

Factores cognitivos que afectan al desarrollo de la Destreza Lectora en estudiantes de segundo año de inglés, educación superior, 2024.

Cognitive Factors that Affect the Development of Reading Skills among Sophomore English Students in Higher Education, 2024.

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Resumen

La lectura no es simplemente una destreza fundamental; es la puerta de entrada a la adquisición de conocimientos, al desarrollo del pensamiento crítico y al éxito académico y profesional. En el ámbito de la educación superior, los estudiantes de inglés se encuentran con barreras cognitivas que impiden el desarrollo de sus habilidades lectoras. Este estudio pretende identificar los factores cognitivos que afectan al desarrollo de las destrezas lectoras entre los estudiantes de inglés de segundo año de educación superior. Este estudio observacional no experimental empleó una metodología de investigación mixta, utilizando un enfoque transversal prospectivo para comprender los factores cognitivos que influyen en el dominio de la lectura entre estos estudiantes. El marco teórico extraído de una revisión bibliográfica destaca la importancia del vocabulario, la gramática, la fonología, la descodificación y la memoria en la comprensión lectora. Además, sugiere la aplicación de estrategias de lectura para reducir los déficits lectores. A través de la administración de un cuestionario a 27 estudiantes de segundo año de inglés del Centro Regional Universitario de Coclé, se recogieron y analizaron las percepciones respecto a diversos factores

cognitivos que afectan las habilidades lectoras. Los resultados revelaron que el vocabulario aparece como el factor más influyente, con una mayoría significativa de acuerdo con su importancia. Además, la fonología, la memoria y la gramática se identificaron como factores que contribuyen significativamente al desarrollo de las habilidades lectoras. Curiosamente, casi la mitad de los participantes consideraron que las destrezas de descodificación eran neutrales. Estos resultados subrayan el papel fundamental del vocabulario y la fonología en la formación de la competencia lectora entre los estudiantes de segundo curso de inglés, al tiempo que destacan la importancia de abordar los problemas de memoria. El estudio sugiere la aplicación de estrategias específicas dirigidas a mejorar las destrezas lectoras con el fin de reducir el impacto negativo de estos factores cognitivos y apoyar eficazmente el progreso académico de los estudiantes.

Palabras clave: destreza lectora, factores cognitivos, estrategias de lectura.

Abstract

Reading is not merely a fundamental skill; it is the gateway to knowledge acquisition, critical thinking development, and academic and professional success. In the realm of higher education, English students encounter cognitive barriers that impede the development of their reading skills. This study aimed to identify the cognitive factors that affect the development of reading skills among sophomore English students in higher education. This non-experimental observational study employed a mixed research methodology, utilizing a prospective transversal approach to understand the cognitive factors influencing reading proficiency among these students. The theoretical framework drawn from a literature review highlights the importance of vocabulary, grammar, phonology, decoding, and working memory in reading comprehension. In addition, it suggests the implementation of reading strategies to reduce reading deficits. Through the administration of a questionnaire to 27 sophomore English students at Coclé University Regional Center, perceptions regarding various cognitive factors affecting reading abilities were gathered and analyzed. Results revealed that vocabulary emerged as the most influential cognitive factor, with a significant majority strongly agreeing on its importance. Additionally, phonology, working memory, and grammar were identified as significant contributors to reading skills development. Interestingly, decoding skills were viewed neutrally by nearly half of the participants. These findings underscore the critical role of vocabulary and phonology in shaping reading proficiency among sophomore English students, while also emphasizing the importance of addressing working memory concerns. The study suggests the implementation of specific strategies aimed at improving reading skills to reduce the negative impact of these cognitive factors and effectively support students' academic progress.

Keywords: reading skills, cognitive factors, reading strategies.

Introduction

Reading ability is a crucial communicative process that stands as the cornerstone of language proficiency, particularly in academic and professional contexts (Iruvuri, 2020, p. 1). According to Bharuthram (2017), students “... enter higher education with the literacies of schooling, but not with a well-developed literacy repertoire for higher education” (p. 59). A problem is evident in higher education, particularly among sophomore English students. Despite efforts to foster good reading skills, students encounter various cognitive barriers. “Vocabulary is one viewpoint that should be learned and dominated by students because vocabulary is related to the skills contained in English” (Rahmah et al., 2023, p. 37). Al-Majdawi & Jabbar (2017) state that “three processes (phonological, syntactic, and working memory) show a significant increase in development during the period of rapid reading skill acquisition” (p. 1). In addition, “The ability to decode words is the most critical skill for students to succeed with reading comprehension” (Guenin, 2018, p. 8). Each cognitive factor negatively impacts the academic progress of English Sophomore students.

This study suggests two hypotheses. The first one states that the three main factors that strongly affect reading skills are vocabulary, grammar, and phonology and the second one is the opposite. This study aims to identify the cognitive factors that affect the development of reading skills among sophomore English students in higher education according to the sophomore students’ perceptions.

Having a strong reading proficiency impacts the development of other language skills and academic and professional growth. However, “during reading comprehension, several cognitive processes are involved” (Al-Jarrah1 & Ismail, 2018, p. 34). Many studies suggest that vocabulary, grammar, phonology, decoding, and working memory are the main cognitive factors affecting reading ability. Students highlighted the importance of a strong vocabulary for reading English passages, stating that without word recognition, the enjoyment of reading is compromised (Naveed et al., 2022, p. 1871). According to Zheng et al. (2023), higher reading stages match more complicated requirements of text reading comprehension and proficiency in grammatical knowledge application (p. 2). Additionally, phonology is also important in reading development because it emphasizes the crucial skill of associating sounds with letters (Al-Majdawi & Jabbar, 2022, p. 233).

Furthermore, Guenin (2018) states that decoding skills influence comprehension reading development by helping the students understand the meaning of the text and read faster at the same time (p. 10-11). Finally, Morgan (2019) claims that students who struggle with working memory may have a hard time remembering details or facts in their textbooks because working memory is important for following the sequence of what is being read. The effects of the cognitive factors studied can be prevented or reduced through various reading strategies. Thuy (2018) identifies reading strategies commonly employed by ESL students like activating prior knowledge, delving into the information beyond surface-level data, utilizing sensory experiences to enhance understanding and retention, engaging in logical reasoning processes, and adopting a broad conceptualization approach, among others (p. 120-121). Developing effective reading strategies is thus essential for learners, as they enable efficient text processing and deeper comprehension of the material (Duc, & Lan, 2023, p. 894).

Methods and Materials

Scope

The methodology employed in this study integrated a mixed research approach with observational and prospective elements, guided by a theoretical framework underlying the cognitive factors that influence reading proficiency among English sophomores in higher education. The theoretical framework encompassed concepts such as vocabulary, grammar, phonology, decoding, and working memory, which have been identified in previous research as significant contributors to the development of reading skills.

Population

The instrument was administered to a sample of 27 sophomore English students at Coclé University Regional Center, employing a transversal approach to obtain a snapshot of their current perceptions. Regarding the population, 70.4% of the participants were female, while 29.6% were males. The majority were between the ages of 18 and 24 years.

Instrument

The survey included a Likert scale, which offered participants a range of options to indicate how much they agreed with statements about the importance of different cognitive skills for reading. These options ranged from strongly agreeing to strongly disagreeing. According to Bhandari & Nikolopoulou (2020), Likert scales offer a variety of response choices, allowing participants to express their opinions or feelings about a topic with greater subtlety. The questionnaire was elaborated in Google Forms. Google Forms' popularity in online survey research stems from its convenient features, including accessibility from any device at any time, and its free, unlimited use. (Vasanth & Harinarayana, 2016, p. 5). It facilitated to obtain the specific data to study.

Data analysis

Descriptive and content analytical methods were then used to analyze the data collected, providing information on the nuanced relationships between these cognitive factors and reading proficiency. This methodological framework facilitated a comprehensive examination of the challenges faced by students in this academic context and informed strategies to enhance the development of reading skills effectively.

Results and Discussion

Table 1.

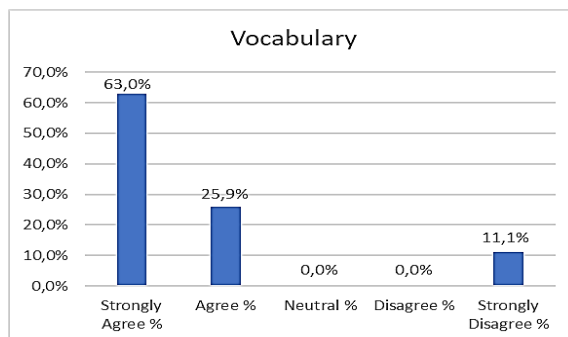
Cognitive Factors that Affect Reading Skills According to the Sophomore English Students Perceptions.

Factors	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
Vocabulary	63,0%	25,9%	0,0%	0,0%	11,1%
Grammar	11,1%	51,9%	22,2%	7,4%	7,4%
Phonology	33,3%	48,1%	18,5%	0,0%	0,0%
Decoding	18,5%	33,3%	48,1%	0,0%	0,0%
Working Memory	18,5%	51,9%	22,2%	7,4%	0,0%

Note. The table shows the perceptions of sophomore English students at Cogle University Regional Center on how different cognitive factors affect their reading skills.

Figure 1.

Vocabulary Knowledge Influences the Ability to Understand Written Texts in Sophomore Students.

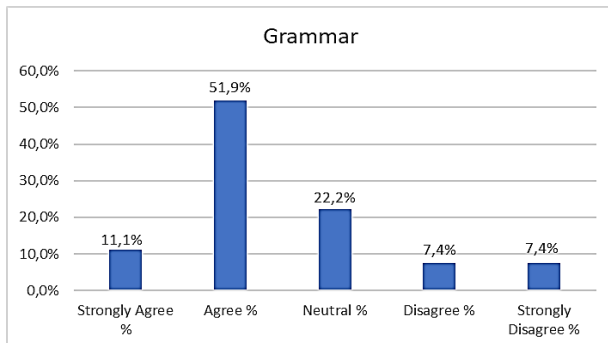


Note. The image shows the perceptions of sophomore English students at Cogle University Regional Center about how vocabulary knowledge influences their skills development to understand written text.

Vocabulary received the highest endorsement, with a whopping 63% of students strongly agreeing that vocabulary significantly impacts reading skills. Only a small percentage (11.1%) disagreed with this statement. This suggests that the students recognize the importance of a strong vocabulary for comprehension. These results are consistent with research on the importance of vocabulary in reading. Vocabulary knowledge is a fundamental factor in developing reading skills in English. Sophomores should spend time learning and practicing new vocabulary to improve their reading comprehension.

Figure 2.

Grammatical Structures Affect the Ability to Understand Meaning from Written Materials in Sophomore Students.

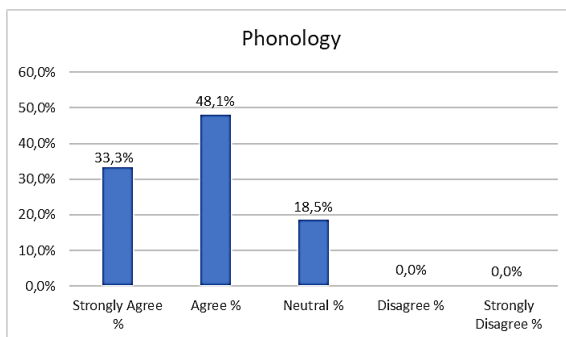


Note. The image shows the perceptions of sophomore English students at Cogle University Regional Center about how grammatical structures affect their ability to understand meaning from written materials.

Over half (51.9%) of the students agreed more than strongly agreeing (11.1%) that grammatical structures have an impact on reading comprehension. A considerable percentage (22.2%) do not have a clear opinion on the influence of grammar on reading comprehension. A small percentage (14.8%) disagrees with the influence of grammar on reading comprehension. While the majority of students recognize the importance of grammar in reading comprehension, a significant percentage is still unsure of its impact. This indicates an awareness of the role of grammar, but perhaps not everyone feels it strongly affects them. Sophomore students need to understand how grammar works to decode written texts in English.

Figure 3.

Phonological Awareness plays a key role in the Development of Reading Skills in Sophomore Students.



Note. The image shows the perceptions of sophomore English students at Cogle University Regional Center about how phonological awareness plays a key role in the development of their reading skills.

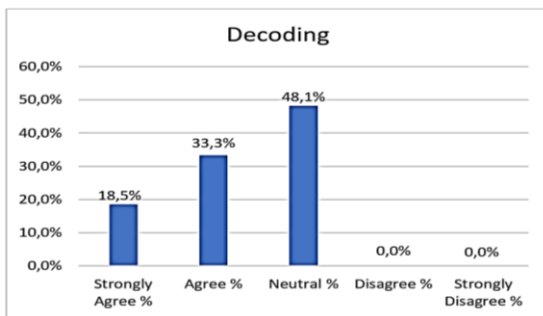
The majority of students (81.4%) recognize that phonological awareness is important for the development of reading skills in English. A significant percentage (18.5%) does not have a clear opinion on the influence of phonological awareness on reading. There are no students who disagree with the importance of phonological awareness. This factor, which is

foundational for reading development, received less emphasis than vocabulary. This might suggest that the students view these areas as more automatic or less relevant to their current reading level.

Phonological awareness is an important factor in the development of reading skills in English. Sophomore students should engage themselves in activities that strengthen their phonological awareness to improve their reading skills.

Figure 4.

Decoding Skills Influence Competence in Reading Comprehension in Sophomore Students.

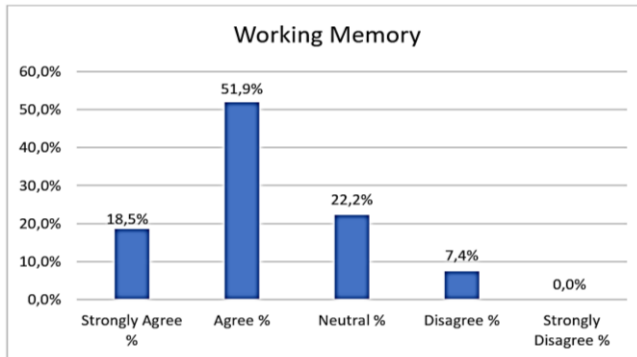


Note. The image shows the perceptions of sophomore English students at Cogle University Regional Center about how decoding skills influence their competence in reading comprehension.

This factor also received less emphasis than vocabulary. Around (18.5%) of students strongly agreed on their importance, and around (33.3%) agreed that decoding skills influence reading comprehension. Almost half of the students (48.1%) do not have a clear opinion on the influence of decoding on reading comprehension. No student disagrees or strongly disagrees with the importance of decoding. These results suggest that sophomore students generally understand the importance of decoding in reading. However, a considerable percentage of students are not sure how decoding affects their ability to comprehend texts.

Figure 5.

Working Memory is a Critical Determinant of Reading Abilities in Sophomore Students.



Note. The image shows the perceptions of sophomore English students at Cogle University Regional Center about how working memory is a critical determinant of reading abilities.

The majority of students (18.5%) strongly agreed and (51.9%) agreed suggesting that they recognize that working memory plays an important role in reading. A considerable percentage (22.2%) do not have a clear opinion about the influence of working memory on reading. Only a small percentage (7.4%) disagrees with the importance of working memory for reading.

Despite the 5 cognitive factors analyzed above, other types of factors also affect English sophomore students’ reading skills according to their perceptions. Students would improve their reading literacy by discovering and understanding those factors that greatly influence reading literacy (Líu et al., 2022). Sophomores shared that they also face factors such as the reading environment, parental or educational support, and how critical thinking and classroom distractions impact comprehension. They additionally added that it affects the encouragement to foster deep reading.

Furthermore, low pronunciation confidence and a lack of background knowledge of the language further hinder comprehension. Besides, the environment itself can influence comprehension. Also, students highlighted the influence of the environment, background knowledge, and language differences on comprehension. According to the sophomore’s opinion, another factor is instructional, within are: teaching methods, students’ learning styles, and weaknesses. Apart from the five factors analyzed before, sophomore students are concerned about other factors that are affecting their development of the reading English process, known as non-cognitive factors. “Non-cognitive factors are qualities other than content knowledge and academic skills that also influence learning” (Heydebreck, 2019). Hence, this passage delves into additional factors categorized as supportive, cognitive, emotional, cultural, instructional, and individual.

Conclusion

The main objective of this study was to identify the cognitive factors affecting the reading skills development of sophomore English students in higher education. The findings demonstrated that vocabulary knowledge is the most prominent factor, followed by phonological awareness and working memory, while others are concerned that working memory and grammar affect their ability to understand meanings from written materials. Therefore, the stated hypothesis determined that vocabulary and phonics are the main factors affecting reading development. However, working memory was identified as a more determining factor than phonology. Interestingly, students expressed and acknowledged a more neutral view on decoding skills, suggesting a developing understanding of reading. The study findings align with previous researchers like (Naveed et al., 2022) by emphasizing the impact of vocabulary knowledge on reading comprehension. Besides, the process of comprehending texts is usually a struggle for learners. Therefore, it can be stated that certain factors have an impact on their reading comprehension process (Gilakjani & Sabouri, 2016, p. 180).

Despite their concerns about the five cognitive factors interpreted above, sophomores recognized other categories of factors that are influencing their development of reading skills, known as non-cognitive factors. “Reading comprehension is a complex process that involves components, processes, and factors with the aim of finding better ways of improving it among learners” (Gilakjani & Sabouri, 2016, p. 180). Thus, students highlighted the need for more interventions to help them improve their progress in reading skills, as students recognize their challenges but require greater support because they have not yet managed to find more effective solutions.

This research provides valuable information for both teachers and students. Teachers can build on these findings to prioritize vocabulary development and integrate strategies that reinforce phonological awareness, working memory, decoding, and grammatical skills into their teaching to foster their reading skills. Understanding how different thinking skills affect reading can be a game-changer for students. By recognizing these factors, they can conquer challenges, find the right kind of help, and ultimately become stronger readers, which will boost their success in their studies. The implementation of reading strategies is important to reduce the negative effects of all cognitive factors. It is suggested for further research to see if there is a correlation between their perceptions and their current reading comprehension.

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