

## **The Utilization of Digital Comics to Enrich Students' Vocabulary Knowledge**

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### **ABSTRACT**

This study aims to explore the utilization of digital comics in improving students' vocabulary acquisition in English Education, Universitas Negeri Semarang. The background of this study is based on the need for a more contextual and engaging vocabulary learning method compared to traditional approaches such as word memorization. Using a descriptive qualitative approach, through semi-structured interviews and open-ended questionnaires. The results showed that digital comics are an interesting and fun medium, supporting vocabulary learning through narrative context, visualization, and increased learning independence. The conclusion of this study emphasizes the need for instructional support to optimize the effectiveness of using digital comics. The contribution of this study lies in the utilization of interactive visual media as a bridge between conventional vocabulary learning methods and modern technology-based learning approaches.

**Keywords:** digital comic, language learning, vocabulary acquisition, digital media in education

### **INTRODUCTION**

Vocabulary knowledge is often recognized as an important component of reading comprehension, academic achievement, and effective communication in various educational settings. According to multiple studies, vocabulary

proficiency strongly correlates with improved reading comprehension skills. Emphasized the positive relationship between vocabulary acquisition and reading comprehension, with students with a lot of vocabulary knowledge tending to understand texts in general better (Yuliastuti & Usman, 2022). A longitudinal study explained that oral vocabulary development is essential for reading comprehension, especially at more advanced stages of reading development (Cheng et al., 2025).

Basic vocabulary teaching methods, which are generally characterized by rote memorization and lists of words taken out of context, may not be effective in promoting long-term retention and learning experiences. Memorization involves repetitive learning, so such teaching methods can feel boring and ineffective, leading to a lack of understanding of words without the ability to use them in various situations (Misuari-Abdurasul, 2023). (Misuari-Abdurasul (2023) It is explained that effective vocabulary teaching requires greater engagement and contextual understanding to close the gap between vocabulary knowledge and reading comprehension. This opinion is supported by research conducted by Kim and Petscher, who argue that an integrated strategy approach can combine the vocabulary and spelling needed to improve student reading outcomes (Kim & Petscher, 2023).

Vocabulary instruction has evolved with the rise of multimedia and digital tools, including digital comics. These comics offer an engaging way to teach vocabulary by combining narrative, visuals, and context. Studies, such as those by Azizah and Hamid, highlight how comic strips can enhance vocabulary, improve reading comprehension, and promote a stronger interest in reading (Azizah & Hamid, 2022). Digital comics make learning more engaging by combining stories and visuals, helping students better understand and remember new vocabulary (Brainin et al., 2022). Compared to basic teaching methods, comics' dynamic and engaging nature makes it easier for students to infer meaning through context and visual stimuli. Digital comics combine narrative and visual stimuli that allow students to see words in relevant contexts, motivating them to learn new vocabulary (Scanlon & Anderson, 2020). The visuals provided by comics make it easier for

students to understand the meaning of unfamiliar words based on meaningful text (Q. Wang, 2023). Additionally, research indicates that contextual instruction helps students acquire broad and integrated vocabulary knowledge over time more effectively than memorization (Vandenberghe et al., 2021).

With growing digital access in education, educators can enhance teaching by using digital comics as entertainment and a practical learning tool. Incorporating digital comics into curricula boosts student engagement and improves vocabulary teaching (Z. Wang, 2021). This aligns with Chen and Zhang's research, which shows that varied contexts improve vocabulary understanding, especially for English learners (Chen & Zhang, 2023). Additionally, a multifaceted approach to vocabulary teaching reinforces the idea that the active use of visual narratives helps improve strong vocabulary at various skill levels (Tangsakul, 2024). Students can engage in critical thinking and understand the meaning of texts by assisting students to discover new vocabulary in rich narratives (Bengochea & Sembiente, 2024).

Furthermore, researchers have shown that students' engagement significantly influences their motivation, ultimately affecting their vocabulary learning outcomes (Webb et al., 2020). When students find material that aligns with their interests, they are more likely to have a greater desire to master new vocabulary (Subon & Unin, 2021). Innovative vocabulary teaching methods help students integrate new words. Therefore, using comics as a medium for students to enhance vocabulary also motivates students through enjoyable learning experiences (Dennis et al., 2024).

Digital comics enhance vocabulary development by providing contextual cues that aid comprehension and showcase language in action. Despite their potential, they remain underused in education. This study addresses the gap between traditional teaching and modern learning preferences by exploring how digital comics improve vocabulary mastery. Offering an engaging alternative aligned with students' digital literacy, digital comics use visual narratives and context to help learners better understand and retain new vocabulary. The problems discussed in this research could be stated as follows:

1. How is the students' perception of using digital comics to enrich vocabulary?
2. What are the challenges of using digital comics to enrich vocabulary?

## METHODS

This study used a descriptive qualitative case study approach to explore digital comics' role in vocabulary learning. Qualitative methods offered deep insights into the phenomenon, while the case study allowed flexible data collection on digital comics' use. According to Winarti and Putro, diverse data sources like interviews and audiovisual materials are vital to capturing students' real experiences with digital media in language teaching (Winarti & Putro, 2024). The case study method effectively explores digital comics in specific contexts, revealing complex social dynamics and user interactions. Bungai's research supports this approach, highlighting its value in uncovering insights within educational management (Bungai et al., 2024). This study's focus on qualitative research aligns with its goal to uncover complex digital interactions. Thirteen English Education undergraduates from Universitas Negeri Semarang participated and were selected purposively for their shared interest in comics. The group included 10 females and three males from the same class, making them ideal for exploring digital comics in vocabulary learning.

This study used open-ended questionnaires and semi-structured interviews to collect qualitative data on students' perceptions and experiences with digital comics for vocabulary learning. The questionnaire, distributed via Google Forms, included eight questions encouraging detailed, reflective responses. After analyzing these, interviews with 11 flexible questions were conducted via Zoom to deepen understanding and clarify answers. Interviews lasted 10–20 minutes, were recorded with consent, and transcribed for analysis. Data were analyzed using thematic analysis in six phases: reading, coding key phrases and patterns, grouping codes into themes, reviewing and naming themes, and presenting them with participant excerpts. This ensured a systematic exploration of

how digital comics support vocabulary acquisition.

## **RESULTS AND DISCUSSION**

### **Students' perception of using digital comics to enrich vocabulary**

#### ***Increased Engagement and Motivation***

Digital comics offer a more engaging and enjoyable way to learn vocabulary than traditional methods like memorizing word lists. Respondents emphasized that combining visuals, narratives, and diverse stories keeps their interest and motivation high. Many found comics entertaining and stimulating, with intriguing storylines that spark curiosity and encourage learning. Additionally, including slang and idioms in digital comics further motivates students by exposing them to authentic language use. The questionnaire results show that many respondents view digital comics as a fun and engaging way to learn vocabulary. They find the method less boring and more enjoyable, especially because they can choose comics they like, making learning feel stress-free. Respondents also highlighted that combining visuals, stories, and everyday language in comics makes vocabulary easier to understand and more motivating. Overall, digital comics serve as an educational tool and a source of inspiration, reducing cognitive load and creating a positive, relaxed learning experience.

#### ***Enhanced Contextual Understanding***

Digital comics provide context for new vocabulary in relevant contexts, especially through dialogue and visual narratives, helping students understand and remember the meaning of words. Students can see how vocabulary functions in conversations and storylines, providing practical examples of real-life language use. Integrating vocabulary into character dialogue makes the language feel more authentic and helps us better understand grammar and its usage. From the interviews conducted, it was found that some respondents agreed that comic dialog and visuals help students understand and remember the meaning of words, and vocabulary is naturally integrated into narrative conversations, enhancing vocabulary understanding and syntactic awareness. Visual context is also

important for comprehension. Illustrations, movements, and situational cues within the text often support unfamiliar words and show that visual elements not only serve as aesthetic elements but also help learners process information more effectively through metaphors that reinforce the meaning of words.

### ***Improved Vocabulary***

Some participants said digital comics help with long-term vocabulary retention by inserting new words into meaningful narratives. Students reported that digital comics significantly enhanced their vocabulary, particularly idioms and slang, through contextual exposure within stories. They found that learning vocabulary embedded in narratives and character interactions made it easier to understand and remember. Respondents highlighted increased word knowledge and improved contextual usage, as reflected in statements like, “I have increased my vocabulary and understood how to use those words in sentences.” Reading various comic genres also contributed to vocabulary growth, with several participants noting gradual yet noticeable improvement. This supports the idea that digital comics promote incidental vocabulary learning over time through engaging, meaningful contexts.

### ***Enjoyment and Learning Autonomy***

Digital comics support independent vocabulary learning by combining engaging content with visual and contextual cues. Five of eight interviewees said reading comics felt like a hobby rather than a task, which kept them motivated and helped them acquire slang and idioms naturally. Questionnaire responses echoed this, showing students enjoy reading English comics in their free time and often learn new words incidentally. Visual elements, such as colorful illustrations and text-image integration, aid comprehension and retention. Digital comics promote consistent, interest-based vocabulary learning in an enjoyable and low-pressure environment.

### ***Understanding Vocabulary from Comic Visuals***

Digital comics with visual elements greatly aid students’

understanding of unfamiliar foreign vocabulary. Images such as character expressions, body language, background, and actions serve as contextual cues that help participants understand the meaning of foreign and new words more accurately. Comic visuals provide an easy and direct understanding of vocabulary that might be confusing if only read in text. Some interview results indicate that comics with many visuals and expressions are very helpful for understanding the meaning of vocabulary. Several respondents stated that visuals in comics help them understand word meanings. Images show expressions, provide context, and offer clues that make it easier to guess unfamiliar vocabulary. Questionnaire results supported this, with students noting that illustrations, like in picture books, help connect words to meaning through context. Visuals and dialogue in comics make vocabulary easier to understand and remember. Overall, visuals bridge the gap between language form and meaning by providing emotional and situational context, making new vocabulary more accessible.

## **Challenges of using digital comics**

### ***Distraction from learning objectives***

Digital comics offer an engaging medium for vocabulary learning through their interactive and visually rich format, which increases student motivation. However, their entertaining nature can also distract from vocabulary acquisition. Questionnaire and interview data reveal that while students enjoy reading comics, they often focus more on the storyline and visuals than learning new words. Some reported confusion with unfamiliar vocabulary and difficulty understanding complex narratives without sufficient context or visualization. These findings highlight a tension between emotional engagement and cognitive focus, where enjoyment may reduce attention to language input.

### ***Limited Vocabulary Range***

Some respondents expressed concerns about the vocabulary used in digital comics, which is dominated by informal language, everyday expressions, and frequent use of

idioms or slang words. Although this language style can demonstrate authentic and realistic usage, some respondents considered it limited, especially compared to traditional academic texts. Respondents highlighted that informal vocabulary is not always compatible with formal vocabulary, especially for those preparing for academic writing. This creates a tension between the need for more structured vocabulary. Some respondents reported difficulty learning vocabulary from comics due to the frequent use of slang, idioms, and unfamiliar words without enough context. This made it hard to understand or translate certain expressions. They also noted that comic genres affect vocabulary difficulty. Genres like fantasy, history, or business often include rare or technical terms that are challenging to understand. While these can expand vocabulary, they are not always practical or easy to apply. These findings suggest students still need more structured support to grasp and fully use new vocabulary from comics.

### ***Language and Cultural Barriers***

Some participants reported difficulties understanding slang, idioms, and informal expressions in digital comics. These types of vocabulary are often missing from dictionaries or translation apps, leading students to search multiple websites for accurate meanings. Respondents noted that translating idioms or slang often results in different or unclear meanings, which can be confusing. While visuals and dialogue in comics offer some context, they are not always enough to fully explain unfamiliar expressions, especially for students with limited exposure to informal English.

In addition to language challenges, students also struggled with cultural references embedded in comic dialogue or settings. Idiomatic expressions and metaphors rooted in specific cultural contexts can hinder comprehension for unfamiliar learners. This shows that although comics are engaging and provide contextual clues, they may not always be effective for vocabulary learning without additional support. To make comics more beneficial, structured guidance or supplemental resources may be needed to bridge language and



cultural gaps.

## **DISCUSSION**

### **Students' perception of using digital comics**

Studies show that digital methods, like comics, boost student engagement and motivation in vocabulary learning. Unlike traditional word memorization, digital comics combine storytelling and visuals, making learning more enjoyable and effective. This study confirms that narrative and visual elements in comics sustain student interest better than conventional methods (Castillo-Cuesta & Quinonez-Beltran, 2022; Juliana, 2021). Some respondents noted that combining visuals, text, and everyday language in digital comics makes vocabulary learning more enjoyable and easier to understand than traditional methods. These findings align with Juliana, who emphasizes how engaging content creates a positive learning environment (Juliana, 2021).

Cognitive learning theories, particularly visual and narrative techniques, align with students' positive responses to the entertaining elements of digital comics. These comics not only entertain you but also help reduce cognitive load, making vocabulary acquisition a more enjoyable activity than formal tasks. This enhances emotional responses to language learning, which can improve vocabulary retention, as supported by Al-Sabbagh's findings on the impact of multimedia modalities on vocabulary acquisition (Al-Sabbagh, 2023). This clearly states that learning through comics is "not boring".

Research shows digital comics offer personalized learning by letting students choose content that matches their interests, boosting motivation and engagement. One respondent noted that selecting favorite comics makes learning fun and stress-free. This supports Milosavljevic and Reynolds' findings that learner choice and varied methods enhance vocabulary retention and comprehension (Milosavljevic & Reynolds, 2024). Other respondents said comics motivate vocabulary learning by making stories engaging and diverse, which sparks curiosity and encourages them to learn more. This aligns with Soltanabadi, who highlights how innovative teaching frameworks can enhance

vocabulary memory and retention (Soltanabadi et al., 2021). This is also in line with research conducted by Sutrisno and Azlinda, who state that digital games, similar to digital comics, increase student motivation by transforming the learning experience into a process of exploration and engagement, resulting in deeper learning outcomes (Sutrisno & Azlinda, 2023). Students engage actively with entertaining content; motivation is key to success in vocabulary learning. Digital comics, rich in informal language and cultural context, boost motivation, as respondents noted the inclusion of new slang and idioms. Gao's research supports that task-induced engagement in interactive formats like comics enhances incidental vocabulary learning through greater attention and interest (Gao et al., 2024).

Digital comics effectively enhance vocabulary understanding by providing context through dialogue and visuals. Respondents noted that seeing words used in conversations and storylines helps learners grasp and remember meanings. Integrating vocabulary into authentic character dialogue also improves understanding of grammar and practical language use. This aligns with research showing that well-structured context significantly aids vocabulary retention (Nishonova, 2024). Integrating digital comics into education enhances vocabulary mastery by combining text and visuals for an engaging learning experience. Digital comics present vocabulary in context, helping students grasp language nuances. Studies show contextual learning through comics improves retention and engagement, often outperforming traditional texts (Azizah & Hamid, 2022).

Digital comics can provide direct contextual cues that aid comprehension. The interaction between dialogue and images allows students to visualize meaning, which improves their understanding of new words and phrases. According to research by Putri, digital comics can strengthen reading interest while supporting vocabulary development, demonstrating the dual benefits derived from the visual and narrative elements inherent in comics (Putri et al., 2023). During interviews, students reported that visuals helped them understand new vocabulary. One said, "Visuals and words connect because digital comics require finding meaning

through images,” showing how comics bridge comprehension gaps. Questionnaire results showed combining dialogue and visuals offers a clear context, aiding vocabulary comprehension and retention. Respondents said visuals clarify meanings, while dialogue demonstrates word usage, with some focusing on images first to understand better and stay motivated. Choiriyah & Hidayah highlight digital comics’ role in developing metacognitive skills, as they help students assess understanding through interaction with visual narratives, enhancing vocabulary mastery (Choiriyah & Hidayah, 2023). This study found that digital comics significantly boost students’ vocabulary. The narrative context aids word understanding and retention, especially slang. Interviews highlighted visuals and dialogue as crucial for deeper vocabulary learning through active engagement with the story (Kroik, 2022; Razmeh, 2024).

Interviewees noted that comics helped enrich their vocabulary, especially idioms and slang. The recurring nature of words in comic episodes aids retention and improves understanding through repeated exposure (Bipasha, 2025; Daelman et al., 2023). Another respondent stated, *“I think it’s significant because when you read comics of different genres, it helps to learn new vocabulary and increase vocabulary.”* This evidence indicates that their vocabulary has increased significantly, emphasizing the contextual exposure from reading various genres of comics, thereby reinforcing the idea that having diverse comic-reading experiences can expand one’s linguistic repertoire (Li, 2023).

Interestingly, participants reported gradual but consistent vocabulary growth, reflecting how vocabulary often develops slowly through immersive language experiences (Li, 2023). Participants noted that digital comics supported gradual vocabulary growth, helping them understand familiar terms through context and engage in conscious language learning (“Language Acquisition in Early Childhood,” 2021). Additionally, respondents indicated that digital comics enhance vocabulary and support practical understanding and word usage. These findings suggest combining narrative elements with vocabulary instruction can make language learning more engaging and effective (Schönström, 2021). One

respondent noted that digital comics expanded their vocabulary and helped them understand how to use the words in context. This is supported by Jwair's research, which states that engaging story formats result in more effective vocabulary mastery (Jwair, 2023). This also aligns with the positive impact of technology on vocabulary learning, which shows that innovative learning formats can enhance students' vocabulary repertoire (Hasan et al., 2022).

Another respondent noted significant vocabulary improvement over time, though gradual and not immediately noticeable. This reflects how consistent exposure through comics supports steady, long-term language development (Alamer, 2021). These gradual improvements consistently demonstrate the long-term benefits of sustained exposure to new vocabulary through engaging resources (Xodabande et al., 2022). A respondent noted that it "leaves an interesting impression," highlighting how the contextual nuances presented through comics can lead to a deeper understanding of new words and their usage (D. P. Sari et al., 2021).

Digital comics are creative educational tools that promote independent learning and boost student motivation. Respondents shared that reading comics feels like a hobby, making vocabulary learning more enjoyable and effortless. This shows that digital comics support personalized learning by allowing students to choose content that matches their interests, turning vocabulary acquisition into a fun, engaging experience rather than a formal task. This aligns with previous research showing that comics can engage students more effectively than traditional texts, especially among those already enthusiastic about the medium (Vera et al., 2021; Wiseman et al., 2021).

The visual appeal of comics, such as vibrant illustrations and the narrative style inherent in comics, makes learning enjoyable. Students often mention that colorful graphics help them understand complex vocabulary in relevant contexts. One respondent once said, *"The stories and images in comics help me understand the context of words more easily"* (Golding & Verrier, 2020). Empirical studies show that the combination of text and visuals significantly improves comprehension and retention among students (Sabri et al., 2024; Vera et al., 2021). Comics

provide entertainment and frame vocabulary in real-world contexts, reinforcing memory through frequent exposure (Nishonova, 2024). Dual-purpose functionality demonstrates that comics can engage students while enhancing their cognitive abilities. Digital comics as an educational medium are highly effective in the context of self-directed learning. Studies show that the digital comic format improves accessibility and student interest (İlhan et al., 2021; Ramadhani, 2022).

Comics have emerged as an effective tool to help students learn English among various student groups, as digital literacy integrates with conventional learning. To ensure that students have enjoyable experiences and learning, the engagement it fosters fulfills two mandates: teaching and interest (Herd et al., 2020). Comics promote a unique literacy style that blends visuals and narrative, helping students understand and retain vocabulary through context. One respondent noted that combining images and text made it easier to grasp the storyline, supporting deeper vocabulary learning (Sangur & Makatita, 2021; Sani et al., 2022; Wayne et al., 2024). The need for learners to connect language with visual narratives fosters layered vocabulary understanding, echoing findings from the educational framework Golding and Verrier discussed, highlighting the important role of visual literacy in educational comics (Golding & Verrier, 2020).

Digital comics are increasingly being used in foreign language education. This demonstrates the potential of visual elements in improving vocabulary acquisition. Studies show that visual representations such as characters, language, and body language are very important in helping foreign language learners understand new vocabulary. The results show that visuals are very effective in simplifying complex lexical elements. This finding also emphasizes the importance of multimodal learning, which involves various sensory and cognitive pathways. For example, in English as a Foreign Language (EFL) learning, visual aids are considered important in the vocabulary learning process because they provide situations that bridge the gap between language form and meaning, improving retention and understanding (Chung, 2023; Zhao, 2023).

Engaging visuals in digital comics support vocabulary

comprehension by illustrating word meanings and nuances. The interaction of images, expressions, and context helps students infer unfamiliar vocabulary. This research highlights how visual and textual cues enhance understanding, promoting cognitive flexibility in language learning (Hill & Wagovich, 2020). This is evidenced by interview and questionnaire results stating, *"Yes, because in the comic there are pictures that show expressions," "The visuals can be related because digital comics need to find a certain meaning by viewing a visual," "It's true, images in the comics can help me understand the meaning of the words in the comics."*

Teachers who use visual aids report that students are more engaged and motivated in class. As confirmed by research, higher engagement increases cognitive and emotional investment during the learning process, leading to better language outcomes (Aydın & Tekin, 2023; Yang, 2023). A respondent noted that visual aids help them understand vocabulary more easily and reduce the need for translation tools. This aligns with other feedback showing that visuals provide direct context, supporting vocabulary learning through semantic mapping (Fakhr et al., 2020; Hulme & Rodd, 2021).

Additionally, students indicated that viewing digital comics with visuals enhanced their understanding of dialogue, leading to a deeper comprehension of the narrative. This supports multimodal learning theory, which advocates integrating visual aids to improve knowledge and retention of complex concepts (Reumont & Budke, 2021). One respondent stated, *"The visuals in digital comics explain the dialogue in the comics so that I can understand the meaning of the words used in the comic story."* The correlation between visuals and vocabulary acquisition emphasizes the role of images in language learning, making unfamiliar terms more accessible by grounding them in relevant contexts (Sastrawan et al., 2021).

Furthermore, students' ability to seek meaning when faced with difficulties reflects a proactive approach to their language learning, highlighting the integration of intrinsic motivation and strategic resources (Kainta & Rombot, 2020). Interacting with digital comics creates a blend of visual and textual stimuli, stimulating motivation and enjoyment among learners (Fitri et al., 2022; Septialti et al., 2022). Despite their

benefits, digital comics can cause distractions. Some students focus more on the storyline and visuals than on the vocabulary, reducing learning effectiveness as entertainment may overshadow educational goals (Apostolou & Linardatos, 2023; Utomo et al., 2020). A survey revealed that unfamiliar vocabulary in digital comics can often be confusing. As storylines grew more complex, students needed more cognitive effort to follow the plot, which sometimes reduced their focus on vocabulary learning (Candrayani & Sujana, 2023; Nugroho et al., 2024). Additionally, when dense visual elements obscure important vocabulary, comprehension becomes more ambiguous, prompting students to seek more information about dialogue and character meanings (Damopolii et al., 2021; Harizon et al., 2023).

### **Challenges of using digital comics**

Digital comics can distract students from language learning goals, posing challenges for vocabulary acquisition. While engaging, their entertaining content may disrupt learning outcomes by diverting attention. Research, including Abidin's, highlights how digital distractions can reduce learning effectiveness, stressing the need to manage them to improve engagement and productivity, especially for EFL learners (Abidin, 2023). Digital comics increase engagement through storytelling and visuals, but this "educational entertainment" can distract from language goals.

Students may focus more on visuals and stories than on practicing new vocabulary. Some respondents said they enjoyed reading comics as a hobby and didn't feel like they were studying, yet their vocabulary improved naturally. Others noted that colorful, engaging comics make learning feel like entertainment rather than work. These findings align with Hidayah's research, which found that students primarily view digital comics as entertainment, sometimes leading to passive consumption rather than focused vocabulary learning (Hidayah et al., 2024). This perspective resonates with broader literature on the inherent tension between engagement and the rigor of education in media designed for entertainment versus those intended for instruction (Choiriyah & Hidayah, 2023).



Furthermore, inherent digital distractions are not limited to entertainment; they can contribute to complex interactions between students' enjoyment and their understanding of the subject matter. Mrazek reinforces this perspective by stating that distractions from digital media, including comics, can cause significant mind wandering, disrupting students' ability to focus on academic tasks (Mrazek et al., 2020). To distinguish between entertainment and educational benefits, a careful approach is needed. Incorporating digital comics into learning materials allows educators to leverage their appeal while maintaining the rigor of vocabulary instruction.

A key challenge of digital comics is their limited and informal vocabulary, often filled with slang and idioms that may not meet educational standards. Respondents noted that genres like fantasy use words uncommon to those found in traditional texts. Thus, while digital comics introduce new terms, they may not provide the full range needed for comprehensive language learning (Abidin, 2023). These findings align with Hidayat and Suryadi's observation that digital learning media must be updated to ensure they promote broad vocabulary mastery while meeting various learning outcomes (Hidayat & Suryadi, 2023). Digital comics also have a limited vocabulary.

Many respondents stated that the language used is often informal and filled with idiomatic expressions and slang, which may not help expand one's vocabulary. According to Sari, the context and genre of comics can significantly influence the vocabulary presented (P. K. Sari et al., 2022). Students, especially those focused on academic writing, often find the slang and idiomatic expressions in digital comics frustrating. While authentic, this informal language is hard to understand and unsuitable for formal education. Many respondents noted that such vocabulary makes learning difficult, with one saying, "Sometimes comics use slang English, and it can be hard to find the meaning." (Castillo-Cuesta & Quinonez-Beltran, 2022). This observation shows a significant issue when informal language deviates from the structured vocabulary typically found in academic texts.

Learning through digital comics becomes challenging due to the tension between informal and formal vocabulary.



Respondents stated that the occasional use of unfamiliar idioms and slang made it challenging to understand the comics, thereby worsening the learning experience (Castillo-Cuesta & Quinonez-Beltran, 2022). Another respondent said learning is hard when translating unfamiliar idioms, as meanings often differ from the original. This highlights the need for educational materials that balance informal and academic language with clear guidance.

Additionally, respondents stated that the lack of contextual support for idioms and slang makes them harder to understand. As indicated in the interviews, *“Sometimes, some comics use slang or idioms, but do not provide enough context to understand certain words,”* suggesting that inadequate explanatory cues can undermine the educational benefits of digital comics (Castillo-Cuesta & Quinonez-Beltran, 2022). Incorporating contextual cues and definitions into the digital comic framework can significantly reduce this issue. This will allow students to find and assimilate new vocabulary more easily. Informal genres may not adequately represent the critical academic language students need for higher education contexts. One respondent noted that genres like fantasy and business contain many unfamiliar or specialized vocabulary words. Another said that slang and specific expressions in comics often lack enough context, making them hard to understand, especially when terms are outdated or rarely used in daily conversation. Apostolou and Linardatos’ statement emphasizes the importance of creating an environment that allows students to discover various vocabulary outside of everyday use, as mastering diverse vocabulary is crucial for comprehensive language proficiency (Apostolou & Linardatos, 2023).

EFL learners often struggle with slang and idioms in digital comics due to language and cultural barriers. Interviews and questionnaires show that these informal expressions are hard to understand and rarely found in dictionaries or translation apps, forcing students to seek multiple sources. Respondents noted that idioms often don’t translate literally, complicating comprehension. While digital comics engage learners, informal language can hinder understanding and slow fluency without extra support (Kamal & Bulila, 2022; Ketabi &

Sadeghi, 2020). According to Ketabi and Sadeghi, idiomatic expressions are important carriers of culture and play a crucial role in language learning. A deeper examination of the complexity of idiomatic language reveals that minority learners often struggle with the cultural context that shapes the idiomatic expressions they encounter (Ketabi & Sadeghi, 2020). However, as demonstrated by Suryadimulya, who shows how cultural contexts shape the meaning of idioms across languages, understanding idioms requires more than just linguistic knowledge (Suryadimulya et al., 2023). Although comics are visually informative and provide context, research participants expressed frustration when encountering idiomatic phrases and stated that such barriers hindered their language acquisition (Ketabi & Sadeghi, 2020; Suryadimulya et al., 2023).

Language and cultural barriers can limit students' ability to benefit from digital comics fully. Many of them struggle with unfamiliar idioms and slang, which disrupt comprehension and hinder vocabulary learning. Respondents shared that these expressions are often missing from translation apps, forcing them to search multiple websites for accurate meanings. This highlights the difficulty of understanding informal language without additional support (Dontre, 2020). Language and cultural barriers hinder students' comprehension and vocabulary learning in digital comics. Students struggle with slang, idioms, and cultural references, often needing external translation resources. Choiriyah highlights that without sufficient cultural context, even well-designed comics may fail to convey linguistic nuances effectively (Choiriyah & Hidayah, 2023). This relates to a broader discussion of the intersection between language and culture as fundamental to providing meaningful learning experiences (Sastrawan et al., 2021). This is particularly relevant when considering the emphasis on how a lack of cultural understanding and context can exacerbate the challenges learners face in understanding new vocabulary and its use in texts. (C.-H. Wang et al., 2022)

## CONCLUSION

This study shows that digital comics are an engaging and effective tool for improving English learners' vocabulary.

By combining visual storytelling, narrative context, and informal dialogue, digital comics increase motivation, emotional engagement, and vocabulary understanding. Students find learning more enjoyable and meaningful as words appear in real-life contexts, supported by visuals that enhance comprehension and memory. The interest-based nature encourages self-directed learning, making vocabulary expansion feel natural.

However, challenges include distractions from visuals and narratives and difficulties with informal language, idioms, and cultural references, especially for EFL learners who lack background knowledge. These issues highlight the need for scaffolding, contextual support, and complementary teaching strategies when using digital comics. Digital comics can boost vocabulary retention, learner independence, and sustained interest when carefully integrated into curricula. Future research should focus on making digital comics more inclusive, culturally responsive, and pedagogically effective.

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