

Assessment of the Impact of Reading Difficulties on Learners' Academic Performance: A Case of Junior High Schools in the New Juaben North Municipal of Ghana

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Abstract

The study assessed the impact of reading difficulties on learners' academic performance in the New Juaben North Municipal of Ghana, following reports on the falling standards of students' academic performance. Specifically, the study established the effect of the reading ability of Junior High School [JHS] students in the New Juaben North Municipal on their academic performance, and appraised comprehension lessons in such schools. The study is a quantitative-oriented study which employed the cross-sectional survey design to sample 260 students and 24 teachers by the simple random sampling technique. The study found that word mispronunciation and word substitution were respectively the main and least reading errors identified among JHS students in the Municipality. The study established negative associations among all identified reading errors, which were found to distort the intended meanings of the text in students' comprehension. This was inferred to trickle down to misconstrued interpretations of examination questions' demands of students, and hence poor performance in the examination. The study found that the ignoring of punctuation is the main impedance to achieving the objectives of comprehension lessons. Further, the study found that English Language teachers in the Municipality use comprehension tests as the main assessment technique. The study finally established that 60 percent of English Language teachers schedule after-school lessons to improve the reading competencies of students. The study recommended that the Ministry of Education and Ghana Education Service should prioritise and develop strategies to improve reading abilities.

Keywords

Reading Comprehension, Reading Difficulty, English Language, Academic

Performance, Comprehension Lesson Appraisal

1. Introduction

According to Lerner and Kline (2006), many learners, for unexplained reasons, are unable to use reading as a tool for learning, and getting new information, ideas, and attitudes. Even after they have been taught, it is quite unfortunate that a large number of them are unable to read efficiently at higher class levels (Lerner and Kline, 2006). According to Mercer and Mercer (1989), between 10 percent and 15 percent of school-going learners have reading difficulties. Lerner and Kline (2006) notes that more than 17.5 percent of learners studied have reading difficulties. Reading difficulty is defined from a normative perspective, or how well a kid reads in comparison to their peers or educational expectations (Fletcher et al., 2018). The government of Ghana planned to achieve education for all (EFA), according to the Millennium and Sustainable Development Goals (MDGs/SDGs), through the provisioning of quality education that is accessible and relevant to the lives of all children. Related studies have focused on the situation at the primary school level, marginalizing the case at the junior high school level in Ghana. The study so is interested in what happens to learners' reading competencies after they are promoted to the junior high school level in New Juaben North Municipal.

Schools' performance analysis over the years identifies that the performance of junior high schools is below average performance throughout the country. The 2021 school performance plus inspection aggregate report expresses that the BECE results for 2018 to 2020 on the three (3) core subjects—English, Mathematics, and Science revealed that 92.8% of schools were rated unsatisfactory (National Schools Inspectorate Authority [NaSIA], 2021). The Ministry of Education (MoE) advances that the performance analyses for the 2010, 2011, and 2012 academic years recorded mean grades which were far below the country's average mean grade for junior high schools. To the best of my knowledge, there has not been any study to investigate the underlying conditions of the situation as reported, in the New Juaben North Municipal. Efforts and recommendations proposed by NaSIA to address the problem focus on infrastructure and food, and leadership and school management (NaSIA, 2021), sidelining the contribution of reading and comprehension to the problem.

Reports in literature have established that the competencies of students relevant to reading and comprehension have a role in how students perform academically (Carmine, Silbert, & Kameenui, 1997; Kerr, Nelson, & Lambert, 1987; Kirigia, 1991; Njoroge, 2000). There has therefore been the conception of the need to assess the role of reading and comprehension in the poor academic performance of junior high school students in the Municipality. In this light, the study presents a descriptive appraisal of reading and comprehension lessons, establishes comprehension errors, and finds out the effects of reading difficulties on students' academic performance in the New Juaben North Municipal.

2. Research Methodology

2.1. Study Area

The New Juaben North Municipal is one of the thirty-two (32) Districts in the Eastern Region. According to the 2010 Population and Housing Census (PHC) report, New Juaben North has a total population of 47,198 which comprises 20,106 males (42.60%) and 27,092 females (57.40%). The annual projection as of July 2018 was 55,832 with a growth rate of 2%. New Juaben North Municipality has 55 Kindergarten/nursery schools out of which 22 are private. The Municipality has a total of 51 primary schools out of which 19 are Private. There are 39 Junior High Schools (JHS), of which 28 are public and 11 are private. The SDA College of Education and 5 public Senior High Schools (SHS) are also in the New Juaben North Municipal.

2.2. Study Design

The study assumed a quantitative approach with a cross-sectional survey design. The survey design was adopted for the study justification of the use of the quantitative approach, after [Creswell and Creswell \(2017\)](#) who have reiterated that the survey design provides a quantitative description of trends, attitudes, or opinions of a population by studying a sample of that population. [Creswell and Creswell \(2017\)](#) views quantitative research is an approach for testing objective theories by examining the relationship among variables. These variables, in turn, can be measured, typically on instruments, so that numbered data can be analyzed using statistical procedures ([Creswell and Creswell, 2017](#)). This justifies the adoption of the quantitative approach for the study.

The study's target population constituted all students and English Language teachers from all 28 public junior high schools. A simple random sampling technique was used to sample 260 junior high school students and 24 English Language teachers in the New Juaben North Municipal. The sample sizes for teachers and students were determined after [Krejcie and Morgan \(1970\)](#), who proposes that sample sizes of 260 and 24 were appropriate for populations of 800 and 25 people. A comprehensive list of teachers and students was sourced from the respective managements of Junior High Schools in the Municipality. The simple random sampling featured the lottery method as outlined by [Sarantakos \(2017\)](#).

2.3. Data Collection

The study employed a printed text passage picked from the GES-approved English Language textbook for the respondents' reading. The student respondents read individually as the researcher recorded the tapes of the readings, noted the reading errors, and scored accordingly. A cloze test constructed from the passage students read was used to assess students' comprehension of the passage they read. The cloze test was administered to sampled students. The cloze procedure is considered an appropriate tool to test the proficiency of a reader ([Stubbs &](#)

Tucker, 1974). The cloze test was used in this study to establish the extent to which respondent student readers have comprehended the passages they have read. Data on the academic performance of students over the last three school terms were sought from the schools. In the case of teachers, a self-constructed questionnaire of closed-ended and Likert format was used to collect data on their views on reading difficulties among their students.

2.4. Data Analysis

Statistical analysis emphasizing both descriptive and inferential statistics was used to analyse the data. The study used simple percentages and mean with standard deviations for the descriptive analyses of the data. The Inferential statistics witnessed the application of the Chi-Squared test of goodness of fit to analyse the relationship between reading errors and the academic performance of students. Tables and charts have been used to present the data.

3. Results and Discussion

3.1. Demographic Characteristics of Respondents

Respondents' demographic information was accessed and analysed to enable readers to have a better appreciation of the nature of participants used in the study and the data so obtained from them. In so doing, the gender, age, and the highest level of education attained by teachers were considered for the teacher category of the sample. For students, gender, age, and class were considered.

The findings revealed that female teacher respondents formed the highest percentage of the sample. As shown in **Table 1**, there is gender bias among staff teaching the English Language in studied schools. This is an issue that is worth addressing; males should be motivated to be trained in the various teacher training institutions in the area of English Language as the presence of more male English Language teachers will in a way help boys in the English Language class because the supremacy of the English Language among all other subjects cannot be underrated. The English Language is the medium through which other lessons are conveyed and as such, learners with problems in the English Language tend to have problems in general academic performance.

The mean age of teachers in the study's sample was 36 years with a majority of the respondents falling in the age bracket of 31 to 40 years, which formed 50 percent of the teacher respondents. The study revealed that 29 percent of the respondent teachers were aged between 41 and 50 years. Translating to their years of teaching experience, the study established the experiences of teachers in terms of the years that they have served in the profession. The results identified that about 80 percent of teachers have up to 15 years of teaching experience, with 20 percent expressing that they have been in service for over 15 years. The experience of teachers evidences high chances of ever identifying learners with reading difficulties. Teachers were therefore expected to have higher competence with remedial strategies to improve learners' performance.

Table 1. Socio-demographic characteristics of respondent teachers.

Variable	Responses	Frequency	Percentage
Gender	Male	5	20.8
	Female	19	79.2
Age	21 - 30 yrs.	2	8.3
	31 - 40 yrs.	12	50.0
	41 - 50 yrs.	7	29.2
	Over 50 yrs.	3	12.5
Level of education	Diploma	5	20.8
	1st Degree	17	70.8
	2nd Degree	2	8.3
Professional experience	Less than 5 yrs.	10	41.7
	6 - 15 yrs.	9	37.5
	Over 15 yrs.	5	20.8
Average number of students per class	45	5	20.8
	50	14	58.3
	55	5	20.8

Source: Field data (2022).

The study considered the enrolment of classes from schools studied. The study considered the average number of students who report to school according to the class records for student attendance. Establishing the class enrolment in the sampled schools sought to assess the teachers' workload and the results have been presented in **Table 1**. **Table 1** indicates that most of the classes had an average number of 50 (60%) students. Thus class enrolment size could be a contributing factor to poor performance. This has been inferred because previous studies confirm it. In Bolivia, [Urquiola \(2006\)](#) found that a one-standard-deviation reduction in class size improves test score performance by 0.2 to 0.3 standard deviations. Similarly, [Fredriksson et al. \(2013\)](#) evaluated the long-term impact of class size in Sweden. The authors identified that students in smaller classes had higher cognitive and non-cognitive skills, such as effort, motivation and self-confidence.

The study found that the ratio of male students to female students in Junior High Schools in the Municipality is 147 to 113. This expresses a gender bias situation. This might not necessarily be the case since the simple random sampling procedure is not a respecter of gender. The ages of students identified that majority of the students (38.8%) are aged between 13 years and 15 years old. The study also established that 96 and 94 students connoting 36.9% and 36.1% students respectively in JHS 1 and 2 (**Table 2**).

3.2. Assessment of Students' Reading

The study sought to examine the students' reading levels and comprehension by

Table 2. Socio-demographic characteristics of respondent students.

Variable	Responses	Frequency	Percentage
Gender	Male	147	56.5
	Female	113	43.5
Age	Below 12 years	86	33.1
	13 to 15 years	101	38.8
	Over 15 years	73	28.1
Class	JHS 1	96	36.9
	JHS 2	94	36.1
	JHS 3	70	27

Source: Field data (2022).

use of the cloze procedure. The cloze procedure test had 179 words and twenty blank spaces. The students were to provide the original word or a synonym in the blanks as the researcher instructed them. **Figure 1** shows how students performed in a cloze procedure test administered by the researcher. The majority (72%) scored below the average mark while 28% scored above the average mark. This performance tends to agree with teachers' opinion in **Table 4** where 90% of the teachers strongly agreed that reading appeared to affect performance in all other academic subjects.

3.3. Impact of Reading and Comprehension Errors on Academic Performance

An analysis of the common comprehension errors was done. This revealed that words mispronunciations were the most common error with a mean of 1.2 words mispronounced. Word omission was also a common comprehension error with a mean of 0.7 words omitted. The other comprehension errors studied observed 0.5 words added, and 0.3 words substituted. Comprehension errors have the potential to lead to the altered meaning of the passage read, indicative that the students did not get a complete understanding of what they read.

The study found that students who omitted fewer words in reading tests performed better than their counterparts who omitted more words. Students who did not omit a word scored more than 50%. The study determined the relationship between word omission error and academic performance using the chi-square test. The results of the chi-square test show that there is a significant relationship between word omission errors and the academic performance of students ($X^2 = 17.582$; $p < 0.05$), implying that the academic performance of students is influenced by the extent to which they omit words whenever they read. Omitting words results in distorting the writer's intended meaning. This translates as distorted interpretations of questions in examinations. This finding agrees with studies conducted in Kenya by **Chege (2015)**, **Kirigia (1991)** and **Njoroge (2000)** which all have confirmed that learners with problems in reading have problems in school performance in general (**Figure 2**).

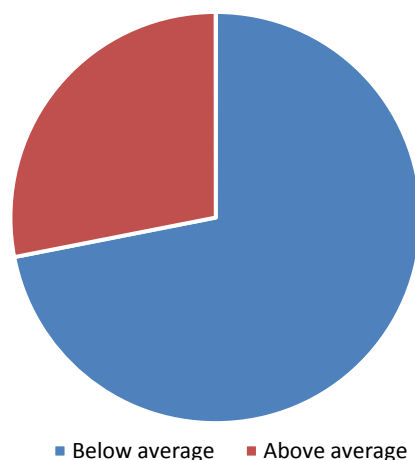


Figure 1. Students' performance in the cloze test. Source: Field data (2022).

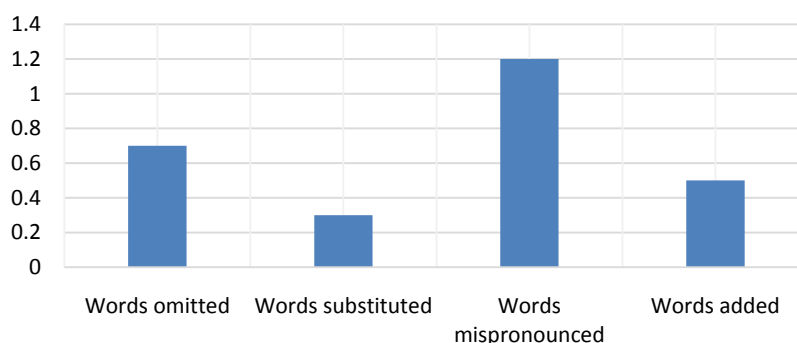


Figure 2. Means of reading errors identified. Source: Field data (2022).

The association between words substituted and academic performance was also assessed. The results in **Table 3** show the relationship between word substitution errors and the academic performance of students in their end-of-term examinations. The study found that the students who had not substituted words in a reading test performed better than their counterparts who substituted several words. Seven students who did not substitute a word scored a mean grade of over 50% compared to two students who substituted some words during the reading test and scored less. Word substitutions have the same effect on academic performance as word omissions. The reader ends up with a different or distorted narrative which deviates from the writer's intended one and hence fails to answer examination questions correctly.

The study established the effects of word mispronunciation on academic performance, and the results are indicated in **Table 3**. The study found that students who mispronounced fewer words in the reading test performed better than their counterparts who mispronounced several words. The results established that students who had the highest mean scores in their end-of-term examinations mispronounced at most one word during the comprehension test. The study sought to determine whether there is a relationship between words mispronunciation errors and academic performance. The chi-square test results show that there is a significant relationship between word mispronunciation errors

Table 3. The impact of reading errors on students' academic performance.

Reading error	X ²	df	p-value
Words omission	17.58	24	<0.05
Words substitution	13.33	16	<0.05
Words mispronunciation	37.33	40	<0.05
Words addition	44.67	24	<0.05

Source: Field data (2022).

and the academic performance of students ($X^2 = 37.334$; $p < 0.05$). Like omission and substitution, mispronunciation of words would also result in distorted meaning.

The study found that students who did not observe word addition errors performed better than their counterparts who added several words to the passage they read. The results further established that most students who did not add words during their reading tests had also scored better in their end-of-term examinations.

Words omission, substitution, mispronunciation, and addition all lead to distortion of the writer's intended meaning. The results presented confirm Smith and Luckasson's (1995) list of common problems experienced by some students who suffer from reading difficulties, such as inserting extra words or sounds, substituting words that look or sound similar, mispronouncing words, repeating words, or using improper inflexion during oral reading, among others. These findings are also in line with the findings of Carmine, Silbert and Kameenui (1997) who found reading difficulties to be the principal cause of failure in school. Kerr, Nelson and Lambert (1987) have found that word recognition, reading comprehension and application to be the reading skills mostly assessed in an examination. The above results were confirmed by teachers' perception of the effects of comprehension errors on academic performance as indicated in Table 4.

3.4. Teachers' Perceptions of the Effects of Reading Difficulties on Academic Performance

Teachers' opinion on the extent to which they agree with various statements about the effects of reading difficulties (comprehension errors) on academic performance, was done using a five-point Likert scale scaled 1 to 5, where 1 represents strong disagreement, and 5 represents strong agreement. As shown in Table 3, the study found that the majority of the teachers from the sampled schools agreed that poor reading skills affected academic performance in all the examinable subjects. They also agreed that library lessons were often ignored and that library resources and reading materials were not well established in the area.

3.5. Descriptive Appraisal of Basic Schools' Comprehension Lessons in New Juaben North Municipal

The study sought teachers to express their levels of understanding relevant to a

Table 4. Teachers' perceptions of reading.

Item	Mean	SD
Reading appears to affect performance in all other academic subjects	4.6	1.2
Reading comprehension is very important at the basic education level as students use it as a tool to get new information, ideas, attitudes and values from all content areas and especially in literary texts	4.6	1.2
Reading comprehension is required to interpret examination questions and even to comprehend what the questions in an examination required for an answer	4.5	1.2
Reading and comprehension help in information gathering and learning concepts	4.1	1.1
Reading is an ongoing process and should also be taught in junior high schools	3.7	1.2
Reading difficulties are the principal cause of failure in school	3.6	1
Library lessons are often ignored in my school	3.6	1.3
Library resources and reading materials are not well established in my school	3.9	1.2

Source: Field data (2022).

few statements about the causes of poor academic performance in schools. The results as shown indicate that majority of the teachers identified reading difficulties and learners' previous academic background as the main causes of poor academic performance in the Basic schools in New Juaben North Municipal. The results agree with [Ricket, List and Lerner's \(1989\)](#) findings that reading difficulties are the principal causes of failure in school.

The study sought to establish challenges faced by teachers supporting students with reading difficulties. Teachers were asked to indicate whether they were comfortable or not in dealing with those students in regular classes. The study reveals that the responses to the question of teachers' comfort when dealing with students with reading difficulties in regular classes exhibit that majority of the teachers expressed that they were not comfortable in dealing with such students in regular classes. The perceived lack of comfort in handling students with reading difficulties in regular classes is expressive of teachers' frustration during lesson delivery. The study advances that teachers might be frustrated and may not cover the lesson as intended due to students' low response in coping. This could mean a poor relationship between the teachers and the students.

The study in this light investigated what should be done to make teachers of students with reading difficulties to be comfortable in dealing with such students in regular classes. Sixty percent (60%) of teachers responded that extra time should be created to attend to students with difficulties separately. Forty percent (40%) of teachers recommended that the relevant teachers should be made to undergo relevant training to build on their expertise. The study puts across that special-need attention should be given to students. This position is supported by

Runo (2010), who has established that there is a need to introduce special needs education in all teacher training institutions to prepare them in working with learners with mild disabilities in regular schools.

The study investigated the methods that teachers use to assess students reading comprehension. The use of comprehension tests was the most widely used method as 50 percent of teachers confirmed their use of it. After every reading comprehension passage, there are comprehension questions which test the comprehension abilities of students. One of the major general objectives of teaching reading is that at the end of lessons, learners should be able to comprehend literary and non-literary materials, formatively or summatively (Ghana Education Service, 2006). As shown in Figure 3, other techniques identified by the study with their respective levels of utilisation were reading in turns, remedial sessions, and asking students to write summaries.

The study recommends that the Ghana Education Service and the Ministry of Education should emulate this. Junior High School students are supposed to demonstrate an understanding of common and distinctive features of literary genres from novels, plays and short stories. For these targets, the study inquired how often library lessons are conducted in their respective school. It was revealed that more than half of the respondent teachers have never conducted library lessons, with 30 percent of them expressing that they conduct library lessons once a week. Only about 10 percent of the teachers conduct library lessons. It is worth noting that these lessons are observed in the space of at least 2 weeks. The presence of a significant number of teachers who have never conducted a library lesson is indicative that JHS 1 form 2 students, other things being equal, have failed to attain the comprehension target according to the Ghana Education Service.

The study identified some factors that prevent the achievement of the objectives of comprehension lessons. Figure 4 shows the levels of the challenging factors as expressed by the respondent teachers. The study revealed that ignoring punctuation is the major reading comprehension challenge. This is followed by the inadequacy of textbooks and the inability to read. Runo (2010) recommends to parents and other stakeholders that schools should have more library materials and reading hours which are to be guided or supervised by teachers. Through this, the learners will be exposed to new vocabulary, sentence structures and different registers.

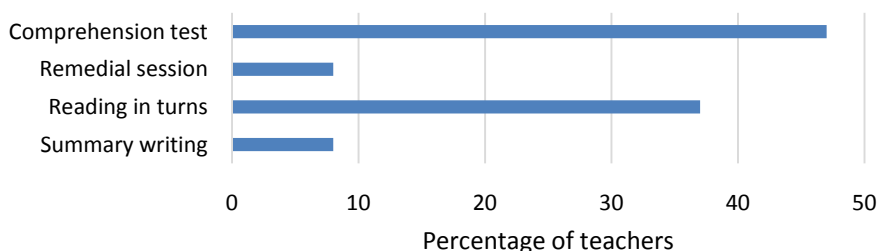


Figure 3. Assessment techniques implemented by teachers. Source: Field data (2022).

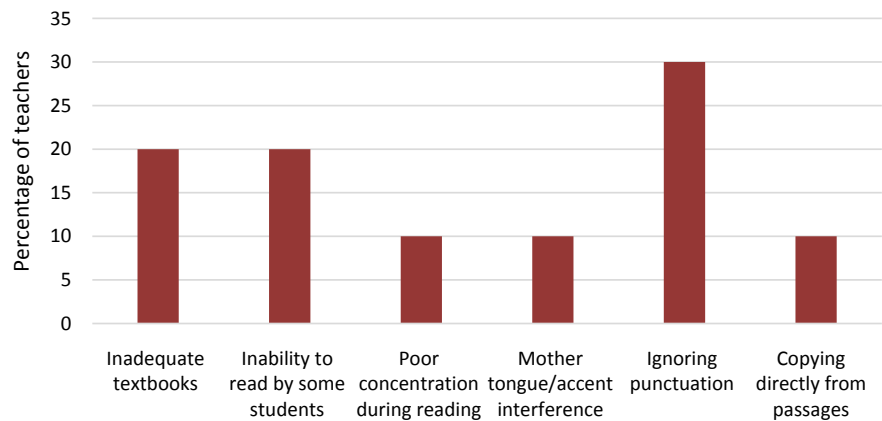


Figure 4. Challenges faced by students in reading and comprehension. Source: Field data (2022).

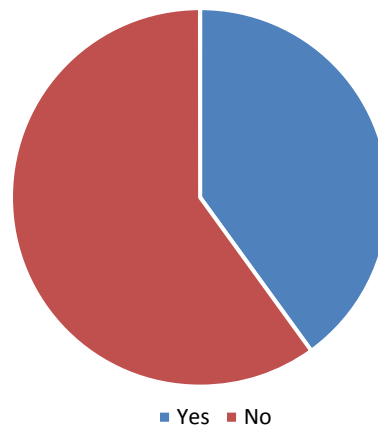


Figure 5. Position of teachers regarding professional development training. Source: Field data (2022).

The study investigated the strategies which teachers use to enhance reading comprehension in their schools. The results identified the use of extra comprehension lessons as the most common strategy, as 60 percent of respondent teachers indicated that they fix an extra time for comprehension lessons. Teachers readily followed the layout of English textbooks, where reading comprehension should be conducted every week. However, teachers were identified to forsake library lessons which are equally important in eliminating comprehension errors. Ricket, List and Lerner (1989) indicated that Junior High teachers among other teachers need knowledge about the assessment and treatment of reading difficulties. Adequate literary and non-literary materials should be provided since reading is an important skill that does not only help the learners in the mastery of the English Language but also enhances their performance in other subjects in the school curriculum (Carmine, Silbert, & Kameenui, 1997).

In the position of Ricket, List, and Lerner (1989), the study inquired how best in-service professional development training sessions are held for English Language teachers. The teachers were asked to indicate whether they had attended any in-service, training and the results were presented in Figure 5. It has been

established that more than half of the teachers had not undergone any in-service training. The presence of a considerable number of teachers who had not undergone any in-service training in reading instruction since they completed the initial teacher education may have led to poor teachers' poor professional performance in the studied schools. As the English Language is the official language for communication in Ghana, as well as the medium of instruction in Ghanaian schools, colleges and universities, proficiency in English will make the learning of other subjects much easier. It is therefore important that the teaching of reading is not marginalized. The Ministry of Education should ensure in-service training and professional development avenues for English Language teachers in the Municipality.

4. Conclusions and Recommendations

The study has established that reading difficulty negatively affects learners' academic performance. The study so recommends to the Ministry of Education and Ghana Education Service to develop mandatory strategies to improve reading abilities in the New Juaben North Municipal. In essence, the MoE and the GES should develop policy guidelines to measure students' reading abilities to address difficulties.

To improve performance in both public and private schools, reading comprehension should be emphasized. Following the appraisal of comprehension lessons in schools in the Municipality, it is recommended that, stakeholders in education in Ghana should make sure that schools and libraries are stocked with enough books and that there is an adequate supply of reading/learning materials. They should also implement frequent and mandatory in-service training programs for teachers.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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