

Exploring the Multidimensional Factors Influencing Senior High School Students' Reading Comprehension

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Erwin S. Campuso

University of the Visayas, Cebu City, Philippines

ORCID ID:0009-0006-2766-2591 | winwinsotto@gmail.com

Abstract

This study evaluated the multidimensional factors that influence the reading comprehension of the senior high school students. Factors influencing the reading comprehension were categorized into three: the cognitive factors, environmental factors, and the physical factors. It also evaluates the respondents' reading performances interpreted as Outstanding, very good, good, fair, and bad. Based on the results of the study, the environmental factors got a weighted mean of 2.32 interpreted as Always Affected, cognitive factors got a mean of 2.48 interpreted as Always Affected while the physical factors got a mean of 2.40 interpreted as Always Affected. For the reading performance of the respondents, majority of them belong to the third level interpreted as Fair. There is significant relationship between the factors affecting reading comprehension to the English performance of the respondents. Therefore, the students are always affected by the environment, cognitive, and physical factors, therefore they cannot comprehend with so many distractions. The factors are held liable to the students' reading comprehension. The factors affecting reading comprehension affect the students' English performance.

Keywords: *Environmental factors, Cognitive factors, Physical factors, Reading Comprehension*

Introduction

Reading is an action that is done to gain knowledge about a subject or topic. It is a necessary skill that people must master to be successful in life. This also keeps people informed, current, and thinking. Reading is both a passive and an active activity. It is a dynamic process in which the reader searches the text for links between ideas. Reading necessitates the use of numerous brain processes as information is gathered, processed, and analyzed. Reading is also a source of enjoyment for many people (Carrel, Devine & Eskey, 2018).

Reading comprehension is a multi-tasking skill that requires a lot of effort. Lower level and higher-level processes were identified as the two most demanding types of processes (Grabe & Stoller, 2002). Word recognition, graphophone, and other lower-level abilities are included, whereas higher-level talents include syntactic, semantic, and other processes. In order to comprehend what is read, a person has to know the text structure, the topic and possess appropriate reading methods to process the material and recognize words (Pang, 2008).

In addition, reading comprehension as a skill is necessary for performing well in school. Students can struggle with reading comprehension, and if they do, it can affect them in several ways. Ornstein (2004) asserts that mastery of reading is a need for academic success since it makes academic accomplishment unattainable without it. However, Robinson et al. (2006) approach reading from a different perspective, emphasizing its social role and the importance of reading for social success. Reading comprehension is crucial for both social and professional progress. In a similar vein, Shavelson (2009) contends that reading is a necessary ability in the complicated world of today, especially in this age of power and speed when people's concerns and desires are developing quickly. People's desire for reading has increased along with their expectations of being able to handle the demands of modern life.

Conformably with these authors' ideas, it is imperative that all reading teachers should develop among their students the power to comprehend what they read and the ability to grasp the central thought that is expressed in several sentences, to interpret content and draw inferences. This is what Holmes (2006) termed as "power of reading", which is reading comprehension as it is commonly called. Grabe and Stoller (2002) added that if comprehension is taken away from the reading ability, the goal of reading, which is comprehension to the fullest of what is written, could not be attained.

Policies are implemented in the Philippines to support the argument that teaching children to read is a crucial life skill. One such is the National Capital Region (NCR) DepEd memorandum order number 67, series of 2014, which outlines the No Read, No Pass Policy. These strict standards suggest that if a student's reading ability falls below their grade level, it causes more harm than good because reading is a tool that promotes youngsters. Reading proficiency is assessed in grade 1 before advancement to grade 2. Learners who perform badly and fall short of the required competency level are kept in their previous grade. There is considerable contention, nonetheless, that many high school graduates still struggle or lack reading comprehension despite this approach (Minoza, 2019).

Understanding texts is still a big problem in the Philippines as many teachers have been continuously battling low rates. The country's meager showing in the PISA (2023) results, where it was ranked last in reading comprehension out of 79 countries, shows how serious the situation is. Reading comprehension in the Philippines is a multifaceted problem with many contributing variables. Despite the efforts of the Department of Education, such as the Early Grade Reading Program, Mother Tongue-Based Multilingual Education, and Reading Recovery, there is still a need to improve, which indicates that the problem is more complex.

Studies indicate that one's ability to read and comprehend text is influenced significantly by cognitive, physical, and environmental factors. Among the cognitive factors is a student's information processing capacity, working memory, and language comprehension. Certain ailments and hearing or vision deficits can also fall under physical factors that affect reading comprehension. Environmental factors such as socio-economic class, the availability of resources, and a reading culture at home and in the community are equally important (Hart, Soden, Johnson, Schatschneider, & Taylor, 2013).

The researcher, being an English teacher in a public school for three years, has observed that many students have difficulty reading and understanding texts, especially those who belong to a non-academic strand. So far the researcher noticed such challenges in this field and now she realized she should look for the effective factors which cause it.

This motivates the researcher to investigate how cognitive, physical, and environmental factors may affect the reading comprehension skills of Senior High School, particularly those in non-academic strands.

Literature Review

The act of reading involves the interpretation and construction of meaning from textual materials. Furthermore, definitions of reading that emphasize the significance of meaning suggest that print stimulates the act of reading. The reader must possess the ability to interpret the written words and transform them into coherent linguistic expressions. Grabe and Stoller (2002) define reading as the capacity to derive intended significance from written content and accurately interpret it.

Furthermore, Rahmatullah (2013) provided a definition of reading as the interpretative process of spoken symbols that are either printed or written. This effort is not characterized by passivity. Lexical interpretation is the process of deriving meaning from written words. The task requires a remarkable degree of physical coordination. Furthermore, the reader is not just noticing and identifying the symbols but also understanding their significance. Based on the given definition, the present researcher asserts that reading is an active procedure of obtaining desired new knowledge. Text comprehension is the cognitive process of understanding the intended significance of written or printed material.

Text reading, as defined by Tarigan (2018), is the act of acquiring a message or information from a writer through written medium. Language comprehension is a multifaceted process where the reader's capacity to identify and understand written symbols is affected by their perceptual ability, decoding ability, experiences, language background, mindset, and reasoning.

In the context of language, comprehension is synonymous with understanding. Textual comprehension is understanding what a piece of writing means to the reader and what the author means to convey. The readers' previous knowledge on the topic matter discussed on the text has a significant influence on the reading comprehension of the authors message. Comprehension, according to Hornby (2020), is the act to making better or evaluating one's understanding of a particular language, whether it be written or oral. Mastery of comprehension is essential not just for students' reading tasks, but also for evaluating each student's proficiency in the classroom. Carrel (2018) proposed that reading comprehension is the outcome of a four-way interaction involving readers, text, task, and structured activity.

The availability of excellent content and adaptable strategy frameworks that can be modified to fit novel problem-solving situations is essential to the success of this engagement. The cognitive process of deriving and constructing meaning from written language through active involvement and direct interaction is known as reading comprehension. The reader participating in comprehension, the text to be understood, and the understanding-related action are the three interrelated components of the process. The mentioned literature emphasizes the dynamic, complex, and interactive aspect of reading comprehension, highlighting its multiple nature. It emphasizes how crucial it is to take into account a number of aspects that affect comprehension, including as the reader's prior knowledge, decoding abilities, and cognitive processes. Because it highlights the necessity of analyzing the ways in which individual traits, textual elements, and the reading environment interact to impact comprehension, this body of work offers a solid basis for researching the variables that impact reading comprehension. Researchers can more effectively identify and remove obstacles to reading comprehension and create efficient plans to enhance reading results by comprehending these interrelated elements.

Statement of the Problem

This study aimed to determine the multidimensional factors influencing reading comprehension among senior high school students from one of the public schools in Cebu City school year 2023-2024.

Specifically, the study sought after to answer to the following questions:

1. What are the levels of factors that influence the reading comprehension of the respondents in terms of:
 - 1.1. Physical factors.
 - 1.2. Cognitive factors; and
 - 1.3. Environmental factors?
2. What are the reading performances of the respondents?
3. Is there a significant relationship between the factors and the reading comprehension of the respondents?

Hypothesis

H₀: There is no significant relationship between the factors and the reading comprehension of the respondents.

Methodology

Investigating the factors impacting the reading comprehension of Senior High School students enrolled in non-academic strands was the goal of this descriptive study, which was carried out in a Cebu City public school during the 2023–2024 academic year. The goal of the study was to determine how these children's differences in reading comprehension skills might be influenced by environmental, cognitive, and physical factors.

Three questionnaires that the researchers created—one for environmental factors, one for cognitive elements, and one for physical factors—were used in a survey manner to collect data. The purpose of these questionnaires was to evaluate the particular facets of each characteristic that might have an effect on reading comprehension. To gauge the pupils' actual reading comprehension abilities, a reading passage was also given to them.

To guarantee reliability, 50 Grade 11 students who were not involved in the study piloted the instruments prior to the main study. The results (75%) of the Cronbach Alpha reliability coefficient showed strong reliability, indicating that the instruments were consistently assessing the desired structures. Participants gave their informed consent and were guaranteed the confidentiality of their data, demonstrating the importance of ethical issues.

The data was analyzed using the chi-square test to see if there was a significant relationship between the independent variables and the dependent variable (reading comprehension), the weighted mean to find the average scores for each independent variable (environmental, cognitive, and physical factors), and simple percentages to examine the reading comprehension assessment results.

With its numerous instruments, reliability pilot testing, ethical considerations, and suitable statistical analyses, this research design offers a strong method for examining the variables affecting senior high school students' reading comprehension. The results of this study can help shed light on the difficulties that students encounter in this setting and guide the creation of efficient treatments aimed at enhancing reading comprehension.

Results

Data was collected from a total of 100 students who agreed to take part in the study. The scores from the survey questionnaire were tallied, encoded, and analyzed as follows.

Table 1. Factors Affecting Reading Performance of Students

Indicators	Mean Rating	Descriptive Equivalent
Environmental Factors	2.62	Always Affected
Physical Factors	2.46	Always Affected
Cognitive Factors	2.60	Always Affected
Overall mean	2.56	Always Affected

Table 2. Reading Performance of the Students

Reading Scores	Frequency	Percentage
93-98 (Excellent)	1	1.00
88-92 (Ver Good)	8	8.00
83-87 (Good)	40	40.00
78-82 (Fair)	45	45.00
77 and below (Needs Improvement)	6	6.00
Total	100	100.00

Table 3. Relationship between the Factors Affecting Reading Comprehension and the English Performance of the Respondents

Indicators	Frequency
χ^2	39.397
df	22
cv	33.924
p	0.05
Results:	Significant

Discussions

Environmental Factors. For this section, the respondents were asked to answer the questionnaire about environmental factors. Based on the findings, the respondents got a mean of 2.62 interpreted as always affected. This means that kids are always influenced whether distracted by loud noises, an overcrowded classroom, or not in a peaceful and regulated environment.

Ashby et al. (2011) found that the learning environment has an important effect in student achievement. It lends weight to the broader premise that environmental influences might have an impact on student performance. This study emphasizes the relevance of evaluating the learning environment as a crucial element in educational results, implying that a favorable and conducive learning environment might help to increase student accomplishment.

Cognitive Factors. Based on the findings, cognitive factors got a mean of 2.46 interpreted as always affected. This means that students are always affected by understanding difficult words, connecting new information with past experiences and determining the main idea of the text.

Ramirez-Arellano, Bory-Reyes, and Hernández-Simón (2019) present a model in their study that outlines the interconnectedness of emotions, motivation, cognitive-metacognitive strategies, and behavior in predicting learning performance within the context of blended learning. Their research underscores the critical role of cognitive factors in the learning process, emphasizing how factors like emotions, motivation, and metacognitive strategies interact with cognitive processes to influence academic achievement. By highlighting the complex relationships among these variables, the study provides insights into the multifaceted nature of learning and the importance of considering cognitive factors as fundamental components in achieving successful learning outcomes in blended learning environments.

Physical Factors. Based on the findings, physical factors got a mean of 2.60 interpreted as always affected. This demonstrates that students are always affected when they have poor vision, are anxious, or pressured, and their bodies are not relaxed.

This is analogous to Bandura's (1986) research, which established the basis for social cognition theory by highlighting the reciprocal interplay of personal variables, behavior, and the environment. According to this hypothesis, physical factors such as health, stress, and physical constraints all have a significant impact on behavior and learning outcomes. Bandura's work emphasizes the need of considering how physical variables influence students' cognitive processes and educational experiences within the larger context of social cognitive theory.

The average value derived from Table 1 is determined to be 2.56, corresponding with the descriptive classification of "Always Affected." This statistical result indicates that the students under study consistently experience the impact of environmental, physical, and cognitive factors on their learning processes. The convergence of these three categories suggests a high level of influence exerted by the surrounding environment, physical well-being, and cognitive abilities on the students' educational experiences.

The information in Table 2 shows the reading performance of students according to various score ranges. The highest performance level, with 45 students or 45.00% of the total, is in the "Fair" grade range of 78-82. Conversely, the lowest performance level, with 6 students or 6.00%, is in the "Needs Improvement" grade range of 77 and below. This categorization demonstrates the spread of students across different levels of reading performance, where the "Fair" category registers the highest incidence and the "Needs Improvement" category reflects the lowest level of performance among the students.

It appears from the data that the majority of the students are classified under the "Fair" level of reading performance, which indicates a possible necessity for specific intervention and support for improving overall reading ability.

The outcome of the study is similar to the study of Santos (2018), the study shows a high rate of dropout in primary and secondary schools, which indicates a serious issue in the completion of basic education. Moreover, students show poor mastery of certain skills and content, as seen from poor performance in standardized tests. The research also highlights the chronic difficulty in reading comprehension, which it assigns to several factors like curriculum planning, pedagogies, and socio-economic inequalities. Santos's study highlights that there is a need for holistic reforms and implementing the K+12 curriculum as well as the embracing of Mother Tongue-Based Multilingual Education (MTB-MLE) in order to effectively counter these problems.

As shown, the computed chi-square value of 39.397 is greater than the critical value of 33.924 with 22 degrees of freedom at 0.05 level of significance. Therefore, null hypothesis is rejected. There is significant relationship between the factors affecting reading comprehension to the English performance of the respondents.

The result denotes that environment, cognitive and physical factors influence the reading comprehension of the respondents.

This result corroborates on the study of GheeWalla, McClelland, & Furnham (2021) who found out that exposure to noise and chronic overcrowding influences student's reading comprehension, as well as school environment and parental involvement. His studies suggest that prolonged exposure to noise can lead to difficulties in speech recognition, thereby affecting reading comprehension.

Conclusion

The variables that influence reading comprehension, including noise, congestion, and restricted vocabulary, have a direct influence on the performance of students in English. Parents and educators need to come together to create a passion for reading among students and engage them in reading different genres and authors outside of school books. Together, they can build a supportive community that inspires students to love reading, increases their vocabulary, and eventually enables them to become proficient in their English skills. This is a collaborative effort necessary for developing a lifelong passion for reading and helping students reach their full potential in language acquisition.

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