Lexical Ability and Reading Comprehension among Senior High School Students

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ABSTRACT

Students may struggle to fully comprehend reading materials due to a lack of familiarity with essential vocabulary, leading to misinterpretation of certain contexts or ideas. This study aimed to examine the relationship between students' lexical ability and reading comprehension among 300 senior high school students. Utilizing a descriptive-correlational research design and simple random sampling, the study sought to determine whether lexical ability significantly influences reading comprehension. Contrary to expectations, the results revealed no significant correlation ($r = .087$, $p = .389$) between lexical ability and reading comprehension, indicating that vocabulary size, depth, and semantic processing were not strong predictors of reading comprehension. These findings suggest that other factors, such as background knowledge, critical thinking skills, and text structure familiarity, may play a more significant role in reading comprehension among senior high school students. Given these results, future research should adopt a mixed-methods approach to explore cognitive, metacognitive, and contextual influences on reading comprehension. Additionally, experimental research is recommended to examine the effects of targeted interventions on vocabulary instruction and its direct impact on reading comprehension. Educators should implement context-based learning, collaborative reading programs, and explicit vocabulary instruction to enhance students' comprehension skills. By integrating interactive and contextualized learning experiences, curriculum developers can support students in developing stronger literacy skills, ultimately improving their academic performance and communication abilities.

Keywords: Lexical ability, reading comprehension, senior high school students

THE PROBLEM AND ITS SCOPE

Reading comprehension is crucial for success in life (Kendeou et al., 2014). As students progress through their education, they transition from learning to read to developing fluency and comprehension skills (Carlson et al., 2014). Vocabulary knowledge is strongly correlated with reading comprehension in both children and adults, as full comprehension of a text requires an understanding of individual words (Cain & Oakhill, 2014). A broad definition of reading comprehension involves "understanding, using, reflecting on, and engaging with written texts to achieve one's goals, develop knowledge and potential, and participate in society." Reading difficulties stem from a lack of quality English reading materials, ineffective teaching methods, and inadequate English language development. Research shows that students who struggle with reading early on rarely catch up; poor readers in first grade are likely to continue experiencing difficulties in subsequent grades (Suson et al., 2020).

In Indonesia, students often struggle with reading due to various factors (Syahfutra & Niah, 2019). To address these challenges, teachers can implement creative methods, engaging materials, and enjoyable learning processes. Problem-Based Learning (PBL) is a strategy that immerses students in real-life contexts, fostering critical thinking and problem-solving skills. PBL encourages flexible knowledge acquisition, collaboration, life-wide learning, and intrinsic motivation. It also promotes active learning by presenting real-world problems and making students responsible for their own learning. Research has shown that PBL enhances students' reading comprehension and motivation. A study by Suwanaroa (2021) examined reading comprehension challenges

among second-, third-, and fourth-year English for International Communication (EIC) students at Rajamangala University of Technology Lanna Tak. The results indicated that students' reading difficulties were primarily linked to grammar, vocabulary, comprehension, and personal experiences. The study also revealed that second-year students' reading comprehension was most influenced by attitude, while third-year students cited classroom instruction as the most impactful factor. For fourth-year students, attitude remained the strongest influence. These findings underscore the importance of identifying and addressing factors that contribute to reading comprehension difficulties.

A survey conducted among tenth-grade students at SMAN 2 Jember in the 2019–2020 academic year found that students continued to struggle with reading comprehension, particularly in narrative texts (Sari et al., 2020). The study identified motivation as the most significant challenge, followed by reading strategies, background knowledge, reading processes, and language proficiency. The researchers suggested that teachers should focus on fostering motivation and using diagnostic assessments to further analyze students' reading difficulties.

In the Philippine education system, students from low-income families often prioritize work over formal schooling due to poverty and limited resources. This affects cognitive development and socialization, contributing to low rankings in Science and Mathematics. Some educators argue that emphasizing mastery of the mother tongue before introducing English could improve overall comprehension (Manlapig, 2020).

In Davao City, many senior high school students have a limited vocabulary, restricting their reading comprehension and classroom participation. This is due to insufficient exposure to diverse vocabulary both in school and at home (McKeown, Crosson, Moore, & Beck, 2018). A large percentage of senior high school students perform below the minimum required reading proficiency level. This is primarily due to poor vocabulary, which is further exacerbated by a lack of age-appropriate resources and ineffective teaching strategies. As a result, students receive lower grades and have fewer opportunities for higher education and employment (Bautista, 2020). Additionally, factors such as fear and limited vocabulary hinder students' speaking skills, making them reluctant to participate in interactive discussions (Andante & Limpot, 2023). Therefore, this study seeks to explore whether factors such as vocabulary learning strategies and reading comprehension skills development influence students' motivation to learn.

Significance of the Study

This study examines the role of vocabulary breadth and depth in reading comprehension among senior high school students. The findings may benefit the following:

Department of Education (DepEd). As the governing body responsible for managing the Philippine Basic Education System, DepEd may use the results to improve vocabulary instruction, focusing on both common and academic terms.

School Administration. School administrators, responsible for school performance and management, may gain baseline data on the role of vocabulary breadth in students' reading comprehension.

Teachers. As facilitators of the teaching-learning process, teachers may use the findings to implement strategies such as vocabulary games, word mapping, and contextual learning to enhance students' vocabulary breadth.

Students. By expanding their vocabulary, students may improve their comprehension skills and academic performance.

Future Researcher. The study provides essential data and insights that can inform future research on vocabulary acquisition and reading comprehension in real-life educational settings.

Statement of the Problem

This study aimed to determine the significant relationship between lexical ability and reading comprehension among senior high school students. Specifically, it aimed to attain the following objectives:

1. What is the level of lexical ability among senior high school students in terms of:
    1.1 word recognition;
    1.2 associative knowledge; and,
    1.3 contextual usage?
    2. What is the level of reading comprehension among senior high school students in terms of:
    2.1 critical thinking;
    2.2 fluency; and
    2.3 vocabulary knowledge?
3. Is there a significant relationship between lexical ability and reading comprehension among senior high school students.

Hypotheses

This study was tested at a 0.05 level of significance

H_0: There is no significant relationship between lexical ability and reading comprehension among senior high school students.

H_a: There is no significant relationship between lexical ability and reading comprehension among senior high school students.

Review of Related Literature

Lexical ability refers to the comprehension and use of vocabulary, encompassing both depth (understanding word meanings and relationships) and breadth (the number of words known), which are essential for effective communication and language proficiency (Maigeldiyeva, 2020).

Specific tests, including vocabulary assessments that measure word recognition, contextual usage, and spelling accuracy, can operationalize lexical competence. These assessments may include multiple-choice questions, fill-in-the-blank exercises, and matching tasks to evaluate vocabulary knowledge (Vaia, n.d.).

Lexical Ability

Vocabulary size tests typically indicate whether target words are "learned" or "known," although true word knowledge requires real-world language use and a deeper understanding of word combinations and derivative forms (Kremmel & Schmitt, 2016). Nagy (2015) noted that lexical knowledge directly influences a reader's ability to decode and comprehend new words encountered in a text.

A study by Ouellette and Beers (2019) found that high school students with greater lexical knowledge performed better in reading comprehension compared to those with limited vocabulary. Furthermore, vocabulary knowledge in early high school years predicted reading comprehension outcomes, highlighting the long-term impact of lexical acquisition (Quinn et al., 2015).

Word recognition. Evaluating the effects of computerized word recognition is complex, as it is intertwined with processing speed and phoneme-grapheme correspondence familiarity (Roembke, Hazeltine, Reed, & McMurray, 2019). Word recognition involves understanding letter-sound correspondences, letter patterns, and word-specific orthographic knowledge for reading both regular and irregular words (Chiu, 2018).

Associative knowledge. Familiarity with words decreases as associative learning progresses, making newly acquired word forms more recognizable over time. However, prior associations (e.g., an original word meaning) can sometimes interfere with learning new concepts. As these relationships strengthen, they become critical components in later learning stages (Fang, Perfetti, & Stafura, 2017).

Contextual Usage. Stahl and Nagy (2020) found that students proficient in using contextual clues tend to perform better in reading comprehension assessments. This skill enables them to infer the meanings of unfamiliar words and phrases, leading to a deeper understanding of the text. Snowling and Hulme (2016) demonstrated that

vocabulary development interventions and contextual usage strategies significantly improved reading comprehension scores among senior high school students. Similarly, Nagy and Townsend (2015) emphasized that contextual usage enhances comprehension by enabling students to decode complex sentences and passages.

Reading Comprehension

Reading comprehension involves "understanding written material" to construct surface-level knowledge, while higher-order thinking is applied to interpret meaning (Afflerbach, Cho, & Kim, 2015). Given its significance for academic achievement and long-term success, efforts to address reading comprehension difficulties remain crucial (Kendeou et al., 2016).

A study by Sidek and Rahim (2015) in a Malaysian high school found that students performed significantly better on vocabulary tests in their native language than in English, emphasizing vocabulary's role in reading comprehension. Similarly, Dong et al. (2020) found that vocabulary knowledge, alongside grammatical and inference skills, was a key predictor of reading comprehension performance.

Vocabulary size also plays a vital role in second language acquisition. Al-Khasawneh (2019) found that Saudi EFL learners with a vocabulary size of 2,025 word families could comprehend 90% of written texts, underscoring the importance of vocabulary instruction. Researchers using the RAND framework have also examined how text complexity and task demands influence comprehension (Kulesz et al., 2016).

Critical thinking. Critical thinking, critical reading, and reading comprehension are essential life skills, particularly for university students. Hidayati et al. (2020) investigated the correlation between these variables among English Education students at UIN Raden Fatah Palembang. The study found a significant correlation, with critical thinking and reading skills contributing 71.3% to overall reading comprehension.

Fluency. Fluency development is a fundamental goal of language learning, often juxtaposed with accuracy. It refers to the ability to process language efficiently and automatically (De Jong, Groenhout, Schoonen, & Hulstijn, 2015). Originally defined in terms of rapid and effortless language use (Akhmetchina, Kudritskaya, & Saden, 2016), fluency now encompasses literacy skills beyond speaking, including reading.

Reading fluency, once considered a neglected skill (Rasinski, Rupley, Pagie, & Nichols, 2016), involves rapid, automatic text decoding with appropriate expression and deep comprehension (August & Shanahan, 2017). Research suggests that fluency significantly predicts literacy outcomes. Bigozzi et al. (2017) found that reading fluency directly influenced school performance in all literacy-based subjects.

Repeated reading interventions have also proven effective in increasing fluency. Van Erp (2021) implemented guided reading sessions and found that struggling students increased their fluency rates by 38% to 225% over five weeks. Moreover, Veenendaal et al. (2014) emphasized that prosody (intonation and rhythm) is a more significant contributor to reading comprehension than reading speed alone.

Vocabulary knowledge. Vocabulary knowledge, or lexical competence, is crucial for language mastery. Djuarsa (2017) identified multiple dimensions of knowing a word, including its probability of occurrence, syntactic behavior, underlying form, network of associations, and multiple meanings.

Relationship between Lexical ability and Reading comprehension

A strong vocabulary is one of the best predictors of reading comprehension, as it enables students to infer meaning from context and comprehend complex texts (Nation & Webb, 2016). Studies on monolingual populations, particularly English-speaking students, have shown this correlation. However, Zhang and Ardasheva (2016) noted the need for more research on lexical proficiency's effects on bilingual and multilingual readers.

Students with strong lexical ability are better equipped to use contextual clues to deduce word meanings. Zhang and Ardasheva (2016) found that this skill significantly improves comprehension, especially when reading texts beyond a student's current vocabulary level.

Synthesis

This review covered three key areas: lexical ability, reading comprehension, and their relationship. Lexical ability was analyzed through indicators such as word recognition, associative knowledge, and contextual usage. Reading comprehension was examined through critical thinking, fluency, and vocabulary knowledge. Finally, various studies were presented to highlight the connection between lexical ability and reading comprehension, emphasizing the importance of vocabulary in achieving reading proficiency.

Conceptual Framework

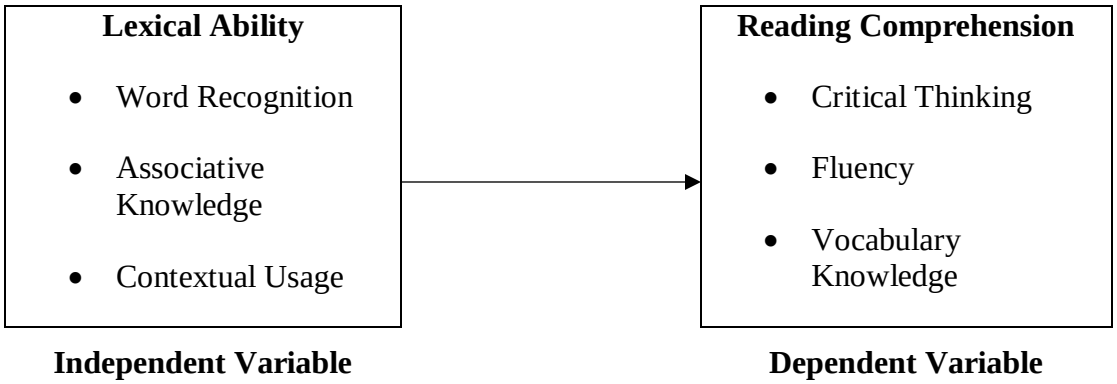

Figure 1. Conceptual Framework of the Study

The independent variable is lexical ability, which will be measured in terms of word recognition, associative knowledge, and contextual usage. Lexical ability refers to the number of words a person can recognize in context, identify their unique linguistic characteristics, and understand at least some of their key meanings (Li & Kirby, 2015). Research on word recognition has allowed for precise estimations of how long it takes to recognize a word and has clarified the process of integrating orthographic information over time (Snell, van Leipsig, Grainger, & Meeter, 2018). Associative knowledge increases the likelihood of forming new connections between existing concepts, fostering individual creativity and cognitive flexibility (Malhotra & Majchrzak, 2019). Contextual usage refers to how language context affects vocabulary learning, indicating that learners may be more successful in understanding certain phrases when they are presented in meaningful and relevant contexts (Schmitt, 2019).

The dependent variable is reading comprehension, which includes the following indicators: critical thinking, fluency, and vocabulary knowledge. Reading comprehension is a complex cognitive process that involves both deliberate and automatic mental operations, allowing the reader to construct meaning from a text (Moore, 2015). Critical thinking is the ability to engage in logical, thoughtful decision-making, focusing on evaluating information to determine what to think or how to act (Ennis, 2015). Fluency, in the context of reading, refers to the ability to read with accuracy, speed, and proper expression, which is crucial for overall reading proficiency (Thomson, 2015). Vocabulary knowledge encompasses multiple aspects of word knowledge, including both receptive (understanding words in context) and productive (using words accurately) components (González-Fernández & Schmitt, 2020).

Lexical ability is expected to have a significant relationship with reading comprehension, particularly among students at Carlos P. Garcia Senior High School. Strong lexical ability enables students to recognize words efficiently, make associations between concepts, and apply contextual clues, all of which are essential for understanding and interpreting texts. Conversely, students with weaker lexical ability may struggle with word recognition, limiting their ability to comprehend new information and engage in critical analysis. Poor vocabulary knowledge can also hinder fluency, making it more difficult for students to retrieve the right words to express ideas, leading to misinterpretations and ineffective communication. Therefore, enhancing lexical ability may contribute to improved reading comprehension by strengthening students' capacity to process and analyze textual information more effectively.

METHOD

This chapter presents the method of the study which includes research design, respondents of the study, sampling design, research instrument, data gathering procedure, data analysis, and ethical considerations.

Research Design

A research design was a systematic approach that described how data was gathered, examined, and evaluated to address a specific research problem. Correlational research was a type of non-experimental research that facilitated the prediction and explanation of relationships among variables (Fitria, 2019). For the objective of investigating "Lexical Ability and Reading Comprehension Among Senior High School Students," a non-experimental quantitative research design was deemed appropriate. This method allowed researchers to gain insight into and quantify correlations between variables without manipulating them—a crucial approach when ethical or practical considerations prevented experimentation. Researchers conducted quantitative, non-experimental research by collecting data from existing sources or through surveys, questionnaires, or observations.

For this study, a descriptive correlational design was applied. It allowed an investigation of how students' lexical ability and reading comprehension related to one another. This design was justified because it identified patterns and relationships without assuming causation—a key feature when modifying variables was impractical or unethical. Nunez and Tellez (2019) stated that materials development should focus on encouraging students to learn new words and use them to start writing simple paragraphs. The learners agreed that worksheets helped develop their vocabulary skills. The worksheets taught them words they had never known before, and they were thankful for the exposure to good stories and varied vocabulary drills.

Research Locale

The study was conducted in the public senior high school of Cluster 1, Division of Davao City, Region XI, which was located in the central part of Davao City. This school was chosen as the study site because it was known as one of the leading institutions in the community for offering tailored reading programs and multimodal learning tools, particularly in the field of education. Davao City was selected as the research location due to its diverse population, language exposure, educational landscape, and socioeconomic factors. The city was home to various indigenous groups, each with its own unique culture, traditions, and language. Additionally, Davao City was the largest city in the Philippines in terms of land area.

Research respondents

In this study, the respondents were HUMSS (Humanities and Social Sciences) students from Carlos P. Garcia Senior High School, Davao City. The HUMSS strand was selected because of its emphasis on the acquisition of lexical ability and reading comprehension and the necessity of understanding complex texts, critically evaluating ideas, and communicating effectively in writing and debate. These skills were essential for analyzing specialized information in disciplines such as sociology, literature, and history.

Sampling Design

This study used simple random sampling, in which each member of the population had an equal chance of being selected. This technique ensured that the sample was representative of the entire population, reducing selection bias and allowing for the generalization of results to a larger group. According to Acharya et al. (2017), by ensuring that every unit had an equal chance of selection, random sampling increased the fairness of the sample, reduced bias, and enhanced the generalizability of the study's findings.

Research Instrument

The study utilized two research instruments to measure the variables. Lexical ability was assessed using a researcher-made Lexical Ability Assessment, which measured three domains: word recognition, associative

knowledge, and contextual usage. Word recognition referred to an individual's ability to identify words and understand their meanings accurately and efficiently. Associative knowledge measured how well individuals could connect words with related concepts, enhancing their understanding and creativity. Contextual usage assessed the ability to comprehend words within different contexts, ensuring a deeper understanding of vocabulary in various situations.

On the other hand, reading comprehension was measured using the results of the Philippine Informal Reading Inventory (Phil-IRI), a standardized assessment tool designed to evaluate students' reading proficiency. The Phil-IRI results provided insights into three key domains: critical thinking, fluency, and vocabulary knowledge. Critical thinking involved the ability to analyze and evaluate texts logically, enabling students to make informed judgments. Fluency referred to the ability to read smoothly and accurately while maintaining comprehension. Vocabulary knowledge measured the extent of students' understanding of word meanings, including both receptive (understanding) and productive (usage) aspects of vocabulary.

To ensure validity, three experts evaluated the researcher-made Lexical Ability Assessment and provided feedback, which was incorporated into the final version of the instrument. After validation, a pilot test was conducted among senior high school students to assess its reliability. According to Taherdoost (2016), surveys were widely used in research for their cost-effectiveness and ease of distribution, allowing researchers to collect large amounts of quantitative data efficiently. Furthermore, well-structured surveys provided reliable and relevant data for statistical analysis.

Ethical Considerations

Ethical considerations were crucial in determining whether the research was trustworthy and valid, particularly when addressing issues like reading comprehension and lexical abilities, which might not have seemed significant to students but were vital for their academic development. This study adhered to four essential components of ethical standards:

Social Value. his study aimed to explore the relationship between lexical ability and reading comprehension among senior high school HUMSS students. The findings contributed valuable insights into the development of effective educational practices and interventions, particularly for learners struggling with language skills. The study's results had the potential to improve not only the participants' personal growth but also the overall educational, social, and economic well-being of the community.

Informed Consent. Before any data were collected, informed consent from each participant was obtained. All participants were provided with detailed information about the study's objectives, methodology, potential risks and benefits, and their right to withdraw at any time without consequences. This ensured that participants were fully aware that their involvement was voluntary. For students considered minors, consent from parents or guardians was sought.

Risks, Benefits, and Safety. While reflecting on their lexical abilities and reading comprehension difficulties may have posed some psychological risks, anonymity was maintained to minimize anxiety. Participants who experienced any distress during the study had the option to withdraw at any time. If any participant required additional support, they were referred to school guidance counselors or other appropriate support services. The primary benefit of participation was that students became more aware of their lexical and reading comprehension skills, which could lead to academic and personal development.

Data Privacy and Confidentiality. All personal information gathered in this research was kept confidential and securely stored in compliance with data protection laws. Participants' identities remained anonymous, and access to source data was restricted to authorized study personnel only. The results were reported in an aggregated manner to prevent the identification of specific individuals. The collected data were used solely for this study and were disposed of after analysis and reporting.

Data gathering procedure

The researcher conducted the study following these steps:

Permission to conduct the study. Initially, the researcher wrote an official letter to the School Principal of Carlos P. Garcia Senior High School, informing them about the study, its objectives, and the selected respondents. The researcher then presented the study to class advisers to seek approval for conducting the research in their sections.

Distribution and retrieval survey questionnaire. The researcher personally distributed the questionnaires to the respondents, ensuring that clear instructions were provided to minimize incomplete responses. Participants were assured that their answers would remain strictly confidential. Once the questionnaires were completed, the researcher collected, tallied, analyzed, and interpreted the data.

Collation and Statistical Treatment of Data. Data collection focused on "Lexical Ability and Reading Comprehension Among Senior High School Students." The target population comprised senior high school students from Carlos P. Garcia Senior High School. A sample of students was selected through simple random sampling, ensuring that inclusion criteria, such as age and grade level, were met.

Data Analysis

The researcher employed various statistical tools to analyze the respondents' answers, including the mean and the Pearson product-moment correlation coefficient. These tools provided different approaches for determining the relationship between the study's variables, thereby enhancing data interpretation.

Mean. The mean was used to determine the central tendency of the dataset, providing a summary of the average values of lexical ability and reading comprehension scores. It served as a useful measure for statistical comparisons and analysis. However, when working with skewed distributions or outliers, additional measures like the median and mode were considered.

Pearson's Correlation Coefficient. This statistical tool measured the strength and direction of the linear relationship between lexical ability and reading comprehension. It was not a measure of central tendency but rather an indicator of association between the two variables. In this study, it determined how strongly vocabulary knowledge was related to reading comprehension.

RESULTS AND DISCUSSION

This chapter presents the findings and discussion based on data gathered. The presentation is organized based on the sequence of the problem statement of the first chapter.

Table 1. Level of Lexical Ability among Senior High School Students

Domains of Lexical Ability	SD	Mean
Word recognition	1.666	4.46
Associative knowledge	2.453	6.04
Contextual Usage	2.731	7.56
OVERALL	**5.244**	**18.09**

The table of lexical ability scores revealed concerning issues among the respondents, with an overall mean score of 18.09 out of 30 points. Given that the passing score for a 30-item multiple-choice assessment was 23, this mean indicated that most respondents scored below the minimum passing mark, highlighting a serious concern regarding their lexical ability. Such low performance suggested that students struggled with reading comprehension in the contexts they encountered, which might have adversely affected their academic performance and overall communication abilities.

This finding was supported by Quinn et al. (2015), who suggested that having a large vocabulary made it easier to recognize words, thereby improving comprehension skills. However, this contradicted a study by McKeown, Crosson, Moore, and Beck (2018), which investigated the impact of vocabulary learning on reading comprehension. Their research found that simply increasing one's vocabulary did not always lead to better understanding. They argued that inferencing abilities—along with context and prior knowledge, rather than sheer vocabulary size—were crucial for comprehension. In other words, even students with a large vocabulary might struggle to comprehend a text if they lacked conceptual or contextual knowledge of the subject matter (McKeown et al., 2018).

Furthermore, despite having the highest mean score among the three domains, the contextual usage domain had a mean score of 7.56 with a standard deviation of 2.731. This indicated that students only sometimes demonstrated lexical ability in this area. In other words, students occasionally exhibited contextual usage, but their skills remained insufficient for effective communication and academic engagement. Without further development in this area, students might struggle to articulate their thoughts clearly and appropriately in various situations.

Rachmawati (2018) emphasized that both intrinsic and extrinsic factors could influence students' interest in reading. This study underscored the importance of lexical competence in academic learning, suggesting that a strong vocabulary foundation enhanced reading comprehension skills. Additionally, the study found that while morphological awareness alone did not directly improve comprehension, it facilitated lexical inferencing, which, in turn, supported the understanding of new vocabulary.

The domain of associative knowledge followed with a mean score of 6.04 and a standard deviation of 2.453. Although this score was slightly higher than that of word recognition, it still fell below the passing mark. The results suggested that students struggled to establish connections between words and their meanings, a crucial skill for deeper comprehension and critical thinking. The lack of associative knowledge might have hindered students' ability to engage meaningfully with texts and apply their vocabulary in various contexts.

This study was further supported by Richter et al. (2015), who conducted research on lexical quality and its impact on reading comprehension among German primary school children. Their findings revealed that lexical quality—defined by the efficiency and accuracy of orthographic, phonological, and semantic representations—played a significant role in explaining variations in text comprehension abilities.

Lastly, in the domain of word recognition, the mean score was 4.46 with a standard deviation of 1.666. This score reflected a low level of skill in recognizing and understanding words. Difficulty in decoding texts and comprehending reading materials effectively could pose significant challenges to students' academic success and everyday communication. The low mean score suggested an urgent need for targeted interventions to enhance word recognition skills.

Ouellette and Beers (2018) demonstrated that vocabulary depth—knowledge of word meanings and their relationships—significantly predicted reading comprehension and fluency. Their research showed that students with richer lexical knowledge processed texts more effectively, facilitating better overall reading skills. However, a study by Ahmed et al. (2016) argued that the relationship between lexical knowledge and reading comprehension was mediated by cognitive skills such as working memory and executive function. Their findings suggested that students with lower lexical knowledge but strong cognitive flexibility and inference-making skills could still achieve high levels of reading comprehension. This indicated that while lexical knowledge facilitated comprehension, it was not always the most critical determinant of reading success (Ahmed et al., 2016).

Overall, the results indicated a significant need for improvement in lexical abilities across all assessed domains. The low mean scores suggested that many students were not meeting the minimum standards required for academic success, particularly in word recognition and associative knowledge. To address these issues, educators should implement targeted instructional strategies aimed at enhancing vocabulary development and comprehension skills. By focusing on these areas, students could develop stronger lexical abilities, leading to improved academic outcomes and communication skills.

A study by Matthews & O'Toole (2015) explored how learners' ability to segment words in connected speech influenced their second-language listening comprehension. Their findings revealed that receptive vocabulary knowledge and lexical segmentation skills were vital predictors of listening success. These results suggested that enhancing lexical ability could improve learners' ability to process spoken language and understand it more effectively.

Table 2. Level of Reading Comprehension among Senior High School Students

	SD	Mean
Reading Comprehension	2.399	21.62

The table of reading comprehension scores revealed concerning issues among the respondents, with an overall mean score of 21.62 out of 30 points. Given that the passing score for a 30-item multiple-choice assessment was 23, this mean indicated that most respondents scored below the minimum passing mark, highlighting a serious concern regarding their reading comprehension. Such low performance suggested that students struggled with reading comprehension in the contexts they encountered, which might have adversely affected their academic performance and overall communication abilities.

According to Soriano-Ferrer and Morte-Soriano (2017), activities that motivate students to read texts related to themes they find interesting can enhance reading engagement. Several factors influence reading motivation, including engaging texts, interpersonal relationships, family or friends (social context), subject matter, and text genre.

Table 3. Significance of the relationship between Lexical Ability and Reading Comprehension

		Reading Comprehension			
	r	**r^2**	**p-value**	**Decision on H_0 @ 0.05 level of significance**	**Interpretation**
Lexical Ability	.087	.008	.389	Fail to Reject H_0	Not Significant

Table 3 reveals that there was no significant relationship between lexical ability and reading comprehension. The analysis yielded a p-value of 0.389 at the 0.05 level of significance. Since the p-value was greater than 0.05, the null hypothesis failed to be rejected. This indicates that no significant relationship existed between lexical ability and reading comprehension.

The correlation coefficient ($r = 0.087$) suggests a very weak positive correlation between the two variables, while the coefficient of determination ($r^2 = 0.008$) indicates that only 0.8% of the variance in reading comprehension could be explained by lexical ability. This suggests that other factors may have played a more substantial role in influencing students' reading comprehension skills.

Almekhlafy and Alqahtani (2020) defined reading motivation as an essential factor that plays a crucial role in reading development. Their study identified two key factors influencing students' motivation: intrinsic motivation, where students are driven by their own interest in reading, and extrinsic motivation, which comes from external sources such as teachers, parents, or rewards.

CONCLUSIONS AND RECOMMENDATIONS

This chapter presents the conclusions drawn from the study's findings and provides recommendations to improve educational practices based on the results.

This study aimed to assess the lexical ability and reading comprehension skills of HUMSS students at Carlos P. Garcia Senior High School. Specifically, it sought to determine whether a significant relationship exists between lexical ability and reading comprehension and to measure the extent of their relationship. A descriptive-correlational research design was employed to analyze these skills, using simple random sampling to select 300 respondents. Data collection involved researcher-made survey questionnaires for lexical ability and Phil-IRI

results for reading comprehension, ensuring strict adherence to ethical considerations. The data were analyzed using mean and Pearson's r to assess the relationship between the two variables.

The findings revealed that the lexical ability of HUMSS students was moderately manifested, meaning that while students demonstrated some lexical skills, they did not consistently apply them. Similarly, reading comprehension was also moderately manifested, indicating that students had some ability to understand and process reading materials but struggled with full comprehension. Furthermore, the statistical analysis showed no significant relationship between lexical ability and reading comprehension, as evidenced by a p-value of 0.389 at a 0.05 level of significance. The computed r-value of 0.087 indicated a very weak correlation, confirming that lexical ability did not strongly influence reading comprehension in this study. This suggests that while vocabulary knowledge is important, other factors such as cognitive skills, inferencing abilities, and reading motivation may play a more significant role in students' reading comprehension.

Conclusion

Based on the findings, the study concludes that lexical ability among HUMSS students at Carlos P. Garcia Senior High School is poorly manifested, indicating that students struggle with word recognition, associative knowledge, and contextual usage. Although lexical ability is a crucial component of reading comprehension, it is not the sole determinant of reading success. The findings also suggest that reading comprehension is moderately manifested, meaning that students are capable of understanding texts but may require additional support to improve their comprehension skills. Despite the assumption that lexical ability strongly affects reading comprehension, the study found no significant relationship between the two variables. This implies that even students with lower lexical ability may still achieve moderate reading comprehension, likely due to compensatory factors such as prior knowledge, critical thinking skills, and reading strategies.

Recommendations

Based on these conclusions, the study recommends that teachers implement targeted instructional strategies to enhance students' vocabulary development and reading comprehension. Teaching approaches such as context-based learning, explicit vocabulary instruction, and reading interventions should be incorporated into the curriculum to help students strengthen their lexical skills. Teachers should also create collaborative reading programs, where students read in groups or pairs and discuss unfamiliar words or phrases, fostering better comprehension through social learning.

Additionally, experimental research is recommended to further examine how interventions in vocabulary instruction can directly impact reading comprehension. Future researchers should also consider a mixed-methods approach, integrating qualitative data, such as student interviews or think-aloud protocols, to explore other factors influencing reading comprehension beyond lexical ability. Since motivation and cognitive skills may play a significant role in reading success, future studies should investigate the effects of reading motivation, prior knowledge, and inferencing abilities on comprehension outcomes.

By addressing these areas, educators and researchers can develop more effective teaching strategies that cater to students' diverse learning needs. Strengthening lexical ability and reading comprehension is essential for improving students' academic performance and communication skills, ultimately enhancing their overall literacy development.

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SURVEY QUESTIONNAIRE

Lexical Ability Test

Instructions:

Read each question carefully. Choose the best answer from the options provided. There are no penalties for incorrect answers, so make your best guess if unsure.

1. Which of the following words means "to make something less severe"?

A. alleviate

B. aggravate

C. illuminate

D. celebrate

2. What is the antonym of "benevolent"?

A. kind

B. malevolent

C. generous

D. charitable

3. The word "ephemeral" most closely means:

A. eternal

B. temporary

C. abundant

D. fragile

4. Which word is synonymous with "diligent"?

A. lazy

B. hardworking

C. careless

D. indifferent

5. What does the word "meticulous" mean?

A. careless

B. precise

C. quick

D. reckless

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6. The term "ubiquitous" refers to something that is:

A. rare

B. everywhere

C. hidden

D. expensive

7. Which of the following words means "to criticize severely"?

A. praise

B. condemn

C. support

D. ignore

8. What is the meaning of "candid"?

A. secretive

B. honest

C. deceptive

D. uncertain

9. The word "quintessential" most closely means:

A. unusual

B. typical

C. rare

D. complicated

10. Which word is an antonym for "arduous"?

A. difficult

B. easy

C. challenging

D. strenuous

11. Choose the word that best completes the sentence:

"The scientist's findings were ____ by further research."

A. contradicted

B. supported

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C. ignored

D. simplified

12. In this context, what does “broke” mean?

"He broke the news gently."

A. destroyed

B. revealed

C. fixed

D. ignored

13. Choose the correct synonym for “elated” in this sentence:

“She was elated when she received the award.”

A. depressed

B. overjoyed

C. indifferent

D. angry

14. What does “inundated” mean in this context?

“The city was inundated with requests for assistance.”

A. flooded

B. ignored

C. limited

D. delayed

15. Choose the best word to fill in the blank:

“The teacher’s explanation was so ____ that all students understood.”

A. confusing

B. clear

C. ambiguous

D. lengthy

16. In this sentence, what does “dwindle” mean?

“His savings began to dwindle after he lost his job.”

A. increase

B. decrease

C. stabilize

D. multiply

17. Choose the best synonym for “metamorphosis” in this context:

“The caterpillar undergoes a metamorphosis to become a butterfly.”

A. change

B. stagnation

C. repetition

D. decline

18. What does “proliferate” mean in this sentence?

“Rumors tend to proliferate in small towns.”

A. decrease

B. spread rapidly

C. remain constant

D. disappear

19. Choose the best word to complete this phrase:

“The athlete’s performance was ____ by her rigorous training.”

A. hindered

B. enhanced

C. neglected

D. compromised

20. In this context, what does “cognizant” mean?

“Being cognizant of your surroundings is important for safety.”

A. unaware

B. knowledgeable

C. distracted

D. careless

21. Which word is most closely associated with “ocean”?

A. mountain

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B. wave

C. desert

D. forest

22. What would you associate with “school”?

A. homework

B. vacation

C. celebration

D. silence

23. Which term is commonly linked with “doctor”?

A. patient

B. teacher

C. chef

D. artist

24. What would you associate with “winter”?

A. snow

B. heat

C. sunlight

D. flowers

25. Which word pairs well with “music”?

A. silence

B. dance

C. noise

D. stillness

26. What is commonly associated with “birthday”?

A. celebration

B. sadness

C. routine

D. work

27. Which term would you associate with “exercise”?

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A. laziness

B. fitness

C. relaxation

D. sleep

28. What do you associate with “fire”?

A. water

B. heat

C. ice

D. wind

29. Which term pairs well with “travel”?

A. adventure

B. routine

C. stability

D. home

30. What would you associate with “computer”?

A. technology

B. nature

C. food

D. music

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Reading Comprehension

Directions: Read each item carefully and choose the letter of the best answer.

Athletes in Action

The 100-meter sprint is the shortest race at an outdoor track-and-field competition. In the World Championship games, the winner of this race may will be the fastest in the world. Over the years, records in track-and-field events have continued to be broken. In the 100-meter sprint, a new record may be the only one-hundredth of a second lower than the previous record. But new winners are still faster than ever, why?

One important reason is science. About 100 years ago, a runner showed up for a race in Scotland. He got into a crouch for the first start. The other runners laughed at him because no one had ever tried a crouch start before. But by starting low to the ground, the runner was putting more energy into forward motion than upward motion. He won the race. Soon the crouch became the standard position for the start of a short race.

The invention of video cameras and computers also made it possible for athlete to continue breaking records. A runner's performance is videotaped and fed into a computer The computer program shows every movement. Sports scientist studying the movements might say, "If the runner makes a small change in arm position in the starting blocks, she might cut two-hundredths of a second from her time." Computer analysis can make the difference between winning and losing.

1. One reason that the new World Championship winners are faster than ever is

    A. their advance training.

    B. stronger competitors.

    C. better nutrition.

    D. the application of science.

2. The crouch position improves a runner's time because

    A. the runner starts farther from the ground.

    B. the runner puts more energy into forward motion

    C. the runner reduces air resistance.

    D. the runner conserves more energy.

3. What effect can computer analysis have on a runner's performance?

    A. It can show every moment the runner makes.

    B. It can determine which starting position is best.

    C. It can turn any runner into a world champion.

    D. It can show minor adjustments that will improve performance.

4. Sports Scientists might say that if a runner makes a small change in arm position,

    A. she can be more comfortable while running.

    B. she can adjust her body position in the starting blocks.

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C. she can reduce wind resistance.

D. she can cut two-hundredths of a second from her time.

On this 10th day of November, before we harbored the ship, we observed some of our people were not interested in staying united and working in harmony with us. Instead, they appeared dissatisfied. So, it was thought there should be an agreement that we should join together in one body. We should by common consent agree to obey such government we made, and governors we chose.

We set our signatures to this document that follows word for word…

We whose names are signed below are loyal subjects of the mighty ruler, King James of Great Britain, France, and Ireland.

We have agreed, for the greater glory of God, the spreading of Christianity, and for the honor of our King and country, to build the first colony in northern Virginia.

We, by this document, solemnly do promise before God and one another, to join together into a group to form a citizen's government, so we may manage, keep safe, and improve this colony.

This government shall plan, make up into law any fair and equal laws, rules, constitutions, and public positions that are necessary and useful for the good of the colony.

We all promise to obey.

5. What is one detail that explains why the Pilgrims formed an agreement?

   A. Some of our people were not interested in staying united.

   B. We set our signatures to this document.

   C. We have agreed to build the first colony in northern Virginia

   D. We join together so we may manage, keep safe, and improve tis colony.

6. Which of these is not a reason the Pilgrims agreed to build a new colony?

   A. For the glory of God

   B. To spread Christianity

   C. For the honor of King and country

   D. To advance themselves

7. The Pilgrims considered themselves to be loyal subjects of

   A. the new governors.

   B. Virginia

   C. King James.

   D. William Bradford.

8. In their agreement, the Pilgrims promised to

    A. form a citizen's government.

    B. create a new religion.

    C. return to England.

    D. obey one another.

Muslims are followers of the religion called Islam. Muslims believe that there is one God. Allah, and Muhammad is his messenger, or prophet.

As a young man, Muhammad was a merchant from Mecca, a city on the Arabian Peninsula, in what is now Saudi Arabia. In about A.D. 610, after having a religious experience, Muhammad began preaching Islam. Muslims believe Muhammad received revelations, or messages, from Allah. These revelations were written in Koran, or Qur'an, the holy book of Islam. Muslims believe that the Koran contains the exact words of Allah, as spoken to Mohammad through the angel Gabriel.

The prophet Muhammad preached a simple yet demanding way of life. According to his teachings, Muslims follow the Five Pillars of Islam. The five Pillars of Islam outline five things a devout Muslim must do: (1) declare faith in Allah; (2) pray five times daily; (3) give to the poor and needy; (4) fast during the holy month of Ramadan; (5) visit the holy city of Mecca at least once.

The Muslim place of prayer is a mosque. Pointing upward outside the mosque is a minaret, or tower. From the minaret, a crier known as the muezzin calls followers to prayers five times daily. Muslim usually pray together as a group. Muslim women pray in separate area of the mosque or at home.

Before Muslims enter the mosque, they remove their shoes and make ablutions by cleansing themselves. Most mosques provide fountains where worshippers make ablutions. Inside the mosque, they kneel on the floor in prayer, bowing their heads toward the holy city of Mecca. The mihrab, or prayer niche on the mosque wall, indicates the direction of Mecca.

9. The author's purpose in paragraph 2 is to__.

    A. describe the city of Mecca.

    B. entertain readers with facts about Muhammad

    C. persuade readers to respect Muhammad

    D. explain who Muhammad was.

10. What is the author's purpose in paragraph 3?

    A. to convince readers to follow the Five Pillars of Islam

    B. to describe a simple lifestyle

    C. to explain the Five Pillars of Islam

    D. to entertain readers with a story about a holy city

11. What is the author's purpose in the last paragraph?

    A. to explain why Muslims pray

B. to inform readers what a mihrab is

C. to describe how Muslim pray

D. to entertain readers with interesting facts about the features of a mosque

12. The article was written mainly to ____.

A. persuade readers to become Muslims.

B. inform readers about the religion of Islam.

C. describe modern Islamic practices.

D. explain how Islam has changed throughout history.

Paper or Plastic?

Almost every time someone buys groceries, one is asked this question- "paper or plastic?" Paper bags and plastic bags are the most commonly used items to hold purchases. According to people who study the environment, both have drawbacks and advantages.

Most experts agree that plastic bags harm the environment. Plastic can take hundreds of years to break down. As plastic breaks down, it releases poisonous materials into the water and soil. Unlike paper bags, plastic bags often end up in the ocean. The bags look like jellyfish, the main source of food for many sea turtles. Endangered sea turtles eat the bags and often choke on them.

Despite these negative effects, plastic bags do have some advantages. Plastic grocery bags are one of the most reused items around the house. These bags are often used to hold school lunches, line trash cans, and serve as gym bags. This reduces plastic-bag waste. Plastic bags require forty percent less energy to produce than paper bags, and cause seventy percent less air pollution. Plus, plastic bags release as much as ninety-four percent less waste into the water than paper bags do.

Paper bags do use more energy to produce and create more waste than plastic bags. However, paper bags breakdown more quickly than plastic bags. And they don't pose a threat to wildlife.

Some people have argued that a tax should be placed on plastic bags. Others worry that a tax would cause people who make plastic bags to lose their jobs because no one will want to use them. Some people also worry a tax would make plastic bags more expensive. A tax would also probably cause an increase of landfill waste because stores would start using more paper bags to cut down on costs.

13. Plastic bags can take hundreds of years to break down while paper bags

A. breakdown more quickly.

B. do not break down.

C. take ever longer to breakdown.

D. take only days to breakdown.

14. How are the effects on wildlife different for plastic bags?

A. Plastic bags do not harm wildlife.

B. Some animals are strangled by plastic bags.

C. Plastic bags often look like predators.

D. Some animals are poisoned by plastic bags.

15. In what way are plastic bags and paper bags alike?

A. They both are often reused in the home.

B. They both release poison into the soil.

C. They both are commonly used in stores.

D. They both create the same amount of waste.

16. One advantage plastic bags have that paper bags do not have is that

A. Plastic bags release less waste into the water.

B. Plastic bags don't require energy to produce.

C. Plastic bags aren't as expensive as paper bags.

D. Plastic bags do not result in landfill waste.

Believe it or not, the computer has a history that reaches back to ancient times. The first computer was the abacus, an ancient device for counting, adding, and subtracting numbers. To calculate with the abacus, the users moved a series of beads that represented eight digits in a number. Calculations were performed by the hand, one step at a time.

In 1642, a French mathematician invented the first automatic calculator with his invention of the arithmetic machine. The machine had wheels and gears that accounted for each step in a calculation. It performed addition, subtraction, multiplication, and division.

In 1649, a German mathematician devised the binary system of numbers. The binary system would later become the basis for the modern computer.

The development of the computer slowed until 1888, when a successful punch-card computer was developed. This computer compiled data for the 1890 United States census. Like the arithmetic machine, the punch-card computer was a mechanical device.

The first electronic computer, the Mark I, was produced in 1939 by IBM. The first personal computer arrived in 1975. But it wasn't until 1977, when Apple II computer was introduced, that the personal computer became widely popular.

17. Which prediction is probably the most accurate?

A. The binary system of numbers will become outdated.

B. Computers will be able to perform more functions.

C. Development of the personal computer will cease.

D. The size of the average computer will grow smaller.

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18. Predict what would most likely have occurred if the development of the computer had moved at a faster pace during the 1700s and 1800s.

    A. The electronic computer would have been developed prior to 1939

    B. Automatic calculators would have been designed to perform more functions.

    C. The hand-held calculator would have replaced the abacus for performing operations.

    D. A system of numbers, more efficient than the binary system, would have been developed.

19. Predict what would have occurred if the punch-card computer had not been accurate.

    A. The arithmetic machine would not have been invented.

    B. Census data gathered in recent years would be faulty.

    C. Another means of gathering data would have been used for the 1890 census.

    D. A binary system would have proved useless.

20. Which of these will most likely happen in the future?

    A. Fewer persons will be willing to develop computers.

    B. Personal computers will become more necessary in everyday life.

    C. Mathematicians will abandon the computer for simpler machines.

    D. Electronic computers will be replaced by manual devices.