

ISIR Journal of Arts, Humanities and Social Sciences (ISIRJAHSS)
ISSN: 3048-7463 (Online)
Frequency: Bimonthly
Published By ISIR Publisher
Journal Homepage Link- https://isirpublisher.com/index.php/isirjahss

EFFECTS OF CRITICAL AND MAIN IDEA IDENTIFICATION SKILLS ON SENIOR SECONDARY STUDENTS' ACHIEVEMENT IN READING COMPREHENSION IN KARU LOCAL GOVERNMENT AREA, NASARAWA STATE, NIGERIA

By

Danjuma Dogara Musa[1], Mary O. Anyebe[2], Patricia U. Mmegwa[3]

[1,2,3]Department of Arts Education, Faculty of Education University of Jos, Plateau State, Nigeria

Article History

Received: 04/12/2025
Accepted: 27/01/2026
Published: 02/02/2026

Vol – 3 Issue – 1

PP: -27-32

Abstract

The current study examined the effects of critical and main idea identification skills on senior secondary students' achievement in reading comprehension in Karu Local Government Area in Nasarawa. The study adopted the quasi-experimental research design. Specifically, the pre-test post-test non-equivalent comparison group design. The sample size of the study consisted of 85 senior secondary students (SS2) The sample was drawn using simple random and purposive sampling techniques. Reading Comprehension Achievement Test (RCAT) was used to gather data. The Reading Comprehension Achievement Test (RCAT) measured the two reading skills namely the critical reading and main idea identification. The data collected for the study were organized and interpreted using descriptive and inferential statistics. The research questions one and two were answered using the mean and standard deviation. Hypotheses one and two were tested using analysis of covariance (ANCOVA). The findings showed that pre-reading strategies motivate and sustain students' interest in the actual reading activity. They also activate the building of related information in such a way that new information is easily assimilated into learners' existing fields of knowledge. Though pre-reading activities play a critical role in the reading comprehension classroom, the study revealed that a substantial number of teachers do not embrace them. The few who do, neither use a variety of them nor use them regularly. The study recommends that English language teachers should employ pre-reading activities such pre-teach vocabulary, discussion and pre-questioning in teaching reading comprehension.

***KEYWORDS**: reading, reading strategies, reading comprehension, achievements.*

INTRODUCTION

Reading comprehension forms an important aspect of English Language and it is not peculiar to English language alone. Its importance endorses all fields of knowledge in the school system. Students need to read and comprehend the notes, the textbooks and even instructions and examination questions in order to attend the best. If students reading comprehension is poor, it is possible that they will fail to learn or will make slow progress. On the other hand, if a student can read with the ability to understand, they will have a better chance of succeeding in school and even the society at large.

Background and Statement of Problem

Reading comprehension refers to the ability to understand information presented in written form. It is a process of making predictions and confirming predictions. The ability to read and understand is, therefore, essential for academic learning because it is the foundation for success in all academic subjects. It is the essence and goal of reading, since the purpose of all reading is to gather meaning from the printed page. The ultimate goal of reading is for extraction of meaning from what the reader is able to read. It is the ability to read text, process it and understand its meaning. Moreover, being able to read and understand is important because it opens door to many opportunities for development in different areas of life. In today's society, anyone who cannot read and understand, stands the risk of facing huge economic, social and personal limitations because the world is driven by information which can be accessed through one's ability to read and comprehend (Villanueva, 2022). Reading is a decisive form of communication through which we get most of the information required in teaching and learning situations and in everyday life. Reading implies the meeting of the mind of the author with the mind of the reader (Zhang, 2018).

Reading comprehension is a critical skill that significantly influences students' academic performance across subjects. In

*Corresponding Author: **Danjuma Dogara Musa.**

This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License.

Nigeria senior secondary schools, many students struggle with understanding texts due to poor reading habits, limited vocabulary, and insufficient exposure to effective reading strategies. Reading is a lifelong activity. Those who enjoy reading derive pleasure and satisfaction from it. Adigun and Oyetunde (2016) observed that skills in reading will not only assist pupils in organising their thoughts and jotting down important facts while reading, but also equip them to comprehend the entire texts. The ability to read is a major determinant of students' success or failure. That is becoming a strong indicator to the society as an evidence of been educated.

A good reader has a better opportunity for greater achievement. Students must form the habit of reading to perform well in all subjects. Christopher (2017) stated that a good reading habit is cultivated by individuals who are ready to give their all to it. Critical reading is a process of analysing, interpreting and sometimes evaluating. When students read critically, they use critical thinking skills to question the text. Critical reading helps the reader to have a deep understanding of the passage. It helps the reader to seek knowledge, develop ideas and to reflect on the objectives of the passage. Main idea reading skill refers to the ability to identify the central thought or most important message of text, paragraph, or passage. It involves understanding what the author is primarily communicating. Some of the key features include; identifying the topic and focus of a passage, distinguishing the main idea from supporting details.

Aim and Objectives

The aim of this study was to determine the effects of reading pre-reading activities on senior secondary students' achievement in reading comprehension in Karu Local Government Area, Nasarawa State, Nigeria. Specifically, the objectives of the study were as follow:

1. find out the difference in the critical comprehension achievement of students in experimental and control groups.
2. ascertain the difference in the main idea identification achievement of students in experimental and control groups.

Research Questions

RQ1 What are the differences between the pre-test and post-test critical comprehension achievement mean scores of SSII students in the experimental and control groups?

RQ2 What are the differences between the pre-test and post-test main idea identification achievement mean scores of SSII students in the experimental and control groups?

Hypotheses

Hn1 There is no significant difference between the pre-test and post-test critical comprehension achievement mean scores of SSII students in the experimental and control groups

Hn1 There is no significant difference between the pre-test and post-test of main idea identification achievement mean scores of SSII students in the experimental and control groups.

Scope of the Study

This study focused on senior secondary school two (SS2) students within Karu Local Government Area, Nasarawa State, Nigeria. It covered pre-reading activities such as brainstorming, pre-questioning, predicting, vocabulary pre-teaching, discussion, storytelling and use of picture. The variables of interest as contained in the research questions were the ability to identify critical ideas, identify main ideas, texts or passages.

Theoretical Framework

This study was guided by Schema theory. Propounded by Sir Frederic C. Bartlett in 1932. Schemata theory is a mental structure or organized body of knowledge built from past experiences. According to Bartlett, readers do not passively receive information; they actively construct meaning using their prior knowledge. He sees reading comprehension as an active process of understanding reading which involves meaning construction by using clues in a reading material and relating them to the reader's existing background knowledge. And within this process, it is possible to identify some skills like linguistics features such as structures, semantics and others which suggested that there is something in the mind of the reader.

The schema theory is further considered relevant because it would provide processes on how to activate students' background knowledge using appropriate reading activities, especially at the pre-reading stage to improve their comprehension of different texts and passages. The theory is suitable because it provides a guide on how to enhance students' background knowledge when teaching different areas of language structures such as formal, content, and structures which are in most cases problematic to students when reading passages.

Literature Review

Reading, unlike listening and speaking, is a learned skill. It calls for formal instruction not only in the second language but also in the first language (Adhikari & Poudel, 2020). In academic contexts, students read not only to comprehend a text but also to synthesize, interpret, evaluate, and transfer information from the text to other skills such as reading and writing (Grabe, 2009). Andoko (2020) defines reading as one of the important activities to obtain knowledge or information. In other words, reading is one of the gateways of knowledge. It is an active and fluent process involving the readers and the reading materials building meaning. It is also noticed as an active task where readers are making selection from a range of words, derive from the text and the situational context that are constructing a model of meaning that reflects, more or less the same, the meaning designated by the writer." From the statement, we can understand that reading as an activity to get meaning and also how is used to recognize and understand the printed of words or symbols.

Reading comprehension is therefore the purpose of reading and remains an essential part of all learning. Comprehension can be conceptualized as the extraction of relevant knowledge from texts and consists of three elements; the reader, the text,

*Corresponding Author: **Danjuma Dogara Musa.**

This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License.

and the purpose of reading. It is the interaction between text, readers, and purpose as well as the use of reading comprehension strategies that increase comprehension. Tompkins (2011) consequently defines reading comprehension as the level of understanding of a text/message. Reading comprehension is the interaction between the written words and the knowledge they elicit from sources outside the text or message. Thus, reading comprehension is a cognitive process that is meant for decoding the meaning embedded in a text in order to understand what the author is communicating to his/her audience through the message. Without comprehension, reading is reduced to symbols that do not provide the reader with any information, and again, without comprehension, reading is nothing more than tracking symbols on a page with the readers' eyes and sounding them out (Mahmoud, 2015).

Some basic steps involved in the reading process. They are:

(i) Pre-reading
(ii) Guided reading
(iii) Post-reading

Pre-reading: this is the first step in the reading process and it consists of activities that must take place before eyes hit the written page. One of the main reasons of pre-reading is to acknowledge the different context, experiences, biases and background knowledge (the given) of the learners that will influence how they learn from a text (the new) this provides teachers with bridges between the given and the clarifying unfamiliar vocabulary and concept, and offering other important information in the process. Lailiyah, Wediyantoro, & Yustisi (2019) opined that these processes are derived from a model of learning called a schema theory. Pre-reading activities also include brainstorms, small group questions and answers.

According to Rustika, (2018), the success of any reading exercise is perfected, to a greater extent, on the activities that must take place before reading. In the words of (Lawal, 2018), for this strategy to be effective, the teacher must have a deep understanding of the features, of the passage, the needs and characteristics of the learners.

Post-reading: this third step of the reading process is the stage at which the reader is able to articulate his understanding of the printed materials. This level involves the transfer of the information acquired from the short term memory to the long term memory for future use.

The first stage of reading can be described as merely associating words with letters but for reading to be purposive, the process has to go beyond this. Reading has to become internalize as a habit and tool for continuous self-improvement. Jambi cited in (Jamilah,2018), explained the stages of the reading process at the primary or elementary school level. Here, the first level is a word perception that is identification of words and understanding their meanings. This is followed by comprehension and the significance of the communication. Reaction to what is read is the third level. This is a stage of critical evaluative reading. Lastly, the assimilation level is the infusion of the new idea with the previous knowledge and experience.

METHOD AND PROCEDURE

Design, Population and Sample

The quasi-experimental research design was used in the current study. Specifically, the study adopted the pre-test post-test non-equivalent comparison group design. The population of this study was 2,88l SS2 students in 40 public secondary schools in Karu Local Government Area in Nasarawa State. Simple random technique was used to select the schools and students. The sample schools for the study consisted of 103 students that were in SS2 at the time of the study in the designated schools.

Instrument

Reading Comprehension Achievement Test (RCAT) was used in measuring the achievement test.

Procedure

A pretest was administered to the experimental and control groups for two days. Day one was for testing questions on critical comprehension skill while day two was used for testing questions on main idea comprehension skill. A comprehension passage was given and students were asked to answer five questions on each skill.

Administration of the Treatment

A treatment was conducted for the experimental and control groups in two the schools. Treatment consisted of reading comprehension achievement test. Students in the experimental group were taught using pre-reading activities while students in the control group were taught using lecture method. Treatment lasted for the periods of 2 weeks which were delivered two times a week for 40 minutes, or a double period of 80 minutes.

Administration of Post-Test

The post-test was conducted after the treatment. The test that was given during the pre-test was the same administered during the post-test. The duration of the test lasted for 40minutes and was monitored to avoid interaction.

Analyses

The research questions raised for this study were answered using the mean and standard deviation. By this, the significant difference between the experimental and control groups in the pre-test and post-test were determined.

Research Question One

What are the differences between the pre-test and post-test critical comprehension achievement mean scores of SSII students in the experimental and control groups?

To determine the pre-test and post-test critical comprehension achievement mean scores of students in the experimental and control groups, mean and standard deviation were employed as presented in Table1.

*Corresponding Author: **Danjuma Dogara Musa.**
This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License.

Table 1
Results of the Analysis on the Pre-test and Post-test Critical Comprehension Achievement Mean Scores of the Experimental and Control Groups

Group		N	X	SD	Mean gain	Mean difference
	Pre-test	44	6.88	.89		
	Post-test	44	16.20	1.28	9.32	
Control	Pre-test	41	6.68	1.05		
	Post-test	41	9.41	2.04	2.73	6.79

The results of the analysis from Table 1 revealed that the experimental group had a pre-test mean score of x 6.88, SD=89, and a post-test mean score of x16.20 SD=1.28 with mean gain of 9.32 in favour of post-test. While the control group had a pre-test mean score of x6.68 SD=1.05, and a post-test mean score of x9.41, SD=2.04 with a mean gain of 2.73 in favour of the post-test. The results indicate that the mean of the two groups increased at the post-test, but that of the experimental group of 9.32 is higher than that of the control group of 2.73. The result, indicates a mean difference of 6.29 in favour of the experimental group. This implies that pre-reading activities improves students, achievement in critical comprehension more than conventional teaching method.

Research Question two
What are the differences between the pre-test and post-test of main idea identification achievement mean scores of SSII students in the experimental and control groups?

Table 2
Results of the Analysis on the Pre-test and Post-test Summarization Achievement Mean Scores of the Experimental and Control Groups

Group		N	X	SD	Mean	Mean difference
Experiment	Pre-test	44	6.59	1.22		
	Post-test	44	15.84	1.50	9.25	
Control	Pre-test	41	6.60	1.15		6.70
	Post-test	41	9.14	2.20	2.54	

The results of the analysis from Table 2 showed that the experimental group had a pre-test mean score of x6.59, SD=1.22 and a post-test mean score of x15.86 SD=1.50 with a mean gain of 9.25 in favour of the post-test while the control group had a pre-test mean score of x6.60 SD=1.65 and a post-test mean score of x9.14, SD=2.20 with mean gain of 2.54 in favour of the post-test. The results indicated that the result of the post-test of the experimental group of 15.84 is higher than that of the control group of 9.14. The results indicate a mean difference of 6.70 in favour of the post-test. This implies that pre-reading activities helps to improve students' achievement in summarization more than conventional method.

Hypothesis One
There is no significant difference in pre-test and post-test critical comprehension achievement mean scores of SSII students between the experimental and control groups.

Table 1
ANCOVA Results on the Pre-test and Post-test Critical Comprehension Achievement Mean Scores of the Experimental and Control Groups

Sources	Type III sum of squares	df	Mean square	F	Sig	Partial Eta squared
Corrected model	981.4619	2	490.731	170.425	<.001	.806
Intercept	222.981	1	222.981	77.439	<.001	.486
Pre critical	2.995	1	2.995	1.040	.311	.013
Group	956.511	1	956.511	332.185	<.001	.802
Error	236.115	82	2.879			
Total	1547.000	85				
Corrected total	1217.576	84				

Q R squared = 806 (Adjusted R squared = .801)

ANCOVA analysis was conducted to determine if a significant difference exists in the post-test critical comprehension achievement mean scores of SSII students between the experimental and control groups. Table 9 shows that f (1,82) =332.185, p<0.005 partial n2=.802 since the P-value of 0.001 is less than the significant level of 0.05, with an effect size of 80.2%. The null hypothesis is rejected hence, there is a significant difference between the post-test critical comprehension achievement mean scores of SSII students between the experimental and control groups. The results further showed an adjusted the R squared values of .80l which means that 80.1% of the variation in the dependent variable which is achievement in critical comprehension is explained by the variation in the treatment which is pre-reading activities while the remaining 19.9% is due to other factors not included in this model. This implies that pre-reading

*Corresponding Author: **Danjuma Dogara Musa.**
This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License.

activities significantly improves SSII student achievement in critical comprehension more than conventional teaching method.

Hypothesis two

There is no significant difference between the pre-test and post-test of main idea identification achievement mean scores of SSII students in the experimental and control groups.

Table 2
The Pre-test and Post-test Identification of Main Ideas Achievement Mean Scores of SS II Students in the in the Experimental and Control Groups

Group		Pretest		Posttest			
	N	Mean	SD	Mean	SD	Mean Gain	$\bar{x}$-Gain difference
Experimental	49	9.10	1.73	18.49	2.37	9.39	7.34
Control	54	9.06	1.64	11.11	1.06	2.05	

Table 2 shows the pre-test and post-test identification of main ideas achievement mean scores of SSII students in reading comprehension in the experimental and control groups. The experimental group obtained a pre-test mean score of with 9.10 standard deviation of 1.73 and a post-test mean score of 18.49 with a standard deviation of 2.37, yielding a mean gain of 9.39 after exposure to pre-reading activities. The control group had a pre-test mean score of 9.06 with a standard deviation of 1.64 and post-test mean score of 11.11 with a standard deviation of 1.06, yielding a mean gain of 2.05 The result indicated that students in the experimental group had a higher mean gain score after exposure to pre-reading activities than those in the control group who were not given treatment. The mean gain difference was 7.34 in favour of the experimental group. This means that pre-reading activities did increase the students' achievement in reading comprehension.

DISCUSSION

The results from research question one showed that students' critical comprehension scores before exposure to treatment were poor as indicated by the pretest scores for both control and experimental groups. The result supports the views of Heick, (2022) Ajide, (2020). who found through their study that critical reading is a process of analysing, interpreting and sometimes evaluating. When students read critically, they use critical thinking skills to question the text. Because critical reading helps the reader to have a deep understanding of the passage. It helps the reader to seek knowledge, develop ideas and to reflect on the objectives of the passage. In this instance, students' poor reading comprehension achievement pointed to the fact that they were not taught using pre-reading activities. After exposure to treatment, the students' critical skill improved significantly.

Findings from research question two revealed that identification of main idea comprehension skill of both control and experimental groups before treatment were poor. However, after exposure to treatment, the identification of main idea skill improved above the identification of main idea skill of the control group which remained in the poor category. The result implies that pre-reading activities is a strong predictor for students' achievement in reading comprehension. Students' achievement in reading comprehension profiles increased significantly, after treatment and this impacted their identification of main idea skill. This view was supported by the study conducted by Nwodo (2019) who found out that identification of main idea states the purpose and set the direction of the paragraphs or passage which is the authors' message about the topic and it is often expressed directly or implied. That had a great impact on students' achievement in reading comprehension. The slight gains in the main idea identification skills continue to increase students 'achievement in reading comprehension.

For hypotheses one, findings revealed that the experimental group improved in their critical comprehension after treatment unlike the control group which did not improve as indicated by the posttest. It means that pre-reading activities impacted critical comprehension achievement. Thus, research has demonstrated that the use of pre-reading activities especially for the SS2 students help in improving their reading comprehension achievement as posited by Tomitch (2020).

In hypotheses two, the finding of the study showed that at the pre-test both the experimental and control groups showed significant low achievement in reading comprehension, the two groups generally performed below average. After exposure to pre-reading activities, the level of senior achievement in the experimental group was significantly high in idea identification. This finding are in agreement with the findings of Beard (2021). Rondon & Tomitch (2020), Nesrim (2020) who found that students who were taught reading comprehension using pre-reading activities achieved higher in terms of main idea identification which help them to express their viewpoints elaborately to improve their reading comprehension.

Conclusion

Pre-reading activities tolerate the reader to interact with the print and engage him/herself into deep thinking. By doing this, the reader becomes equipped with the expected knowledge to confront all questions with ease. Pre-reading activity is the activity used to elicit students' prior knowledge to the actual reading material. The activity is intended to provide students with required background knowledge that will be needed to have a better comprehension when they interact with a text. Pre-reading has to do with what a learner brings to the reading which can affect how he/she understands what he reads. When the right strategy and activity are employed to teach reading comprehension among students, the number of failure would be reduced drastically. Based on

*Corresponding Author: **Danjuma Dogara Musa.**
This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License.

the significant gains recorded by the experimental group at posttest as compared to the control group whose posttest scores did not significantly improve, it is clear from the findings that pre-reading activities can have impact on the students' reading comprehension achievement. Findings from the study also established that the gain scores which reflected on the experimental group was a result of the use of pre-reading activities.

REFERENCES

1. Adhikari, B. R., & Poudel, K. K. (2020). Approaches and activities adopted by M. Ed. student teachers of English to teach reading: A critical assessment. *Journal of Language Teaching and Research, 11* (3), 364 – 372.
2. Adonko, A. E. (2020) Investigating the combined and relative effects of some student-related variables on science achievement among secondary school students in Barbados. E*uropean Journal of Scientific Research, 37* (3), 481 – 489.
3. Ajide, F.O. (2020). Challenges in the teaching of reading comprehension in secondary school. *Journal of Language Education, 5* (2), 66 – 71. .
4. Beard, R. (2018). Reading-a personal and professional view. I*nternational Journal of Primary, Elementary and Early Years' Education, 49* (1), 13 – 25.
5. Christopher, G. (2017). Teaching reading skill using heuristic technique through Schema theory. *IUP Journal of English Studies, 12* (1), 11.
6. Dickson, A. (2022). *Pre-reading activities to boost comprehension*. Retrieved on 4th June 2022 from https://ellii.com/blog/pre-reading-activities-to-boost-comprehension
7. Garbe, N. (2019). *Effect of peer assessment on students' learning outcomes in junior secondary social studies in AMAC.* An unpublished master's thesis, School Nasarawa State University, Keffi.
8. Grisang, Z., & Everatte, K. (2021). The impact of brainstorming and critical thinking ability of EFL learners. *Procedia Social and Behavioural Sciences, 98* (2), 513– 521.
9. Heck, J. (2022). The power of reading: Insights from the research: Insights from the research. *TESOL Quarterly, 31*(2), 237–261.
10. Lawal, R. A. (2018*).* A diagnostic study of the reading performance of some Nigerian primary school pupils. In T. O. Oyetunde J. S Aliyu and Y. Aboderin (Eds.). *Literacy and reading in Nigeria,* 5, 423-433.
11. Mahmoud, O. (2015). *Pre-reading activities: What effects do they have on heterogeneous classes?* Porto: University of Porto.
12. Nesrim, N. (2018). College English reading instruction in North China Electric Power University: The production-driven approach. *English Language Teaching, 10* (11), 10-15.
13. Nurdina U. (2018). *The effect of before, during, and after reading (BDA) strategy on students' reading comprehension achievement in narrative text.* Unpublished master's thesis, University of Muhammadiyah Sumatera Utara.
14. Nwodo, D. W. (2019). Poor reading comprehension issue in EFL classroom among Indonesian secondary school students: Scrutinizing the causes, impacts and possible solutions. *Englisia Journal of Language, Education, and Humanities*, *8* (1), 12–24.
15. Oyetunde, T. O. (2016). *Beginning reading scheme: Empowering teachers to help their pupils become good readers*. LECAPS Publishers.
16. Tomitch, M. I. (2018). The effect of using storytelling on developing Saudi EFL University students' reading comprehension. J*ournal of Education and Practice, 9* (3), 80–87.
17. Tomkin, A. (2017). A philosophy of education for Nigerian women problems and prospects. *The African Symposium, 4* (1), 17 – 25.
18. Ugodulunwa, C. A. (2020). *Fundamentals of educational measurement and evaluation*, (2nd ed.). Jos, FAB educational books, Nigeria
19. Ugorji, H. (2017). The effect of pre-reading activities on students' performance in reading comprehension in senior secondary school. I*nternational Research Journals, 2* (9), 1451–1455.
20. Rustika, B. (2018). Reading for meaning: The foundational knowledge every teacher of science should have. *International Journal of Science Education, 40* (3), 291-307.
21. Zhang, B. (2018). Teaching reading skill using heuristic technique through schema theory. J*ournal of English Studies, 12* (1), 11 – 15.

*Corresponding Author: **Danjuma Dogara Musa.**

This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License.