedure) and interview with the editor of the selected textbook served as primary data in this study.

Secondary data pertinent to this study were also gathered from books, researches and newspapers articles and students' theses in the KNUST library and from the internet. These materials gave the researcher a broader perspective and opened the researcher up to works others have done in the area of the study, and in other countries. Secondary data refer to information that has already been gathered by others other than the researcher himself. The use of this form of data has the advantage of being less expensive; saving time particularly with quantitative data; providing in-depth information informed by expertise that may have been originally difficult for an individual researcher to collect (Saunders et al., 2007; Schutt, 2011).

3.8 DATA COLLECTION INSTRUMENTS

The researcher used three data collection instruments to collect the primary data for this study: two readability measuring tools and interview; Flesch Reading Ease Formula- to measure the readability level of the selected textbook, and the Cloze Procedure- to ascertain the comprehension level of the pupils when reading the selected textbook. These two readability measuring devices have been established (see Kondru, 2006; Bormuth, 1968) as being complementary of each other in giving credible and reliable results. Interview- the editor of the selected book was interviewed to investigate the major issues considered in order to ensure the textbook is readable for its users.

3.8.1 The Flesch Reading Ease formula

The Flesch Reading Ease formula uses two variables: *average sentence length* in words, a good and an indirect indicator of sentence complexity; and *average number of syllables* in words, which indirectly measures word complexity (Flesch, 2006). The Formula rates texts on a 100-point scale—the score ranges from 0 to 100, with 0 corresponding to the highest reading difficulty and 100 corresponding to the lowest reading difficulty. Thus, the higher the score, the easier it is to understand the document.

The Flesch Reading Ease Readability Formula uses this equation

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

Where, ASL is the Average Sentence Length (the number of words divided by the number of sentences), and ASW is the Average of Syllables per Word (the number of syllables divided by the number of words).

3.8.2 The Cloze Procedure or Test

In Cloze Test or Procedure (Taylor, 1953), pupils read a passage or passages from the selected textbook from which words have been systematically omitted; that is, every *nth* (usually the fifth) word has been intentionally deleted. Usually, every *nth* word after the first complete sentence is replaced with a blank. In the case of this study, the first sentence and the last sentence of the three passages were left intact and every word on the fifth count in the passages were systematically deleted and replaced with blanks for the pupils to supply these deleted words. Cloze testing hinges on the theory that readers are better able to supply the deleted words as their reading skills improve, this is corroborated by Sadden and Reid (1985).

3.8.3 Interview

Interview is a conversational practice which generate knowledge through interaction between the interviewer and the interviewee using the same research protocol as questionnaire survey (Bhattacharjee, 2012). An interview guide was used to conduct an interview with the editor of the selected textbook basically to enquire about the major issues considered to make the book readable to the targeted audience.

3.9 DATA ANALYSIS AND INTERPRETATION

The Flesch Reading Ease score (FRES) of the passages (representative of the selected textbook) was manually calculated using the Formula and verified with Microsoft Word. Also, the researcher subtracted three (3) from the FRES as suggested by Owu-Ewie (2014) that it should be done for text materials of non-native speakers of English. The readability measurement tools were

originally designed for publications (text) of native speakers of English so when using it to measure the readability level of publications use by non-native speakers, the tool should be adapted to suit their needs. Owu-Ewie (2014) made a case that since in Ghana, according to educational policy, the teacher is legally allowed to use English as a medium of instruction in class four (4), it is prudent and fair to subtract three (3) from the FRES.

The Cloze Test given to the pupils was marked and the scores were collated, coded and analysed using Microsoft Excel.

3.10 ETHICAL CONSIDERATIONS

The researcher sought for permission from the Heads of the various schools and also the purpose of the research was clearly explained to the heads, the teachers and the respondents before they provided any data. Also, the anonymity and the security of the data given by the respondents were guaranteed and ensured. For confidentiality, the names of the schools were replaced with letters in the English alphabet: School “A”, “B”, “C”, “D”, and “E”.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION

4.1 OVERVIEW

This chapter outlined results of the data analysis and presented discussion of research findings. It reported and discussed the findings on how difficult or easy the basic pupils could read and understand their English textbook and finally, the major issues the editor of the textbook considered to ensure the book is readable. The chapter basically answers these questions:

1. What is the readability level of the Government approved English textbook for basic five (5) pupils?
2. How easy or difficult is it for the pupils to understand what is in the textbook recommended for them by Government?
3. What are the factors the editor of the textbook considered to ensure its readability?

4.2 WHAT IS THE READABILITY LEVEL OF THE GOVERNMENT APPROVED ENGLISH TEXTBOOK FOR BASIC FIVE (5) PUPILS?

4.2.1 The Readability level of the Textbook

The researcher employed the Flesch Reading Ease Formula (FREF) to measure the readability level of the textbook, *English Language for Primary Schools-Pupils Book 5*. The formula uses two variables: *average sentence length* in words, a good and an indirect indicator of sentence complexity; and *average number of syllables* in words, which indirectly measures word complexity (Flesch, 2006). The Formula rates texts on a 100-point scale—the score ranges from 0 to 100, with 0 corresponding to the highest reading difficulty and 100 corresponding to the lowest reading difficulty. Thus, the higher the score, the easier it is to understand the document.

The Flesch Reading Ease Readability Formula uses this equation;

$$206.835 - (1.015 \times ASL) - (84.6 \times ASW)$$

Where, ASL is the Average Sentence Length (the number of words divided by the number of sentences), and ASW is the Average number of Syllables per Word (the number of syllables divided by the number of words).

The researcher applied the Flesch Reading Ease Formula to rate three passages purposively selected from the beginning, middle and the end of the textbook: Passage 1 (*Efua Theodora Sutherland*), from pages 30 and 31 of the textbook; Passage 2 (*Asana at the Market*) and Passage 3 (*Abena and Kai Travel by Train*), from page 80-81 and 152-153 respectively (see Appendix A). The selection of the passages was done to ensure that they were representative of the textbook. Each of the sampled passages had approximately 100 words, as recommended by Flesch (1949) and Dubay (2004).

The Average Sentence Length (ASL) and the Average Number of Syllables per Word (ASW) of the three passages were calculated accordingly, and input in the Flesch Reading Ease Formula to compute the FRES. After computing the reading ease score, the researcher subtracted three (3) from the figure as suggested by Owu-Ewie (2014) that it should be done for text materials for non-native speakers of English. The researcher adopted the criterion used by Flesch (1949) as the scale for interpreting the score for rating the complexity of the passages.

Table 4.1 Flesch Reading Ease Score and its interpretation

Reading Ease Score	Description	Predicted Reading Grade
0-30	very difficult	college graduate
30-40	Difficult	college grade
50-60	fairly difficult	10th-12th grade
60-70	Standard	8th-9th grade
70-80	fairly easy	7th grade
80-90	Easy	6th grade
90-100	very easy	5th grade

(Flesch, 1949)

4.2.2 Flesch Reading Ease Score for the Three Sampled Passages

The table below shows the Flesch Reading Ease Scores (FRES) of the three passages selected from *English Language for Primary Schools-Pupils Book 5* (the textbook for the study) and the interpretation of the scores accordingly.

Table 4.2 **Flesch Reading Ease Score for the Three Sampled Passages**

	Average Sentence Length (ASL)	Average Syllable per Word (ASW)	Flesch Reading Ease Score (FRES)	FRES for non-native Speakers of English Language (-3)	Description
Passage 1	15.43	1.52	62.58	59.58	Fairly Difficult
Passage 2	14.86	1.46	68.24	65.24	Standard
Passage 3	16.83	1.38	73.01	70.01	Fairly Easy

The computation of the Flesch Reading Ease Scores for the three individual passages sampled for the study is clearly represented in the table above. The Flesch Reading Ease formula $(206.835 - (1.015 \times ASL) - (84.6 \times ASW))$ required that the *Average Sentence Length* (the number of syllables divided by the number of words) of each passage is multiplied by *1.015*; the *Average Syllable per Word* (the number of syllables divided by the number of words) of each passage is also multiplied by *84.6*; and both figures (products) subtracted from *206.835* to get the FRES of the individual passages. When the calculation was manually done, *Passage 1* had an FRES of 62.58; *Passage 2*, 68.24; and 73.01 for *Passage 3* as compared to the FRES for the three passages when checked in Microsoft Word: 61.10, 67.20 and 72.40 for *Passages 1, 2 and 3* respectively. The difference between the two scores (the one calculated manually and the one checked in Ms Word) were not very significant.

“There will be a subtraction of three (3) from the figures of the Flesch Reading Ease Formula (FREF)” as suggested by Owu-Ewie (2014) in literature that it should be done for non-native speakers of the English language.” Readability formulas were originally designed to measure the readability of text materials for native-speakers of English; however, since, teachers in Ghana are mandated (with regards to the language policy of education in Ghana) to start using English as a medium of instruction in class four (4). It would then be fair to subtract three (3) from the reading ease scores of the passages.

From Table 4.2, when three (3) was subtracted from the FRES for the passages as suggested should be done for non-native-speakers of the English language, *Passage 1* had the lowest score (59.58) which is interpreted as a fairly difficult text. According to the interpretation given by Flesch (1949), the text would be predictably suitable for pupils in grade 10 to 12. *Passage 2* also had a score higher than that of *Passage 1*, a 65.24 FRES. This means the passage is standard; Flesch (1949) predicted it would be appropriate for 8th and 9th graders. *Passage 3* also had 70.01FRES, the highest score among the three passages. This score signifies that the passage would be fairly easy to read and its predicted reading grade is 7th grade.

4.2.3 Average Flesch Reading Ease Score for the Three Sampled Passages

Table 4.3 Average Flesch Reading Ease Score for the Three Sampled Passages

Average Sentence Length (ASL)	Average Syllable per Word (ASW)	Flesch Reading Ease Score (FRES)	FRES for Non-native Speakers of English Language (-3)	Description	Predicted Reading Grade
15.65	1.45	68.29	65.29	Standard	8 th -9 th

Using the Flesch Reading Ease Formula to calculate the average reading ease score of the three passages sampled from the textbook, *English Language for Primary Schools-Pupils Book 5*, the FRES is 68.29 but three (3) was subtracted from the figure as suggested by Owu-Ewie (2014) should be done when measuring the readability level of text read by non-native-speakers of English. Therefore the average reading ease score is 65.29; this is indicative that the language used in the textbook is standard (neither easy nor difficult). The Average sentence length of the passages selected for the study is 15.65 words (per sentence) and the average number of syllables per word is 1.45.

According to the table the content of the textbook is of a standard language. This is because most of the words used in the textbook are mono and di-syllabic, thus there are only some few words in the passages that have more than two syllables. The word *University*, a-ten (10)-letter-word, was the longest word seen in the passages. It had five syllables, making it the word with the highest number of syllables identified in the passages with some other few poly-syllabic words like *Sutherland*, *traditions*, *education*, *Saturday*, *experience*, *etc.* Chall and Dale (1995, p.84) argued, "It is no accident that vocabulary is also a strong predictor of text difficulty." Indeed, the word is a major factor to consider in measuring how easy it is to read and understand a text.

Even though the reading level of the language used in the textbook is standard (neither easy nor difficult to read), it could have been made a little easier to read if the sentences had been kept shorter. It was recorded that the passages had an average sentence length of 15.65 words: this is long and would make the passages a little difficult to read. Keeping sentences longer in passages makes them more difficult to read.

Also from the Table 4.3, according to the interpretation given by Flesch (2006), the predicted grade levels for a standard text are 8th and 9th grades. Thus, a textbook for 8th and 9th grade pupils (who are usually with ages ranging from 13 to 15 years) had been recommended for pupils with an average age of 11 years.

4.3 HOW EASY OR DIFFICULT IS IT FOR THE PUPILS TO UNDERSTAND WHAT IS IN THE TEXTBOOK RECOMMENDED FOR THEM BY GOVERNMENT?

4.3.1 Cloze Survey

Cloze procedure or test was conducted to survey how well the basic five (5) pupils understood the text they read from their English textbook, thus, to find out whether their textbook is either easy to read and understand or not. In Cloze Procedure or Test (Taylor, 1953), learners read a passage or passages from which words have been systematically omitted; that is, every nth (usually the fifth) word has been intentionally deleted. Usually, every nth word after the first complete sentence is replaced with a blank. Cloze testing hinges on the theory that readers are better able to supply the deleted words as their reading skills improve, this is corroborated by Sadden and Reid (1985). They explain that while filling in the words for the blanks of a Cloze passage, the reader automatically pays attention to the content and the structures of the sentences—both semantic and syntactic technicalities of the writer.

The three passages which were rated using the Flesch Reading Ease formula were the same passages used for the Cloze test: *Efua Theodora Sutherland*, *Asana at the Market*, and *Abena and Kai Travel by Train*. Obviously, these passages were not selected in an entirely arbitrary way, but they were selected so that they would form independent and organized passages. Besides, selection of the passages was made in a way that ensured they were representative of the textbook. Taking a cue from Sibanda (2013) and Ekwall and Shanker's (1985) observation that the standard length of Cloze passages is usually 250 words, the three passages the researcher selected all constituted the Cloze passage made up of approximately 250 words in length.

To create the Cloze text, every 5th word was deleted from each text and was replaced with a standard length blank. A 5th word deletion pattern was adopted instead of the more traditional 7th

word deletion so that 30 items could be constructed sufficiently apart to minimize the effect of answering one item correctly (or incorrectly) while filling in other blanks. Also, the first and the last sentences of each passage were left intact and unmodified (Taylor, 1953).

In ensuring a successful Cloze procedure, learners first read the Cloze passages before the Cloze test was administered, for them to complete the deleted words on the tests. Administration of the test was done in the selected schools differently at different times; albeit, all happened during the schools examination week, according to the academic calendar provided by the Ghana Education Service (GES).

In terms of marking, the researcher accepted as correct, any thirty (30) words used that were either close or similar in meaning to the correct word, or were lexically and grammatically correct and because the procedure was designed to test comprehension, spelling mistakes were ignored. The scores were computed in percentages, for instance, a pupil who got all the thirty (30) words correctly would score 100%, and another who got three (3) words right would also score 10%.

A lower score in a test is interpreted as the Cloze passage is difficult and a higher score also indicates that the Cloze passage is easy to read and comprehensible (Vacca and Vacca, 2005; Bormuth, 1968). The Cloze test scores achieved from the passages are compared with reference points of different levels of comprehension. The study adopted the criterion used by Rye (1983) as the standard for scoring.

Table 4.4 **Criterion for Cloze test scoring**

Score range	Reading level	Meaning
0% to 40%	Frustration level	The language is difficult for readers to cope with
41% to 60%	Instructional level	The reader is able to cope, but some assistance will be required
61% to 100%	Independent level	The reader is able to cope with the language.

Rye (1983)

4.3.2 Survey Response Rate

The cloze test was administered to 150 pupils, thirty (30) each from the five schools selected for the study. A response rate of 100% was realized because the test was administered during the week the pupils were taking their exams; all the pupils were seated in class.

4.3.3 Demographic Data of Participants

The cloze test has a part which enquired about personal data of participants to obtain their demography. This furnished the research with information on the background of the various participants. The information included their school, age and gender.

In all 150 participants were involved in the cloze procedure out of a total number of 292 class five (5) pupils in the five school considered under the study. Thirty (30) pupils were selected from each

school: thirty (30) pupils (out of the total population of 40 class five pupils) from Anglican Primary, Aburi; thirty (30) pupils (out of the total population of 68 class five pupils) from Demonstration Primary, Aburi; thirty (30) pupils (out of the total population of 71 class five pupils) from Presbyterian Primary “A”, Aburi; thirty (30) pupils (out of the total population of 56 class five pupils) from Presbyterian Primary “B”, Aburi; and thirty (30) pupils (out of the total population of 57 class five pupils) from Methodist Primary, Aburi. Initially, 30% of the total number of class five pupils in each of the selected schools was to be considered under the study; however, because of the smaller class sizes, the researcher considered thirty (30) pupils from each school which is more than 30% of the total number of class five pupils in each school. This was fairly representative of the total population considered and also enabled to cover larger number of pupils for the study.

Data on the ages of the pupils who participated in the cloze procedure revealed that , out of the total of 150 participants, two (2) of them were nine (9) years old; 27 were ten (10) years old; 39 were eleven (11) years old; 50 were twelve (12) years old; 24 were thirteen (13) years old; six (6) were fourteen (14) years old; and two (2) were fifteen (15) years old. The participants had an average age of 11years.

Based on the data collected 85 pupils representing 56.7% of the participants involved in the cloze procedure were female and 65 pupils, representing 43.3% of the participants were male. The simple random sampling technique was used to select the participants so the researcher did not have any influence on the number of participants selected from each gender. See the graphical presentation of the gender of participants in figure 4.1.

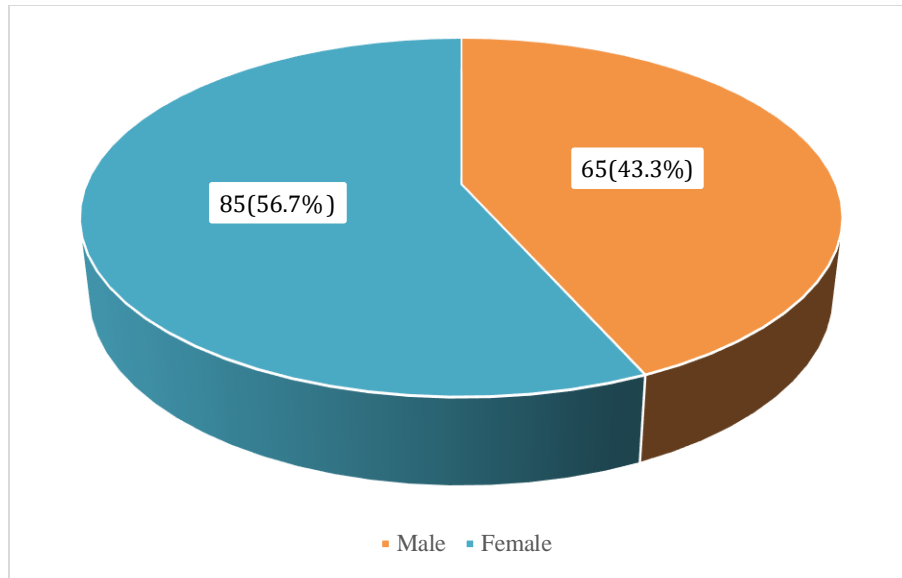


Figure 4.1: **Gender Distribution of Participants involved in the Cloze Procedure**

4.3.4 Results from Cloze Test

Table 4.5 **Categorization of Pupils according to their scores in the Cloze Test**

Cloze Test Score (%)	Number of Pupils	Percentage of Pupils (%)	Reading Level
0-40	77	51.3	Frustration level
41-60	27	18	Instructional level
61-100	46	30.7	Independent level
Total	150	100	

From the table above Out of the 150 pupils selected for the study, seventy-seven (77), representing 51.3% scored from zero to forty percent (0- 40%) in the Cloze test; twenty-seven (27) representing 18% also had a score ranging from forty-one to sixty percent (41-60); and also, forty-six (46) pupils also had a score range from sixty-one to hundred percent (61-100).

This is suggestive that 51.3% out of 150 pupils who form the majority read the textbook at a frustration level; they found it difficult to comprehend the text in the textbook. While 18% of the 150 pupils read at an instructional level, 30.7% of the same number of pupils (46 pupils) could cope with the language in the textbook and would not need any assistance to help make meaning from what read.

Generally, the government-approved English textbook for basic five (5), *English Language for Primary Schools-Pupils Book 5* is difficult for the pupils to understand and most of them would have difficulties in reading it even with the assistance of their teacher.

The scores for the Cloze Test have been diagrammatically shown in Figure 4.2.

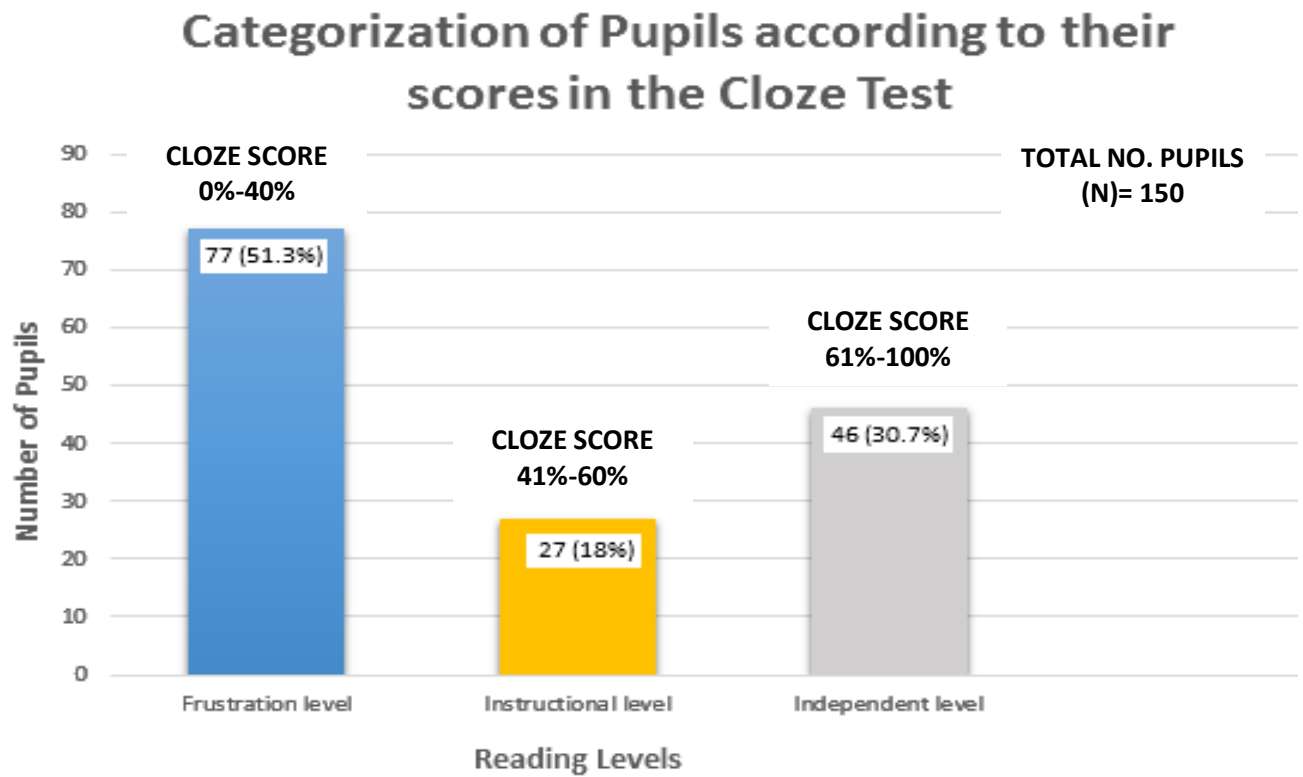


Figure 4.2 Categorization of Pupils according to their scores in the Cloze Test

Table 4.6 Categorization of Pupils of School “A” according to their scores in the Cloze Test

Cloze Test Score (%)	Number of Pupils	Reading Level
0-40	13	Frustration level
41-60	7	Instructional level
61-100	10	Independent level
Total	30	

From Table 4.6, out of the thirty (30) pupils sampled from school “A” for a Cloze Test generated from their English textbook, *English Language for Primary Schools-Pupils Book 5*, thirteen (13) had a score within the range of zero to forty percent (0-40%); seven (7) attained a score from forty-one to sixty percent (41-60%), and ten (10) also had 61% or more.

This indicates that while one-third ($\frac{1}{3}$) of the pupils selected from School “A” could read their English textbook without any assistance; thirteen (13) who read at a frustration level and other seven (7) who read at an instructional level (who formed two-third ($\frac{2}{3}$) of the total number of pupils selected from the school) could not cope with the language in the textbook and would require some form of assistance in order to understand read and understand what is in the textbook.

Table 4.7 Categorization of Pupils of School “B” according to their scores in the Cloze Test

Cloze Test Score (%)	Number of Pupils	Reading Level
0-40	20	Frustration level
41-60	5	Instructional level
61-100	5	Independent level
Total	30	

Table 4.7 shows that, out of a sample of thirty (30) pupils selected from school “B” for the Cloze Test, twenty (20) of them scored at most 40%; five (5) scored from a range of forty-one to sixty (41-60%); and the remaining five (5) also scored either 61% or more. It can be deduced from the table that twenty (20) pupils who constituted two-third ($\frac{2}{3}$) of the total of 30 pupils read their English textbook at a frustration level: they could not cope with the language used in the textbook. With the remaining ten (10) pupils (forming one-third ($\frac{1}{3}$) of 30 pupils), while five (5) could read at an instructional level, the other five (5) could read without any help.

Table 4.8 Categorization of Pupils of School “C” according to their scores in the Cloze Test

Cloze Test Score (%)	Number of Pupils	Reading Level
0-40	17	Frustration level
41-60	7	Instructional level
61-100	6	Independent level
Total	30	

From the above table, while seventeen (17) out of the thirty (30) pupils selected from School “C” read their English textbook at a frustration level, meaning they could not read and understand what they read; seven (7) could read at an instructional level and the remaining six (6) could read at an independent level, meaning the former could read with the help of a teacher and the latter could read independently without any assistance.

Table 4.9 Categorization of Pupils of School “D” according to their scores in the Cloze Test

Cloze Test Score (%)	Number of Pupils	Reading Level
0-40	23	Frustration level
41-60	4	Instructional level
61-100	3	Independent level
Total	30	

From the Table 4.9, Out of the total number of 30 students sampled from School “D” for the Cloze Test, twenty-three (23) could not handle the complexity of the language used in their English Textbook; four (4) could read the textbook but at an instructional level and the rest (three pupils) could read the textbook on their own without any support.

Table 4.10 Categorization of Pupils of School “E” according to their scores in the Cloze Test

Cloze Test Score (%)	Number of Pupils	Reading Level
0-40	4	Frustration level
41-60	4	Instructional level
61-100	22	Independent level
Total	30	

Table 4.10 depicts, from the total number of pupils sampled from School “E” who used the textbook, four (4) of them read at a frustration level; another four (4) also read at an instructional level and the remaining twenty-two (22) read at an independent level. This signifies that more than two-third ($\frac{2}{3}$) of the pupils could read without any form of assistance.

4.4 WHAT ARE THE FACTORS THE EDITOR OF THE TEXTBOOK CONSIDERED TO ENSURE ITS READABILITY?

The basic building blocks of book publishing are words. Basically, the editor of a book is responsible for the first round of proofreading to make sure that written text is concise, succinct and consistent, and is both grammatically and factually correct. Thus the (copy-) editor searches for factual errors and corrects them and ensures the manuscript conform to the style of the publishing house (Meenu, 2008; Finn, 2018). The copy-editor checks that each sentence is readable and that concepts conveyed are in a logical and sequential manner.

Primarily, the duty of an editor is to ensure textbooks are readable because according to Essuman (2009), textbooks are an alternative to the teacher in the teaching and learning environment. Learning can take place with textbooks even when there is no teacher. A number of studies conducted in advanced countries (UNICEF, 1996) have also established that among the numerous learning materials, a greater number of teachers heavily depend on the textbook as their major teaching resource.

The researcher discovered that only one editor was assigned to editing of the selected textbook. The editor stated that “when editing a textbook, extra care should be taken to avoid mistakes. Besides, since the primary function of a textbook is providing knowledge, mistakes and common errors cannot be afforded”. The editor also believed that “a key aspect” of her job as a copy-editor of the textbook was “to come out with a publication (textbook) with a content that the users (pupils) can easily read and understand”. This is in consonance with Dale and Chall's (1949) assertion that, “the success of every textbook is the extent to which the users understand it, read it at an optimal speed, and find it interesting.”

The interview conducted with the editor revealed that in order to ensure that the textbook is readable, she considered the following factors while editing:

- Syntax can influence the readability of a text.
- The number of words used in a passage can affect its readability.
- The number of new words contained in a passage can affect the readability of the passage.
- The difficulty of the vocabularies in a passage can affect the readability of that passage.
- The grammatical difficulty of the language used in a passage can affect the readability of that passage.
- Using words with many syllables can affect the readability of a passage.
- The paragraph transitions of a particular passage can affect the readability of the passage.
- The style an author uses to write can also affect the readability of a text.
- The knowledge of the readers prior to reading the book when editing it.

The editor shared in the notion of Richards et al. (1992, p. 306), Klare (1988), Langeborg (2010) and Hargis et al. (1998), "how easily written materials can be read and understood, depends on several factors including the average length of sentences, the number of new words contained, and the grammatical complexity of the language used in a passage."

However, the editor held an opinion that is contrasting to that of Taylor (1953) and Sadden and Reid (1985), "the reading skills of the reader (the user of a textbook) should be considered in ensuring the readability of a text (textbook)."

Also, it was discovered that the editor was not aware of any technology that helps to assess the readability of texts, even though currently, measurement of readability can be done on a computer because most grammar and text-editing applications have the capability to show the readability

level of the written text. Flesch Reading Ease Formula has been integrated in Microsoft Office Word application.

4.5 SUMMARY OF DATA ANALYSIS, AND DISCUSSION

The average Flesch Reading Ease Score of the passages selected from the government-approved English textbook for basic five (5), *English Language for Primary Schools-Pupils Book 5* was 65.29. This is suggestive that the language used in the textbook is standard according to interpretation given by Flesch (2006), it is neither easy nor difficult. Flesch (2006) also predicted that texts rated as *standard* better suit readers in grade 8 and 9, pupils whose ages usually range from 13 to 15 years. From the research, the average age of the class five (5) pupils sampled from the selected schools was eleven (11) years; 78.7% (118 out of the 150 pupils) were below the predicted age range and grade level of the textbook. Thus, the language used in the textbook was above the grade level of most of its users; the predicted grade level for the textbook does not match the pupils using it.

The Cloze Test also confirmed that the textbook did not match its targeted readership; the test revealed that the textbook was difficult for the pupils to understand and most of them would have difficulties in reading it even with the assistance of their teacher. Three (3) of the schools (B, C, D) had more than half (15) of their pupils reading at a frustration level: majority of the pupils in these schools could not read and understand the passages from the textbook even with help of their teachers.

The results given by the two readability measurement tools adopted for the study confirmed the stand of Kondru (2006), that because well-known and reliable readability formulas were proposed based on long period of research and extensive studies, "their predictions correlate very well with the results of the actual readability measurements of expert judgments, comprehension tests, and the Cloze procedures".

Most tools used for measuring the readability level of texts, like the Flesch Reading Ease formula focus on two major indicators: “syntactic and semantic factors” (Gilliland, 1972; Fry, 2002; Gunning, 2003; Flesch, 2006; Dalecki & Lewis, 2009). Langeborg (2010) argued “still today, the majority of the established readability formulas test the comprehension of a text by using only a combination of the two components — syntactic and semantic difficulty”, usually gauged by the average sentence length and word length (counting letters or syllables). The interview conducted with the editor of the selected textbook revealed that the editor was very particular with “syntactic and semantic factors” when editing the textbook. Therefore, researcher also critically considered the selected passages from the lenses of these two indicators.

From the study, it was observed that most of the words used in the textbook are mono and disyllabic, thus there are only some few words in the passages that have more than two syllables. The word *University*, a-ten (10)-letter-word, was the longest word seen in the passages. It had five syllables, making it the word with the highest number of syllables identified in the passages with some other few poly-syllabic words like *Sutherland*, *traditions*, *education*, *Saturday*, *experience*, etc. Chall and Dale (1995, p.84) argued, "It is no accident that vocabulary is also a strong predictor of text difficulty." Indeed, the word is a major factor to consider in measuring how easy it is to read and understand a text.

Also it was identified that the three passages had an average of 15.65 words per sentence: this could be long and would be difficult to read by the basic five pupils. The text could be made easier to read if the editor (or author) had kept the sentences a bit shorter. Keeping sentences longer in passages make them more difficult to read (Richards et al, 1992; Klare, 1988; Langeborg, 2010 and Hargis et al, 1998). Thus, even though the reading level of the language used in the textbook is standard (neither easy nor difficult to read), the language could have been made to match the

targeted readers by keeping the sentences shorter. The difficulty of text to a large extent determines how motivated pupils will be to read that particular text: the more complex the language in a textbook is, the more likely pupils are going to get frustrated with what they are reading (Kane & Warner, 1997)

In a nutshell, there is the need to pay a particular attention to what is recommended for pupils to read in schools. Fatoba (2014) made an important case that the level of understanding and academic performance of learners (pupils), to a large extent is determined by the readability of the textbook they use. Therefore, there is the need for editors to ensure that textbooks match their targeted readers; editor can take advantage of new technologies which help measure the readability level of texts. Also it is imperative for the institutions in charge of the development of textbooks (Curriculum Research and Development Division, the Procurement Division and the Ministry of Education) to be critical and have a particular interest in the readability levels of textbooks produced or recommended for pupils of different grades, in schools.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 OVERVIEW

This chapter entails the conclusion drawn from the findings of the research and recommendations made for consideration.

5.2 CONCLUSIONS

The findings of the research unveiled that for the readers of textbooks to be able to use them effectively (read and understand their contents), editors would have a major role in ensuring that they consider factors while editing: reading skills and comprehension level of targeted users of the textbooks, together with syntactic and semantic factors. Editors can use the following elements to gauge the readability level of their publications: the number of words used, the number of new words used, the difficulty of the vocabularies used, the grammatical difficulty of the language used, the paragraph transition style, the author style, and the reading skills and knowledge of the perceived readers prior to reading.

Furthermore, the study showed that the textbook with a readability level above the readers has been approved for them to use. The textbook was two (2) grades above the level of its intended readership, hence, the language in the book would be difficult for them to handle. As a result, majority (51.3%, 77) of the pupils read the textbook at a frustration level; they could not cope with the language used in the textbook, even with help from their teachers. And while the other 18% (27 pupils) would need help from their teachers to read and comprehend what they read from the

textbook, the remaining 30.7% (46 pupils) could read and understand the passages on their own without any assistance.

5.3 RECOMMENDATIONS

The following recommendations were made based on the findings of the study:

- There is the need for authors and editors to revise textbooks with difficult language having in mind semantic and syntactic factors, and the reading skills and knowledge of the perceived readers prior to reading.
- Authors and editors of textbooks could be specially trained to be able to write to suit the comprehension level of readers at different levels.
- Editors could be trained and encouraged to use new technologies (editing software) which can help accurately gauge the readability levels of their publications.
- Students could be encouraged to read books that are at their standard in order to motivate them to read more.
- Policy makers could be critical and have a particular interest in the readability level of textbooks produced and approved for students at different levels in schools. Besides, Institutions in charge of the development of textbooks (Curriculum Research and Development Division, the Procurement Division and the Ministry of Education) should thoroughly scrutinize contents of textbooks to ensure they cover all aspects of the syllabus and all other accepted standards before certifying them for approval and distribution in the various schools.

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APPENDIXES

APPENDIX A

CLOZE PASSAGES

(PASSAGES USED FOR COMPUTING OF THE FLESCH READING EASE SCORE)

CAREFULLY READ THE INSTRUCTIONS BELOW.

The passages below are from your English Textbooks. Kindly read them carefully.

Efua Theodora Sutherland

If you enjoy Ghanaian folk tales and drama as a child, then the name Efua Sutherland must be of special interest to you. Efua Sutherland is well known in Ghanaian theatre because of the work she did. She wrote Ghanaian traditions, myths and folk tales to develop the theatre in Ghana. Theatre deals with play-acting, dancing and other types of shows.

Efua Sutherland was born on June 27, 1924, in Cape Coast in the Central Region. She later obtained a degree in Education from Cambridge University in England. She returned to Ghana in 1951 and taught for some time but did not remain in the classroom for long.

Asana at the Market

Asana and her mother, Auntie Fuseina, live at Odorkor in Accra. They go to Mokola Market at the centre of the city every Saturday for their shopping.

This Saturday, many other shoppers were on their way to the big market, and the road was jammed with traffic. The cars and *trotros* on the road sometimes had to wait at one spot for several minutes before getting the chance to move again.

Many things are sold at Makola. They include foodstuffs, clothes, and imported goods. When Asana and her mother finally arrived at the market they went first to the stalls where fish was sold.

Abena and Kai Travel by Train

Abena and Kai are class mates and very good friends. Neither of them had ever travelled by rail, and longed to have that experience. Abena asked Kai to suggest to her parents if she could travel with them on train.

One weekend, Abena went over to Kai's house and informed her that her family had decided to go to Kumasi by rail.

APPENDIX B

CLOZE TEST

READABILITY OF GOVERNMENT APPROVED ENGLISH TEXTBOOKS FOR PRIMARY SCHOOLS

Dear Pupil,

I am Eugene Duodu Ampofo, schooling at Kwame Nkrumah University of Science and Technology, Kumasi. I am researching on how easy it is for pupils to read government recommended English textbooks. I will like you to read carefully and understand very well the instructions below and do the exercise for me. This exercise will enable me to gather information for my research and its success is highly dependent on your diligence. This exercise is solely for my research work and not to be used as any form of assessment. Your answers will be treated with confidence and anonymity.

Your support and co-operation is highly appreciated.

Thank you.

PERSONAL INFORMATION

1. Name of School
2. AGE
3. SEX (*Please tick where applicable*)
 - a. Male (Boy) []
 - b. Female (Girl) []

CAREFULLY READ THE INSTRUCTIONS BELOW.

The passages below are from your English Textbooks. Some of the words have been deleted, kindly fill in the blanks. Remember that guessing of the missing words is highly encourage. Spelling mistakes will not be consider.

Efua Theodora Sutherland

If you enjoy Ghanaian folk tales and drama as a child, then the name Efua Sutherland must be of special interest to you. Efua Sutherland is well in Ghanaian theatre because the work she did. wrote Ghanaian traditions, myths folk tales to develop theatre in Ghana. Theatre with play-acting, dancing and types of shows.

Efua was born on June 27, 1924, Cape Coast in the Region. She later obtained degree in Education from University in England. She returned to Ghana in 1951 and taught for some time but did not remain in the classroom for long.

Asana at the Market

Asana and her mother, Auntie Fuseina, live at Odorkor in Accra. They go to Mokola at the centre of city every Saturday for shopping.

This Saturday, many shoppers were on their to the big market, the road was jammed traffic. The cars and *trotros* the road sometimes had wait at one spot several minutes before getting chance to move again.

..... things are sold at Makola. They include foodstuffs, clothes, and imported goods. When Asana and her mother finally arrived at the market they went first to the stalls where fish was sold.

Abena and Kai Travel by Train

Abena and Kai are class mates and very good friends. Neither of them had travelled by rail, and to have that experience. asked Kai to suggest her parents if she travel with them on

One weekend, Abena went over to Kai's house and informed her that her family had decided to go to Kumasi by rail.