

Correlation between Internet Literacy and Vocabulary Level: Implication towards Reading Comprehension

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Abstract

In-depth research on reading comprehension receives less attention in basic education, despite the fact that the problem is just as critical, if not more so, in this pandemic era. This study aims to learn the dynamics of reading comprehension to draw a conclusion on the phenomenon. Terry (2022) observed a strong connection between vocabulary and reading comprehension. However, meager studies have correlated two variables – Internet Literacy (IV) and Vocabulary Level (DV) – with combined implications for Reading Comprehension. With the globalization of online learning, urban demography's visibility was catered with 83 Senior High School students as respondents. The data revealed a low correlation. Generally, the high mean for online literacy and high mean in the performed evaluation showed the participants' awareness of how to use the digital side of learning and a decent vocabulary level. Null Hypothesis II was accepted in this research. Interestingly, this low correlation could be affected by the students' internal and external strategies, which created an impetus for their reading comprehension aside from digital utilization.

Keywords: reading comprehension, internet literacy, vocabulary level, senior high school

1. Introduction

Reading comprehension is the ability to re-learn how to read, grasp, understand, and connect. The relationship between reading comprehension ability and vocabulary level is tricky. The primary purpose of reading comprehension teaching is to assist students in acquiring the necessary knowledge, abilities, and experiences in order to become effective and enthusiastic readers. Unfortunately, according to Merez (2020) of ABS-CBN News, Filipino pupils scored lowest out of 79 countries in a global reading comprehension assessment. Poor reading comprehension among Filipino pupils is a truth that the country must acknowledge in order to reform its educational system. On the other hand, in order for students to read and understand academic literature effectively, instructors must guarantee that they have an adequate vocabulary. However, the relationship between reading comprehension ability and vocabulary level is tricky (Capodiece et al., 2020). Vocabulary awareness is an important aspect of language learning that must be taken into account while attempting to improve reading comprehension. As a result, it's critical to understand what it takes for a learner to comprehend what he or she is reading, particularly when faced with academic texts. According to Mar & Ancho (2020), low reading ability is one of the main reasons students drop out of school. This low reading ability could be related to a lack of academic vocabulary education. To have effective teaching,

students must understand and comprehend the text's language. In 1996, the California Department of Education coined the term "internet literacy" (Tinmaz et al., 2022). Literacy in digital technology refers to the ability to use a computer, software program, database, and other technologies for educational, work, or personal reasons. COVID-19, on the other hand, increases pupils' educational challenges. Concerns about pupils' reading comprehension have arisen as a result of the new form of learning. In the absence of teachers and other learning strategies or sources such as libraries, free computer-laboratory access, social groups, study groups, and even friends to ask and clarify unfamiliar and difficult material, the new mode of learning makes it difficult for students to comprehend academic texts or modules. Reading comprehension is a top priority in increasing Filipino English proficiency. Focusing on internet literacy's impact on the vocabulary level of students is a discernible aspect to delve into since we are in the era where digital technology is simultaneously utilized to increase learning. This is consistent with the findings of Abidin et al. (2021); using an electronic dictionary or technology to help pupils expand their vocabulary is more beneficial. This idea is yet to be considered since we need to cater to the idea of the assertions by Alemi and Lari (2020). Their research findings concluded that the kid's reading abilities are improving regardless of the vocabulary learning media they utilize, whether SMS or traditional written vocabulary. Also, Walker and White (2020), stated that technological inclination is expected if such a generation is born within the digital era, and this specifically could contribute to the development of internet literacy. However, we also need to consider that there are some areas where there is limited access to internet connectivity. This could potentially mean that there are some students whose motivation in using the internet for the merit of vocabulary level development is not as expected. Contrasting research findings have led to the idea that there is a demographical effect on the establishment of results. It is only imperative for it to be catered in order to assess the situation and provide a transparent suggestion on learning strategy for the improvement of reading comprehension realistically.

2. Literature review

2.1 Technology as Wielder of Vocabulary Size

According to Cilento & Mota (2020), a generation that has grown up surrounded by computers is more likely to use digital gadgets than previous generations. The capacity to use the internet is referred to as internet literacy. Accordingly, this approach may lead to the false assumption that all young people are interested in, motivated by, and enthusiastic about digital technology. This assertion is consistent with Alemi and Lari's (2021) research findings. It is elucidated that the kids' reading abilities are improving regardless of the vocabulary learning media they utilize, whether SMS or traditional written vocabulary. The use of the internet in English instruction, particularly vocabulary, has been reported in some research, indicating that millennial students can increase their vocabulary size by using digital technology. According to Abidin et al. (2021), using an electronic dictionary to help pupils expand their vocabulary is more beneficial.

2.2. The Effectiveness of Technology in Learning English

A study by Alemi and Lari (2021) find out about the effectiveness of using technology in learning English. However, few studies have shown the effectiveness of technology in all English skills; Speaking, listening, reading, and writing skills. The goal of using technology in learning English brings a strong potential to enhance language skills for learners and promote the process of learning English quickly.

2.3 Investigation towards the Extent to which Kind of Reading Comprehension is more Preferable

A study by Julie Coiro (2021) suggests that offline reading comprehension is much more important than online reading comprehension. The researchers found that people with better reading comprehension were able to read more quickly and easily. Students who earned a 0 on one or both of the online reading comprehension scores were unable to complete any of the assignments effectively.

2.4 Preference towards Offline Reading Comprehension

According to Sharma et al. (2022), our generation has access to a magnificent resource that has never been available before. On the other hand, the ideal learning method is utilized by former scientists, teachers, writers, and academics who carefully absorbed the complete material of textbooks and spent enough time reading knowledge that it became ingrained in their nerves. Whatever the source, the key to learning and gaining knowledge is to make the content easier to understand for better learning, and that includes tangible educational materials visible to the eyes and can be perceived in the sense of touch.

2.5 Problematizing Online Reading Comprehension

According to Coiro (2021), it has been proved that students prefer offline reading comprehension to online reading comprehension in her study "Predicting Reading Comprehension on the Internet: Contributions of Offline Reading Skills, Online Reading Skills, and Prior Knowledge." This is a topical and relevant problem that needs to be investigated because we are moving towards a more technological learning environment, and if students' online reading comprehension is inadequate, it could lead to future statistics of poor online reading comprehension among students.

2.6 Internet Literacy doesn't affect Vocabulary Level

According to the findings of a study conducted by Weganofa & Lutviana (2022), there is no link between students' internet literacy and their vocabulary level. Other elements, it might be assumed, have an impact on students' vocabulary levels. In the same sphere, vocabulary mastery is critical because it encompasses all words that kids must understand in order to have access to background knowledge, express ideas, communicate, and learn new things. When a student speaks in an ungrammatical manner, the interlocutor may attempt to deduce the intended meanings. However, if he does not have a sufficient 'vocabulary reservoir' in his memory, he will find it difficult to retrieve any notion in his head that has to be expressed.

2.7 Relationship between Vocabulary Size and Reading Comprehension

According to Milton and Hopkins (2021), learners would need a vocabulary of roughly 4,500–5000-word families to deal with the greatest degree of difficulty (C2). However, Hu and Nation (2020) found that learners need to know between 8,000 and 9,000 words to be able to read novels and newspapers. Reading graded texts, which are intended specifically for language learners, necessitates a smaller vocabulary size. According to the findings of a study conducted by Moghadam (2021), the depth and breadth of vocabulary knowledge are positively associated, meaning that learners with a high vocabulary size also had a deeper understanding of the words. Martin-Chang and Gould, on the other hand, discovered a robust link between vocabulary and reading comprehension. Vocabulary knowledge is essential for reading comprehension because it acts in the same way that background knowledge does.

2.8 Relationship between Internet Literacy, Vocabulary Level, and Reading Comprehension

Walker and White (2020) opined that a generation born within the digital era is technologically inclined to use such aspects. This inclination could develop into the capacity to use the internet, referred to as internet literacy. This assertion is consistent with Alemi and Lari's (2020) research findings. It is concluded that the kids' reading abilities are improving regardless of the vocabulary learning media they utilize, whether SMS or traditional written vocabulary. However, the use of the internet in English instruction has been reported in some research that students can increase their vocabulary size by using digital technology to learn English. According to Abidin et al. (2021), using an electronic dictionary to help pupils expand their vocabulary is more beneficial. As an educational priority, reading comprehension has been a recent topic for development in methodological aspects to motivate the capacity of students' comprehension of texts and learning materials provided by the educational institution. Contrasting research findings have led to the idea that there is a demographical effect on the establishment of results.

2.9 Learning Strategies for Reading Comprehension

According to Curie (2020), research suggests that most learners employ a variety of strategies, each of which contributes differently to their performance. Her research has offered more evidence for the idea that learners should be given a wide range of strategies to choose from, whether offline or online, rather than being limited to the strategies that are assumed to work for everyone without taking into account individual differences.

2.10 Use of English Vocabulary Learning Strategies with Technology-Enhanced Language Learning Tools

Technology has become an integral part of language education in general and English language learning in specific. Accordingly, the use of technology-enhanced language learning (TELL) tools in English language learning has become common as they can improve knowledge retention and increase engagement. Ghalebi et al. (2020) believed that learners could gain a large amount of vocabulary through vocabulary learning strategies.

2.11 Technology in English Education in Remote Mountainous Areas

The study focuses on the teachers' flexibility in employing technology in their teaching amid

the limited conditions of their areas. It finds out that teachers there tend to apply technology in after-class activities instead of in-class ones and make use of offline applications on smartphones to boost language teaching. It reaffirms the feasibility of technology-based learning even in less advantageous regions.

2.12 Research Questions

The study's main objective is to determine and correlate the Extent of students' internet literacy and vocabulary level among Parasan National High School Senior High School students on how it implicates reading comprehension.

Specifically, the research aims to answer the following queries:

- a) What is the level of their internet literacy?
- b) What is the Extent of the respondents' vocabulary level?
- c) Is there a significant relationship between internet literacy and the Extent of vocabulary level among Senior High School students?
- d) What is/are the implication/s of the findings in item no. 3 to the reading comprehension of students?

Null Hypothesis

There is a very low significant link between the two variables; internet literacy and vocabulary level - towards the students reading comprehension.-

3. Methods

3.1 Pedagogical Setting & Participants

The study was conducted in Parasan National High School, which is located within the locality of Molave, Zamboanga del Sur. Due to a meager number of studies on the given context, the rural demography was chosen in order to give significance to the investigation of the case of the study. The rural demography of the said locale has close to no access to an internet connection, not limited to the institution, which has affected students' online reading comprehension in terms of meaning acquisition of vocabulary words. Since the effect of Covid19 prohibits face-to-face teaching due to safe protocol mandates, students are not allowed yet to go to campus. 83 Senior High School students of Parasan National High School participated in the conduct of research. The participants are composed of 46 females and 37 males. The participants were chosen in order to assess their Vocabulary Level and Reading Comprehension before taking any entrance admission test for the collegiate level.

3.4 Design of the Study

This study is quantitative-descriptive in nature since the questions posed will be answered by numerical data. Specifically, this investigation will utilize a correlation approach which is a type of non-experimental design. Tan (2020) defines a correlation approach as a quantitative method of research in which you have two or more quantitative variables from the same group of participants, and you are trying to determine if there is a relationship between the two

variables. A correlation approach was used to determine if there was a significant relationship between internet literacy and vocabulary level with its implication for reading comprehension.

3.5 Data collection & analysis

The information was gathered through a survey questionnaire, which was preceded by a letter of approval from the research adviser and the school administrator. With the new normal and new manner of teaching that forbids students from entering the classroom, a copy of the survey was distributed by inserting it into students' modules. Consents from parents are also offered for ethical evaluation. The findings were tallied and calculated after the survey questionnaire and test were completed. The information gathered was used to conduct analysis and interpretation. The researchers will not specify the names of the participants for the purpose of confidentiality.

The researchers used simple random sampling to determine the students that were included as respondents in the study. The sample items were drawn at random. In calculating the sample size, the researcher used Slovin's formula, where n was the sample size, N was the population size, and "e" was the allowable or the margin of error. Also, the researcher used the 8% margin error to get the sample. To choose the final 178 samples, simple random sampling was applied to give all elements a chance to be included in the sample. All students during the sampling were equally given a chance. Then, the random students comprised the respondents. The researchers used simple random sampling. They list down all the names of Grade 11 and 12 students of Parasan National High School. They used a fishbowl technique in drawing the names of students randomly.

Students' test responses will be scaled based on their internet literacy and vocabulary levels, with the goal of enhancing students' reading comprehension. The survey was completed on a 4-point Likert Scale by the respondents. The researchers will offer a data summary backed up by findings from peer-reviewed journals. The amount and distribution of the variables will be determined using the Mean and Standard Deviation. The relationship between the two variables will be determined using Pearson's r Correlation Coefficient (IV and DV). Mean, Standard Deviation, and Pearson r are needed to answer the research questions queries. The information was processed correctly and analyzed. A 5-item survey was used to determine the students' internet literacy. A Vocabulary Level Test adapted from Meara, 1994, 1996 as the nearest thing to a standardized test was used in the study to assess the vocabulary level of students. The questions largely tested the student's ability to seek the desired meaning of a vocabulary term.

4. Results/Findings and discussion

This section presents the interpretation and discussion of the analysis results derived from the investigation.

Table 1.

Respondents' Internet Literacy Descriptive Statistics

No. Respondents	Mean	SD	Interpretation
81	3.26	0.76	Very High

According to Table 1, the participants generally had very high internet literacy, as shown by the high mean and low standard deviation. This finding alludes to the idea that the level of the students' internet literacy is almost the same. The participants mostly strongly agreed that (Q1) usually they search for unfamiliar words on Google – an online search engine to search for someone or something. – Also, they mostly agreed that (Q2) searching unfamiliar words in Merriam Webster and Oxford Dictionary – offline applications to look up any word in the dictionary anytime, anywhere. – These findings showed the students' tendency to be permissive in using online and offline searching tools to help them understand the meaning of a difficult or vocabulary word. The use of the internet in English instruction, particularly vocabulary, has been reported in some research, indicating that millennial students can increase their vocabulary size by using digital technology. According to Abidin et al. (2021), using an electronic dictionary to help pupils expand their vocabulary is more beneficial. However, it's not always the case. This finding alludes to the relevance that internet connection has the potential capacity to increase the student's vocabulary level. These could give insight into the participants' internet literacy, considering that vocabulary level is a determinant of a successful understanding of a text.

Table 2.

Participants' Vocabulary Level Descriptive Statistics

No. Respondents	Mean	SD	Interpretation
81	12.66	3.10	High

As shown in Table 2, the participants' vocabulary level was high, as shown by the high mean and high standard deviation. The finding alludes to the idea that although the students' vocabulary level was high, it doesn't mean that all students have the same vocabulary level. The writing activity was used to measure the vocabulary level inserted from the self-learning module. It was also shown that students have good vocabulary levels because they mostly got good scores. It was apparent that most students can choose correct answers upon reading and answering the sentences stated to hint at the vocabulary word. This result validates Hu and Nation (2020), who have found that learners need to know between 8,000 and 9,000 words to be able to read novels and newspapers. Reading graded texts, which are intended specifically for language learners, necessitates a smaller vocabulary size. This means that just because most of the participants' got good scores on the test, it doesn't mean that they have higher vocabulary levels. However, it is rational to state that the participants' have a good vocabulary level based on the assessment that was given to them.

Table 3.

Correlation between Parental Support and Reading Motivation

Pearson's r	N	Correlation Coefficient	Sig. (2-tailed)
Parental Support Reading Motivation	83	.226	.040

*Correlation is significant at the 0.01 level (2-tailed).

The data presented in Table 3 shows a low correlation between the students' internet literacy and their vocabulary level. Therefore, the null hypothesis was accepted. The data shows that although the participants have a very high internet literacy and high vocabulary level, it was established that students' vocabulary level was considerably good but not limited to internet literacy but due to other factors outside the boundary of digital learning. According to Walker and White (2020), a generation that has grown up surrounded by computers is more likely to use digital gadgets than previous generations. The capacity to use the internet is referred to as internet literacy. Walker and White (2020) warn, however, that this approach may lead to the false assumption that all young people are interested in, motivated by, and enthusiastic about digital technology. This assertion is consistent with Alemi and Lari's (2021) research findings. It is concluded that the kids' reading abilities are improving regardless of the vocabulary learning media they utilize, whether SMS or traditional written vocabulary.

5. Conclusion

Based on the findings of the study, the level of participants' internet literacy is Very High, with a mean of 3.26 and 0.76 standard deviations. The Extent of the participants' vocabulary level is High, with a mean of 12.66 and 3.10 standard deviation. The statistical analysis suggested a low correlation between the students' internet literacy and the Extent of their vocabulary level with $r = 0.226$ and 0.04 p-value at a 0.04 significance level. This research aimed to establish a relationship between internet literacy and vocabulary level. The goal of the study was to understand the association between internet literacy and the vocabulary level of the students in the alternative delivery mode on how it implicates their reading comprehension. This study filled the gap in research and the problems in Parasan National High School, Senior High students. It provided explanations to the queries of rationale on how it creates implication to the main issue – reading comprehension. – Based on the findings, it can be concluded that vocabulary level development shouldn't be limited to the idea of internet literacy for ideal reading comprehension, even if we are advancing towards more flexible learning with the use of digital aspects. This is relevant according to the findings of a study conducted by Moghadam (2021). The depth and breadth of vocabulary knowledge are positively associated, meaning that learners with a high vocabulary size also had a deeper understanding of the words in the context of reading comprehensively. For this reason, there should be an inference toward the findings of Hurwitz & Schmitt (2020), who proved that there are different strategies that learners do for

successful learning, and it contributes differently to learners' success, specifically in reading comprehension.

The limitation of this study is that the new typical setting has hampered the study's approach. The distribution and retrieval of the modules were significantly delayed due to various lockdowns enacted within the school. It also reduced the amount of time the researcher had to interact with the participants. Another issue was that the data was collected using a non-random sample. The participants were given a survey questionnaire and a consent form, and 83 students willingly completed and returned the survey, with the information being used in the study. A non-random sample could have lacked representativeness, compromising the generalizability of the findings. On the other hand, the results demonstrated that the data is reliable and that the conclusions may be applied generally. Nonetheless, the study's findings must be discussed in terms of this limitation.

Based on the findings of the study, practitioners should consider the following recommendations: contrasting effect on the findings of Coiro (2021), who stated the extent to which new reading comprehension abilities may be required as teenagers read for information on the internet. However, their research is in contrast with the findings of Walker and White (2020), who warned that this approach might lead to the false assumption that all young people are interested in, motivated by, and enthusiastic about digital technology. Also, there should be an integration of different strategies in reading comprehension aside from online learning so as to empathize with the current problems of the locale, such as limited internet devices, limited signal, and limited internet connection. It is highly recommended to conduct profiling of learners in vocabulary level development whether they are passive or active in vocabulary level development. This will serve as a guide to justify the Vocabulary Level Descriptive Statistics interpretation. Before that, there is a need to utilize the standardized test and integrate it into a reading comprehension evaluation to reinforce students' learning.

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