



The Correlation Between English Study Program Students' Habits in Reading Digital English Comics by Using Webtoon Application and Their Vocabulary Mastery

Adhisty Shenia Auliandri Putri¹ Supriusman² Novitri³

English Study Program, Faculty of Teacher Training and Education, Universitas Riau,
Pekanbaru City, Riau Province, Indonesia^{1,2,3}

Email: adhistysheniaa@gmail.com¹ supriusman@lecturer.unri.ac.id²
novitri@lecturer.unri.ac.id³

Abstract

This research investigates the correlation between English study program students' habits in reading digital English comics by using Webtoon application and their vocabulary mastery. The growing popularity of digital comic platforms like Webtoon and their increasing use by students for both leisure and language exposure provided the context for this research. The study was conducted at the English study program of Universitas Riau. Data were collected through a questionnaire on reading digital English comics habits and a vocabulary mastery test, then analyzed using Spearman's Rho correlation coefficient in IBM SPSS 25. The descriptive analysis revealed that the mean score was 3.39 for students' reading habits and 0.80 for their vocabulary mastery. The statistical analysis yielded a Spearman's Rho correlation coefficient of -0.130 and a p-value of 0.492, which is greater than the 0.05 significance level. Therefore, the null hypothesis was accepted. This led to the conclusion that there is no statistically significant correlation between the English study program students' habits in reading digital English comics by using Webtoon application and their vocabulary mastery.

Keywords: Correlation, Habits, Comics, Webtoon Application, Vocabulary, Vocabulary Mastery



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INTRODUCTION

English is widely considered an important language in today's global world. In Indonesia, it has a significant role as a foreign language taught systematically from primary school to higher education. Mastering English is often considered a key factor in increasing success in personal and professional development. For this proficiency, vocabulary mastery plays a vital role, as learners with broader vocabulary show superior performance across all language skills (Schmitt, 2010). With technological advances, digital platforms like Webtoon make it easier for people to access English content anytime, anywhere. Humans tend to be attracted to things that can be seen directly because the brain responds more quickly to visual stimuli (Hutmacher, 2021). Webtoon, which combines the words 'web' and 'cartoon,' has become the most popular digital comics platform in Indonesia with over 6 million active users (Utami, 2022). The theoretical foundation of this study is rooted in the nature of habits and vocabulary mastery. Habit is a cognitive process in which cues from a given context automatically prompt action through consistent repetition (Gardner, 2024). According to Volpp and Loewenstein (2020), habits enable a person to act more efficiently by reducing the need to make decisions constantly. In this study, habit strength is measured using three indicators: frequency, automaticity, and identity (Verplanken & Orbell, 2003). These habits are applied to digital comics, a story medium that combines images, panels, and speech balloons (Ikuta et al., 2023). Furthermore, vocabulary mastery refers to the ability to recognize, recall, and understand the meanings of various parts of speech, namely: nouns, verbs, adjectives, adverbs, pronouns, prepositions, conjunctions, interjections, and determiners (Basri, 2024; Nordquist, 2024; Yule, 2022). Several researchers have explored this potential in the context of language learning. For instance, Efendi (2021) found that

Webtoon helps learners improve vocabulary by making learning more engaging. Similarly, Maharani (2021) highlighted that Webtoon comic strips significantly boost vocabulary and motivation. While these findings are promising, they focus primarily on digital comics as pedagogical interventions and do not address the natural habit of reading in non-instructional contexts. To confirm this trend at Riau University, a preliminary screening was conducted among third-year English Study Program students. The results showed that a significant number of students do not just read Webtoons occasionally, but have integrated them into their daily lives as a consistent, self-initiated habit. Despite Webtoon's effectiveness in formal educational settings, there is limited evidence of the natural correlation between the voluntary habit of reading digital English comics and formal vocabulary mastery. This study addresses this oversight by exploring how informal linguistic input from digital platforms influences language development. By focusing on habit as a psychological construct—measured by frequency, automaticity, and identity—rather than just a classroom learning tool, this research offers a unique perspective on modern language acquisition. Understanding this relationship provides further insight into whether digital reading habits directly contribute to academic proficiency. Given the importance of vocabulary and the need to understand these digital behaviors, the objective of this research is to determine whether there is a significant correlation between the English Study Program students' habits in reading digital English comics by using Webtoon application and their vocabulary mastery.

RESEARCH METHODS

This research applies a quantitative method with a correlational approach to investigate the relationship between students' habits in reading digital English comics by using Webtoon application and their vocabulary mastery. Quantitative research provides a systematic, objective way to study phenomena using numerical data (Sugiyono, 2021). By using a correlational design, the study aimed to determine the strength and direction of the relationship between the independent variable—reading habits—and the dependent variable—vocabulary mastery—without direct manipulation. The study was conducted at the English Study Program, Universitas Riau, Pekanbaru, between November 20 and November 28, 2025. The study population included 115 third-year students of the 2025-2026 academic years. From this group, 30 participants were selected using a purposive sampling technique based on specific criteria. These students were chosen through a preliminary screening to ensure they possessed a genuine reading habit, characterized by high behavioral frequency, automaticity, and a strong sense of self-identity as regular readers. This targeted selection followed the Self-Report Habit Index (SRHI) framework, ensuring that the respondents were appropriate candidates for studying habitual digital reading.

Data were collected through two primary instruments: a questionnaire and a vocabulary mastery test. The questionnaire was adapted from the SRHI (Verplanken & Orbell, 2003) and consisted of 20 items using a 5-point Likert scale from "Very Often" (5) to "Never" (1). To measure vocabulary mastery, a test consisting of 30 multiple-choice questions was developed, covering nine lexical categories such as nouns, verbs, and adjectives at the CEFR B2-C1 levels (Yule, 2022). Before the main data collection, a pilot study was conducted with 20 students from the same population who did not participate in the main study. Statistical analysis using SPSS confirmed that all items were valid ($p < 0.05$) and highly reliable, with Cronbach's Alpha values of 0.858 for the questionnaire and 0.916 for the test, indicating strong internal consistency. The data analysis was conducted using both descriptive and inferential statistics in SPSS. Questionnaire results were converted into numerical scores and classified into levels from "Very Low" to "Very High" (Hadiyanto, 2019). Similarly, vocabulary test scores were calculated and categorized into proficiency levels ranging from "Very Poor" to "Excellent"

(Ramli & Rivaldin, 2021). To test the hypothesis, the Pearson Correlation Coefficient was initially selected; however, a contingency plan was set to use Spearman's Rho if normality assumptions were not met. The relationship between the variables was interpreted using correlation levels suggested by Sugiyono (2021), with a significance threshold of 0.05 to determine the validity of the findings.

RESEARCH RESULTS AND DISCUSSION

This research was carried out at the English Study Program, Universitas Riau. The study tested a null hypothesis (H_0) stating that there is no significant correlation between English study program students' habits in reading digital English comics by using Webtoon application and their vocabulary mastery. The findings are categorized into descriptive statistics for reading habits and vocabulary mastery scores, and into the inferential statistical analysis used to test this hypothesis.

Table 1. Descriptive Statistics of Students' Habits

Descriptive Statistics		
N	Valid	30
	Missing	0
Range		1.10
Minimum		2.90
Maximum		4.00
Mean		3.39
Std. Deviation		0.37884

Table 1 presents the descriptive statistics for English study program students' habits in reading digital English comics by using Webtoon application. The data range from 1.10 to 4.00, with a minimum score of 2.90 and a maximum score of 4.00. The mean score was 3.39, and the standard deviation was 0.37884. Based on Hadiyanto's (2019) classification, the students' overall habit is categorized as *medium* level.

Table 2. Descriptive Statistics of Vocabulary Mastery

Descriptive Statistics		
N	Valid	30
	Missing	0
Range		0.60
Minimum		0.40
Maximum		1.00
Mean		0.80
Std. Deviation		0.164

Table 2 presents the descriptive statistics for students' vocabulary mastery. The scores ranged from 0.40 to 1.00, yielding a difference of 0.60. The mean score was 0.80, with a standard deviation of 0.164. Based on the classification by Ramli & Rivaldin (2021), the overall mean of English study program students' vocabulary mastery test scores was categorized as good level.

Table 3. Normality Test (Shapiro-Wilk)

Test of Normality						
	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Questionnaire	0.182	30	0.013	0.863	30	0.001
Vocabulary Test	0.296	30	0.000	0.840	30	0.000

The normality of the data distribution was tested using the Shapiro-Wilk method. As shown in Table 3, the significance value for the questionnaire is 0.001, and for the vocabulary test is 0.000. Since both p-values are below 0.05, the data are not normally distributed, so a nonparametric correlation test is warranted.

Table 4. Spearman's Rho Correlation Analysis

Correlations				
			Questionnaire	Vocabulary Test
Spearman's Rho	Questionnaire	Correlation Coefficient	1.000	-0,130
		Sig. (2-tailed)	-	0.492
		N	30	30
	Vocabulary Test	Correlation Coefficient	-0.130	1.000
		Sig. (2-tailed)	0.492	-
		N	30	30

Table 4 presents the results of the correlation analysis. The Spearman's Rho correlation coefficient is -0.130 with a significance value (p-value) of 0.492. According to Sugiyono's (2021) interpretation levels, the coefficient indicates a very low relationship between the variables. Additionally, the negative sign of the coefficient signifies a negative relationship direction (Fenton & Neil, 2012). Because the obtained p-value (0.492) is greater than the 0.05 significance threshold, the null hypothesis (H_0) is accepted. This indicates that there is no statistically significant correlation between English study program students' habits in reading digital English comics by using Webtoon application and their vocabulary mastery.

Discussion

The findings of this study reveal that although students have integrated reading English Webtoons into their daily lives, this habit does not significantly correlate with their vocabulary mastery ($r = -0.130$, $p = 0.492$). The acceptance of the null hypothesis suggests that a frequent digital reading habit does not automatically guarantee high vocabulary scores. This result challenges the reading volume theory proposed by Cunningham and Stanovich (1998). It indicates that the specific format of the material is just as critical as the frequency of the act. This lack of correlation is primarily due to the lower linguistic richness of digital comics compared to traditional texts. While Schmitt (2010) argues that vocabulary growth requires exposure to diverse and challenging contexts, Webtoon prioritizes rapid comprehension through simple dialogue and direct visual stimuli. Because the brain responds more quickly to illustrations, students often follow the narrative through visual cues rather than processing complex words. This suggests that the platform's visual-heavy nature may actually reduce the cognitive effort required for deep lexical acquisition. The novelty of this research lies in its focus on Webtoon as a voluntary habit rather than a pedagogical intervention. While previous researchers such as Efendi (2021) and Maharani (2021) successfully used comics as classroom tools, these results show that reading for entertainment has a different impact on language development. This indicates that while digital comics are excellent for motivation, they may be insufficient as a standalone source for advanced vocabulary mastery. As for the type of correlation, the negative sign of the coefficient (-0.130) indicates a negative relationship, as Fenton and Neil (2012) suggest. While this implies that lower reading habits are associated with slightly higher vocabulary mastery, this relationship is not statistically significant and should be interpreted as a chance occurrence. This result highlights that vocabulary acquisition is a multifaceted process influenced by many factors beyond digital reading habits.



CONCLUSION

Based on the statistical analysis, this study concludes that there is no significant correlation between third-year students at Universitas Riau's digital English comic reading habits and their vocabulary mastery. The acceptance of the null hypothesis, supported by a correlation coefficient of -0.130 and a p-value of 0.492, demonstrates that a student's engagement with digital comics is not a reliable predictor of their vocabulary proficiency. These findings suggest that the informal and conversational nature of the language used in digital comics may not align with the academic vocabulary requirements assessed in mastery tests. The heavy reliance on visual cues within the Webtoon platform likely limits its impact on formal linguistic development compared to traditional prose. However, this study was limited by a relatively small sample size and a specific academic context, which may affect the generalizability of the results. Future researchers are encouraged to explore larger populations, different comic genres, or the impact of digital comics on other language skills, such as reading comprehension and slang acquisition. The researcher expresses gratitude to Universitas Riau for providing essential academic resources and an environment conducive to this research. Special thanks are given to the participants who generously contributed their time and data to this study.

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