

# Illustrating Interests: Exploring Comic Reading Preferences Among University Students

Ericka C. Manugas<sup>1</sup>, Violie Marie M. Agulto<sup>2</sup>, Rachel S. Camilo<sup>3</sup>, Anesito L. Cutillas<sup>4</sup>, Anne Jhane R. Danque<sup>5\*</sup>, Lazie May E. Lumayao<sup>6</sup>, Gweneth O. Maaba<sup>7</sup>, Ma. Cristilina Aradillos Montanez<sup>8</sup>

<sup>1 2 3 4 5 6 7 8</sup> College of Arts and Sciences, Cebu Technological University- Argao Campus, Argao, Cebu, 6021, Philippines

\*Corresponding author; Email: [danqueanne@gmail.com](mailto:danqueanne@gmail.com)



**Received:** 19 February 2025

**Accepted:** 03 April, 2025

**Revision:** 11 March 2025

**Published:** 14 April 2025. Vol-6, Issue-2

**Cite as:** Manugas et al., (2025). Illustrating Interests: Exploring Comic Reading Preferences Among University Students. *ICRRD Journal*, 6(2), 124-141.

**Abstract:** This study examines the ways in which student's consume comics at universities and compares these preferences in traditional print and digital formats, in order to learn about what motivates their choices in terms of media format and how these forms can influence their reading experiences. Participants, who were randomly selected from the Bachelor of Arts (BAL) and Bachelor of Information Technology (BIT) programs, explained their reading. Results show a slight preference towards digital comics for their convenience whereas print comics still get some interest due to their tangible nature and their potential for artwork appreciation. Further, it also reveals the factors that affect their choice which include accessibility, reading comfort and art quality. It is concluded that as the number of people reading comics increases, publishers and educators have to make necessary adjustments to meet needs for general readership such as making comics available in educational settings, making them more accessible, while preserving their art quality. Additionally, constant effort of reaching out to readers to understand their tastes and preferences will help the industry survive.

**Keywords:** Comics consumption, print vs. digital comics, media preferences, reading motivation, student readership, accessibility, reading experience, art quality.

## INTRODUCTION

Comics have become a popular and effective way of teaching and learning in various settings. Comics improve student engagement and motivation, particularly in language learning, where they enhance retention and understanding (Brown, 2023). Comics can also make learning and teaching enjoyable so they are a win-win in many aspects. Enjoyment is a great factor in motivation for anything we do in life. If learning is fun, then students will want to learn. Fun can be a rewarding motivator for students if in the end they learn something. Comics not only foster engagement but also support diverse learning needs, making them a valuable pedagogical tool across various educational contexts (Lima et al., 2022). They help students to improve their visual literacy and to use comics as educational resources. Students also have fun making comics, as they can show their feelings, use authentic

language, and tell emotional stories. (Pange, 2022). According to Aaron Meskin, comics are “a medium that consists of static images (usually, but not necessarily, combined with text) that are arranged sequentially to convey a narrative or some other kind of semantic content”. He argues that this definition is better than other alternatives that focus on the pictorial, the narrative, or the structural aspects of comics.

The comic industry has been in a major slump for years, from their earliest beginnings in the 1930's comics were bought for a dime, read, passed around to friends and then, eventually, discarded. Philippine comics have gained popularity in the nation from the 1920s to the present, per the study by Monde (2022). The advent of digital technology has significantly transformed the world of comics, reshaping both the creative process and the delivery of content. Digital comics now encompass a variety of formats, including web-comics and digitized print comics, which reflect the evolution of digital culture and its impact on reader engagement and interactivity (Rizzi, 2023). Digital technologies facilitate easier writing and research, enabling writers to maintain continuity and access vast resources. Artists increasingly utilize digital methods for inking, coloring, and lettering, enhancing the visual richness of comics (Coghill, 2022). The integration of digital technologies has not only changed how comics are created but also how they are consumed and appreciated in contemporary society (Darovanets, 2024).

The American mainstream comic strips and comic books from the early 20th century served as some inspiration for the PH comics, often known as “komiks.” Carlo J. Caparas, Vicente Manansala, and Dr. Jose Rizal are among the legends of the “komik” genre, and Atlas Publishing is the biggest publisher in the nation. According to Joydev Maity (2022), readers are not pivoted on printed pages only; rather they are relying more on their smartphones, laptops, and computers. This shift has raised important questions about the cultural heritage and historical value of traditional comic art forms, which have long been an integral part of our shared storytelling traditions. The evolution of comic art forms has sparked significant discourse regarding their cultural heritage and historical value, particularly as they increasingly incorporate traditional art styles and narratives. In India, graphic novels are merging contemporary themes with traditional artistic expressions, thereby preserving and promoting cultural identity while addressing societal issues, such as the representation of marginalized groups (Rohila, 2023). Similarly, community heritage comics serve as a medium to engage local audiences with their history, fostering emotional investment and challenging exclusionary narratives (Chen, 2022). Projects like the Cochno Stone comic book illustrate how comics can engage younger audiences in archaeology, making complex histories accessible (Brophy & Sackett, 2019). The shift towards digital media offers new avenues for storytelling and audience engagement, enhancing the preservation of cultural heritage (Dimoulas, 2022). While the shift towards modern comic forms presents opportunities for cultural preservation, it also raises concerns about the authenticity and representation of traditional narratives, highlighting the need for a balanced approach in this evolving landscape.

The gap in the literature is the lack of empirical studies comparing the reading preferences and experiences of comic readers between traditional print and digital formats. This gap hinders the understanding of how readers perceive and engage with comics in different mediums, and how these mediums affect their cognitive and emotional responses. According to (Hinerman 2018), digital technologies offer enhanced storytelling opportunities, while (Tiemensma, Lothian 2021) argue that traditional comics provide a unique emotional experience. As technology develops and digital platforms predominate the consumption of visual narratives, this need is made even more urgent. The study of McGarry (2022) emphasizes the urgent need to investigate the coexistence of traditional

comics and digital media, highlighting the crucial understanding it provides for the challenges faced by the traditional form in the digital era. Addressing this gap would help creators, publishers, and the industry to cater to the evolving consumer preferences and ensure the growth and diversity of the comic book medium.

Furthermore, the study understood the attitudes and perceptions of university students towards the coexistence and competition of traditional and digital comics, such as their loyalty, satisfaction, preference, etc. Therefore, for university administrators and educators, the study sheds light on the diverse factors influencing students' choices in comics, exploring genre, format, and thematic inclinations. Moreover, the research provided a deeper understanding of the dynamic nature of comics' consumption, helping researchers create an equitable environment in which diverse literary preferences are acknowledged and supported at the university level.

## BACKGROUND

This study is anchored on the theory of Comics Theory by Chris Murray (2010), adapted by Rob et al. (2018), which emphasizes the role of primary sources and narrative closure in shaping graphic storytelling. It also draws on Audience Theory by Stuart Hall (1973), adapted by Wenmin et al. (2015), highlighting how audience interpretation and context influence the understanding of visual and textual content. These frameworks contribute to the broader understanding of the role of comics in contemporary culture and the factors that shape readers' preferences and engagement. Under Comics Theory, the nature of comics is examined through their visual elements, which encompass various aspects of visual arts and design. Images play a crucial role in conveying narratives and emotions, while style and forms contribute to the aesthetic appeal and readability of comics. Content, including themes and storytelling techniques, further shapes readers' interpretations and engagement. Comics, as explored through various theoretical lenses, reveal a complex interplay of visual elements, narrative techniques, and reader engagement. The fundamental elements of visual design, such as line, color, and texture, significantly contribute to the aesthetic appeal and readability of comics, enhancing their narrative impact (Kumar & Naaz, 2023). By analyzing these components, we aim to understand how different visual elements impact students' preferences for comics. Under Audience Theory, the focus shifts to the influence of media on individuals, including the effects of exposure to comics on readers' perceptions and behaviors. Media effects research examines how exposure to comics may shape attitudes, beliefs, and behaviors among university students. Stuart Hall's Audience Theory emphasizes the significant role of media in shaping individual perceptions and behaviors, particularly through exposure to comics among university students. Research indicates that media messages can influence attitudes, beliefs, and behaviors, with comics serving as a unique medium that may affect socialization and moral values in youth (Sullivan, 2012) (Maimakova et al., 2023).

The cultural studies within this framework explore the societal and cultural contexts in which comics are consumed, shedding light on the broader influences on readers' preferences. Stuart Hall's Audience Theory significantly contributes to Cultural Studies by examining how societal and cultural contexts shape the consumption of comics, revealing the broader influences on readers' preferences. Hall's work emphasizes the interplay between culture and power, suggesting that cultural artifacts, including comics, are not merely consumed but are sites of negotiation and resistance against dominant ideologies (Stuart Hall, 2020) (Scheurle, 2016). The comic-based output, the Comic Reader's Handbook, serves as the culmination of the theoretical framework, synthesizing the main findings and recommendations of the study and providing examples and illustrations of comics from different

periods. The handbook is intended to raise awareness and appreciation of comics as a cultural phenomenon and to provide guidance and best practices for preserving and accessing any form of comics. The comic reader's handbook is also designed to be accessible and engaging for a wide range of audiences, such as students, teachers, librarians, curators, and the general public. By creating a Comic Reader's Handbook informed by these theories, we aim to not only provide valuable insights into university students' comic readership preferences but also to offer practical recommendations for creators, publishers, and educators in the field of comic.

## METHODOLOGY

### Research Design

This study adopts an explanatory sequential design (Creswell, 2020) to sequentially integrate quantitative and qualitative methods in two distinct phases. The initial quantitative phase involves the distribution of questionnaires among BA LIT and BIT students to gather numerical data on their preferences for traditional and digital comic formats. Following the quantitative phase, the study progresses to the qualitative phase, incorporating focus group discussions with small groups of BA-LIT and BIT students. These discussions delve deeper into participants' experiences, attitudes, and perceptions surrounding comic reading preferences. By sequentially integrating the quantitative and qualitative methods, this explanatory sequential design (Toyon, 2021) allows for a comprehensive exploration and understanding of the complex factors influencing comic readership preferences among university students.

### Data Gathering Procedures

Two stages of data collection were carried out so that a thorough analysis could be performed. During the first phase, a survey questionnaire was used to gather quantitative data about the preferences of students for traditional and digital comics. 50 students from the Bachelor of Information Technology (BIT) program and 50 students from the Bachelor of Arts in Literature (BAL) program participated in the survey, which used a Likert scale to measure preference levels (Kusmaryono et al., 2022). According to Ho (2024), focus group discussions (FGDs) allow for dynamic interaction and offer deeper insights. In the second phase to gather qualitative data focus groups discussion with 12 students—six from BIT and six from BAL—were conducted. Their perspectives, thoughts, and experiences of the students with comic reading were examined in these discussions (Faza, 2020). After that, the thematic analysis approach by Braun and Clarke (2006) was used to identify key themes and patterns in the qualitative data. By utilizing a mixed-method approach, quantitative results and qualitative insights might be integrated to provide a more comprehensive understanding of the factors affecting students' preferences for reading comic books (Wicaksono, 2023).

The descriptive analysis specifically the mean and standard deviation (SD) were employed in determining the level of preferences among participants which comprise the quantitative part of the study. Likewise, the Braun and Clarke's framework of thematic analysis was used for qualitative data comprising of the factors influencing the respondents reading preferences as to traditional comics and digital comics. Descriptive analysis involves summarizing and presenting the collected numerical data using statistical measures such as frequencies, percentages, means, and standard deviations. Initially, the collected responses were tabulated and organized to facilitate analysis. Subsequently, descriptive

statistics were calculated to summarize the central tendencies, variability, and distributions of respondents' preferences for traditional and digital comic formats. According to Rea & Parker (2017), descriptive statistics are a fundamental tool for summarizing and presenting quantitative data. This analysis provided an overview of the prevalence and patterns of comic readership preferences among BA LIT and BIT students, allowing for comparisons between different demographic groups and identifying any notable trends or patterns.

For the qualitative data obtained from the focus group discussions, Braun and Clarke's thematic analysis was employed. Thematic analysis involves systematically identifying, analyzing, and reporting patterns or themes within qualitative data (Braun & Clarke, 2020). This approach provided a structured yet adaptable framework for analyzing the participants' experiences with printed and digital reading materials. Thematic analysis excels as a qualitative methodology that breaks things down and digs into the hidden patterns or themes in all the data collected. It allowed the researchers to understand deep experiences and enrich the narrative by dark and complex scenarios. The analysis process was organized into several distinct phases:

**Phase One: Establishing contact with the Data**, in accomplishing to completely understand the content of the data, the researchers first closely looked at the transcriptions and studied the content several times.

**Phase Two: Gathering First Codes**: They systematically coded the transcripts by dividing the data into easily accessible relevant sections corresponding to our research questions. These researchers could detect all of the key themes in the data through the use of this first coding step.

**Phase Three: Searching for Themes** After the researchers wrote the codes during the initial step, they grouped the related codes into bigger concepts and themes. They looked at the big picture and observed what patterns began to appear with what people shared about materials they read, whether those materials are physical books or digital kindles and e-readers.

**Phase Four: Reviewing Themes** The researchers dug into the themes been pinpointed and refined them as they reviewed to ensure they targeted the mark with the data they gathered. This step involved reviewing transcripts again carefully making sure all the important stuff showed up.

**Phase Five: Defining Themes** Each theme was clearly articulated, capturing its fundamental ideas and relevance to the overarching research question. They also identified some sub themes to present the different important parts of people's experiences.

**Phase Six: Writing-Up** In the final phase, the researchers synthesized their findings into a cohesive report, articulating the participants' experiences and the implications of their interactions with printed and digital reading materials. The final transcript included a discussion of how these insights enhanced their understanding of reading practices within the framework of literature education (Byrne, 2022).

## Participants

The study was conducted at Cebu Technological University - Argao Campus, located in Argao, Cebu, Philippines. The campus has a diverse student population, with approximately 5,000 students enrolled in various programs. The Bachelor of Arts in Literature (BAL) and Bachelor of Information Technology (BIT) programs were selected for this study to provide a broad range of perspectives from students with varying academic backgrounds and interests. The university setting provided an ideal environment for this research, as it allowed the researchers to capture a range of preferences influenced by academic discipline, technological proficiency, and exposure to different forms of media. The integration of both qualitative and quantitative data collections within this context enabled the

researchers to explore how university students engage with comics as a medium for both entertainment and education.

## RESULTS AND DISCUSSIONS

### *Reading Preference of The Respondents as To Traditional Comics And Digital Comics*

The tables presented below is the level of readership preferences and readership preference interval of the university students in terms of both traditional comics and digital comics, showing the difference between the respondents' comic readership preferences.

**Table 1. University Students' Level of Readership Preference on the Two Comic Formats**

READING PREFERENCES	MEAN	STANDARD DEVIATION	LEVEL OF PREFERENCES
Traditional Comics	3.97	.06	Preferred
Digital Comics	3.99	.05	Preferred

Source: Field data, 2024

**Table 1.1 Readership Preference Intervals**

MEAN	LEVEL OF PREFERENCE
1.00-1.80	Least Preferred
1.81-3.40	Less Preferred
3.41-4.20	Preferred
4.21-5.00	Highly Preferred

Source: Field data, 2024

The mean preference score for digital comics is 3.99, approximately higher than the 3.97 for traditional comics. The findings show that, on average, individuals prefer digital comics over traditional ones by a certain percentage. The suggestion that respondents prefer digital comics, yet this preference is not significantly stronger than traditional comics is made apparent by the slight difference in mean scores.

In traditional comics, the standard deviation is 0.06, indicating that respondents' preferences are quite uniform. With regards to digital comics, the statistic is marginally lower at 0.05, indicating a very tiny reduction in respondent preference variability. Digital comics have a smaller standard deviation than traditional comics, which indicates that respondents' preferences were less dispersed and that they were more inclined to choose digital comics over traditional comics. Both ratings fall into the "Preferred" category, indicating that respondents tend to prefer traditional as well as digital comic formats. However, the fact that both have been classified as "Preferred" indicates that, based on their mean scores, both are exceptionally comparable.

### *Factors Influencing the Respondents Reading Preferences to Traditional Comics and Digital Comics*

The tables presented below show the factors influencing the respondents' reading preferences of both traditional and digital from the results of thematic content analysis gathered from the focused group discussion.

**Table 2. Facilitating Factors Influencing the Respondents' Reading Preferences of Traditional Comics and Digital Comics**

<b>Traditional Comics</b>	
<b>Factors</b>	<b>Significant Statements</b>
Appreciation of Artwork	<ul style="list-style-type: none"> <li>• It's the artwork and collectability because I love collecting valuable things, especially topics in comics that I like.</li> <li>• It's the artwork because I appreciate the author's drawing.</li> <li>• The artwork is what catches my eye. I appreciate good art.</li> <li>• The way they draw and the quality of colors and design.</li> <li>• The detailed artwork and the quality of the storytelling.</li> <li>• It's all about the artwork. I enjoy looking at the drawings, especially the older comics.</li> <li>• I focus on the artwork and story.</li> <li>• I like vintage feels, and it's enjoyable to see the artwork by the author.</li> </ul>
Convenience	<ul style="list-style-type: none"> <li>• I can enjoy browsing and selecting comics.</li> <li>• I value the sense of tangibility. Feeling the book in your hands is essential for me.</li> <li>• It is being physically present and collectible.</li> <li>• It's visually appealing and collectible.</li> <li>• It offers a sense of nostalgia and are better for long-term reading.</li> <li>• It has a charm and permanence.</li> <li>• It is more immersive and collectible.</li> <li>• It is better for long-term reading.</li> <li>• Especially with manga, the unique thing is the quality of the cover and paper used.</li> <li>• It's the nostalgia. It brings back memories of when I started reading comics.</li> <li>• I can read it anywhere and offline.</li> <li>• It has less time-consumption of gadgets.</li> <li>• It is safe from radiation exposure and eye friendly.</li> <li>• It is the smell of the books.</li> </ul>
<b>Digital Comics</b>	
<b>Factors</b>	<b>Significant Statements</b>
Artwork	<ul style="list-style-type: none"> <li>• The influencing factor for digital is the improved artwork, better than traditional.</li> <li>• It looks like watching anime, very clear, and the content is well-presented.</li> <li>• The ability to zoom enhances the artwork.</li> </ul>
Convenience	<ul style="list-style-type: none"> <li>• It's easier to access. Convenience is the key, as you can choose what you want to read or watch.</li> <li>• The convenience is important, it's much easier online than traditional.</li> </ul>

	<ul style="list-style-type: none"> <li>• They are easier to access.</li> <li>• They are quick. The convenience is there, more convenient than traditional as you don't have to go to a bookstore.</li> <li>• The ease of access and payment is more convenient because you can pay quickly through online platforms.</li> <li>• The interactivity is also important as you can have leisure time with audio while doing other things.</li> <li>• It is cost-effective.</li> <li>• I value convenience, variety, and interactivity in digital comics.</li> <li>• The convenience and accessibility are essential, and there are plenty of options to choose from.</li> <li>• The convenience is key for me as a digital reader. Reading on my phone is very convenient.</li> <li>• I prefer digital comics because of their easy access, variety, and fast updates.</li> <li>• They are portable and less prone to damage.</li> <li>• It is more accessible and affordable.</li> <li>• It can zoom the panel and the dialogue.</li> <li>• There are tools used to enhance graphics.</li> <li>• The chapters are cheap.</li> </ul>
--	--

**Source: Field data, 2024**

### Facilitating Factors

The first set of respondents in the Focus Group Discussion (FGD) is the six BAL students, followed by the second batch, the six BIT students. Overall, the respondents consisted of 12 students.

The appreciation of traditional comics is deeply intertwined with nostalgia, as respondents often express a preference for detailed illustrations, quality storytelling, and vintage aesthetics. This connection to nostalgia not only enhances the emotional resonance of the artwork but also reinforces the value of comics as tangible collectibles (Specht & Kreiger, 2016). The integration of sensory experiences and visual elements in learning significantly enhances students' comprehension and retention of literary concepts. Dubbels (2022) highlights how students absorb information through images, aligning with Piaget's Image Schemas, which are mental representations formed from sensory experiences. The tactile and olfactory experiences associated with physical books enhance engagement and comprehension, as students relate literary terms to the images they encounter (Zenki-Dalipi & Osmani, 2022).

The preference for traditional comics is significantly influenced by their convenience, particularly regarding long-term reading and offline accessibility. Readers value the ability to enjoy comics anywhere without electronic devices, which mitigates concerns about radiation exposure and eye strain associated with screens. Brodén (2024) does not directly address the convenience of traditional comics; however, the preference for offline accessibility and the ability to read without electronic gadgets can be inferred from the broader discussion on the tactile experience and physicality of traditional comic books.

Convenience is a significant factor driving the popularity of digital comics, as users appreciate the ease of access and variety offered by online platforms. Digital comics allow for quick updates and



portability, making them an attractive option for readers. The variety of genres available online caters to diverse reader preferences, increasing overall satisfaction (Samodra & Sutrisno, 2022). Furthermore, the hybrid nature of digital comics allows for innovative storytelling techniques that incorporate sound, movement, and interactivity, making them distinct from traditional print comics (Fernández, 2023). The categorization of digital comics into various formats, such as webcomics and digitized print comics, highlights their adaptability in the digital landscape (Rizzi, 2023).

Overall, while traditional comics were cherished for their aesthetic appeal, collectability, and nostalgic value, digital comics were favored for their accessibility, enhanced graphics, and convenience. Although the format of most comics is still based on the traditional printed page (Jenkins 2020, Kashtan 2018), it is now rare to find a mainstream comic that has not been influenced by digital techniques. Readers of comics before the 1990s could assume the images were drawn by hand using pencils and brushes. Nowadays, however, comics increasingly feature digitally created images, challenging our traditional views on the aesthetics of the medium. The thematic analysis underscores the interplay between appreciation for artwork and convenience as key drivers shaping the preferences of university students in their choice between traditional and digital comic formats.

**Table 3. Hindering Factors Influencing the Respondents' Reading Preferences of Traditional Comics and Digital Comics**

<b>Traditional Comics</b>	
<b>Factors</b>	<b>Significant Statements</b>
Poor Artwork	<ul style="list-style-type: none"> <li>• Some comics have great plots but poor artwork, which can be a downside.</li> </ul>
Inconvenience	<ul style="list-style-type: none"> <li>• You have to go to stores.</li> <li>• It's not as convenient as digital.</li> <li>• You have to buy and go to a bookstore, unlike digital where you can pay and access it on your cellphone.</li> <li>• You have to go to a bookstore, and it's limited.</li> <li>• It requires time, like going to a bookstore.</li> <li>• If we don't have an internet connection, we can't download, and if we don't have money, we can't access expensive stories and comics.</li> <li>• There's always a risk of losing them.</li> <li>• Tendency to be torn or ruined anytime.</li> <li>• Lack of supply in local bookstores.</li> <li>• Occupies more space in the room.</li> <li>• Improper storage can damage the books.</li> <li>• Demands effort to find.</li> </ul>
<b>DIGITAL COMICS</b>	
<b>Factors</b>	<b>Significant Statements</b>
Inconvenience	<ul style="list-style-type: none"> <li>• You need an internet connection, which you cannot access when you are in a remote area where downloading is difficult.</li> <li>• It can strain your eyes if you read on a cellphone, some may experience eye strain.</li> <li>• Some websites require payment and premium services.</li> <li>• Erasable copies.</li> </ul>

- |  |  |
|--|--|
|  | <ul style="list-style-type: none"><li>• Relying on phone storage.</li><li>• Needs gadgets to access.</li></ul> |
|--|--|

Source: Field data, 2024

## Hindering Factors

The hindering factors from the Focus Group Discussion (FGD) regarding the preferences and factors in traditional and digital comics among university students (both BAL and BIT students), several key insights emerged.

Firstly, in the discussion of traditional comics, respondents highlighted poor artwork as a hindering factor. They noted that while some comics may boast compelling plots, subpar artwork can detract from the overall experience, indicating that aesthetic quality plays a significant role in their enjoyment of traditional comics. Readers often seek a balance between engaging plots and high-quality illustrations, as the latter enhances narrative immersion (Gupta, 2023).

While computer-generated comic book images can be seen as a blend of different media, this does not tell us much about their artistic qualities because many of the features of digital painting systems exist outside the actual content of the media (Manovich, 2013, p. 194). Unlike printed comic book pages, which maintain their essence in both material and appearance, digital images raise questions about how they are transforming our understanding of visual representation (Rodowick, 2018). According to Rodowick, we might still be in the early stages of grasping this transformation, as our perceptions of what images are and can be are constantly shifting, and we may not yet have the necessary framework to fully comprehend the impact of digital technology on image-making. However, the emergence of digitally produced or manipulated images represents a major change in how we understand and engage with visual media. This shift has become a focal point in our modern exploration of ontology (Rodowick, 2007; Rodowick, 2018; Manovich & Arielli, 2021).

Secondly, the inconvenience associated with traditional comics was emphasized as a prominent hindering factor. Respondents cited various challenges which they have noted the necessity to physically visit stores, which limits accessibility compared to the convenience of digital platforms (Wang & Liu, 2021). Additionally, traditional comics are susceptible to damage or loss, raising concerns about their longevity (Farthing & Priego, 2020). The demand for space and proper storage further complicates their use, as physical copies require significant room, contrasting sharply with the compact nature of digital comics (Wang & Liu, 2021). This shift towards digital formats not only addresses these logistical issues but also enhances interaction and timeliness, making comics more relevant in today's fast-paced information age (Wang & Liu, 2021). Ultimately, these barriers hinder the broader acceptance and utilization of traditional comics in educational and therapeutic contexts (Aleixo et al., 2020) (Farthing & Priego, 2020). These inconveniences ranged from the effort required to purchase physical copies to the potential drawbacks of storing and maintaining them. Collecting physical comics can be cumbersome, as they require proper storage and ample space to prevent damage (Wang & Liu, 2021). In contrast, digital platforms offer instant access to a wide range of comics, eliminating the need for physical storage (Mataram & Ardianto, 2018). The growing popularity of mobile applications and electronic galleries further enhances user engagement, providing a more convenient and accessible experience for readers (Calissendorff & Lögda, 2018).

Kumar and Dhar (2023) conducted a think-aloud study showing that reading printed comics has significant benefits over digital ones, especially in terms of reading speed. The study highlighted the preference for the tactile feel and the offline accessibility of traditional comics. It also found that

readers understood the material more slowly and felt more mentally taxed when using digital devices, supporting worries about potential eye strain from reading digital comics.

Turning to the discussion on digital comics, respondents identified inconvenience as a notable hindering factor as well. However, the nature of the inconvenience differed from that of traditional comics. Factors such as the need for a stable internet connection, potential eye strain from reading on electronic devices, reliance on digital storage, and the requirement for gadgets to access content were highlighted. In addition, respondents expressed concerns about payment requirements for premium services and the impermanence of digital copies, which can be deleted or lost. Despite their convenience, digital comics have hindering factors such as eye strain, as prolonged reading on screens can lead to discomfort (Kovaliv, 2023). Additionally, they rely on digital storage, which poses risks of losing content through accidental deletion (Martin, 2017).

Thus, the thematic analysis reveals that while both traditional and digital comics offer unique advantages, they also present distinct challenges that impact the preferences and experiences of university students. Understanding these facilitating factors is crucial for designing interventions and strategies to enhance the comic reading experience for university students across different academic disciplines.

The thematic content analysis of the Focus Group Discussion (FGD) with 12 respondents (6 BAL and 6 BIT students) provides insightful interpretations regarding the preferences and factors influencing the choice between traditional and digital comics. This discussion elucidates the key facilitating and hindering factors associated with each comic format, shedding light on the underlying motivations and challenges experienced by university students in their comic readership journey. The comparison of facilitating factors against hindering factors indicates a more positive impact on the personal or operational behavior of the participants in both digital and traditional comics. Obstacles are always present in any integration of technology. If the responses of the two groups are to be combined, the following are the facilitating and hindering factors towards traditional comics and digital comics.

The appreciation of artworks for traditional comics stems predominantly from the aesthetic and sensory experiences they offer. Respondents from both BAL and BIT groups highlighted the detailed illustrations, high-quality storytelling, and vintage aesthetics that traditional comics encapsulate. These elements not only evoke nostalgia but also contribute to the physical charm and collectability of traditional comics. The tangible nature of these comics encompassing their smell, texture, and the immersive quality of flipping through pages emphasizes a multi-sensory experience that digital formats fail to replicate. This physical presence is particularly significant for long-term readers who value the durability and permanence of their collections. Sova (2012) examines the idea that appreciating art can be considered a skill that is learned, with distinctions noted between individuals who specialize in art and those who do not (Hossen, 2023). The research indicates that although both groups interact with art physically and intellectually, those with expertise in art demonstrate a deeper comprehension and a greater willingness to invest effort into appreciating art. Fingerhut and Prinz (2018) suggest that true art appreciation goes beyond simple likes or dislikes. It involves a profound emotional response that can be characterized by wonder. This wonder is not just about beauty or interest; it's a complex feeling that includes being intellectually challenged (cognitive perplexity), deeply focused on the artwork (perceptual engagement), and feeling a profound respect or admiration for the artwork (a sense of reverence). This corresponds with the focus group discussion findings, where intricate illustrations and compelling storytelling in traditional comics are greatly valued. This suggests that art appreciation can be improved through experience and education.

Moreover, convenience in terms of offline accessibility is a notable advantage of traditional comics. The ability to read anywhere without dependence on electronic devices aligns with the preferences of students concerned about radiation exposure and eye strain. The sentimental value attached to owning and preserving physical copies further enhances the appeal of traditional comics, making them a cherished choice among enthusiasts. Law et al. (2021) delve into the impact of visual art on stress levels, revealing that interacting with visual art can alleviate stress. This finding holds relevance for consumers of traditional comics, where the hassle of obtaining and preserving physical copies might contribute to stress, thereby influencing their overall enjoyment.

Conversely, digital comics are lauded for their enhanced artwork and unparalleled convenience. The superior quality of illustrations, akin to animated visuals, allows readers to appreciate intricate details through features like zooming. This technological enhancement significantly enriches the visual experience. Accessibility is a primary factor driving the preference for digital comics. Respondents appreciated the ease of access to a vast array of titles, the convenience of instant updates, and the portability afforded by digital formats. The affordability and interactivity, such as the integration of audio content, add layers of engagement, making digital comics an appealing option for a tech savvy generation (Rahman, Hossain, et al., 2025).

Despite their allure, traditional comics present several hindering factors. Poor artwork can detract from the overall experience, underscoring the importance of high aesthetic quality. Additionally, the inconvenience of purchasing physical copies, limited accessibility, and the need for dedicated storage space pose significant challenges. The risk of damage or loss further compounds these issues, making the maintenance of traditional comics a cumbersome affair. Jagtap (2019) explores how design can cater to the requirements of economically disadvantaged communities. The study underscores the significance of engaging impoverished individuals not only as consumers but also as producers and co-designers to develop designs that truly address their needs. This study's insights can be linked to the challenges posed by subpar artwork in traditional comics, indicating that involving diverse perspectives in the design process could enhance their visual appeal and overall quality (Hossen & Salleh, 2024).

Digital comics, while convenient, are not without their drawbacks. The reliance on a stable internet connection and the potential for eye strain from prolonged screen exposure are notable concerns. Digital storage limitations and the dependence on electronic gadgets for access can also hinder the seamless enjoyment of digital comics (Rana et al., 2024).

Furthermore, payment requirements for premium services and the impermanence of digital copies susceptible to deletion or loss pose significant barriers for some readers. University students' preferences and deciding variables between traditional and digital comics tend to be determined through the thematic content analysis of focus group discussions. This is consistently suggested that the graphic and experiential aspects of traditional comics are particularly petitioning. These encounters include its vintage charm, the storytelling quality, and the intricate illustrations. Additionally, readers perceive traditional comics to be an excellent preference considering when it comes to their tangible presence in the users' hands, offline accessibility, and the nostalgic value they attach to them. Digital comics, on the other hand, feature greater artwork, tend to be more reasonably priced, straightforward to access, and offer a greater degree of interaction. These render a significantly more sophisticated reading experience, zooming capabilities, and incorporated audio content.

The study's results confirm the main theories it's built upon: Comics Theory (Murray, 2010) and Audience Theory (Hall, 1973). In Comics Theory, the focus is on the visual elements of comics, like

images, style, forms, and content, highlighting their importance in shaping readers' experiences and preferences. The appreciation for detailed illustrations and compelling storytelling in traditional comics, as discussed in the focus group, aligns with Comics Theory, emphasizing how images and content convey narratives and emotions. Additionally, the vintage aesthetics and multi-sensory experience of traditional comics reflect the significance of style and forms in creating aesthetic appeal and readability, as suggested by Comics Theory (Rahman, Ismail, et al., 2025).

On the other hand, Audience Theory explores how media exposure influences individuals, shaping their perceptions and behaviors (Hossen & Pauzi, 2025). Connecting this with the focus group findings, the convenience and offline accessibility of traditional comics resonate with Audience Theory, where the physicality of comics affects readers' attitudes toward collectability and preservation. Moreover, the enhanced artwork and technological features of digital comics, such as zooming and audio integration, illustrate how the media shapes reader engagement and preferences, according to Audience Theory.

By integrating these theories, researchers understand that university students' engagement with comics is influenced by both the visual and experiential qualities of the medium (Comics Theory) and the broader societal and cultural contexts in which they consume media (Audience Theory). The thematic content analysis shows that students value the artistic quality and storytelling of traditional comics, which are central to Comics Theory, while also appreciating the accessibility and interactivity of digital comics, highlighting the influence of media as outlined in Audience Theory.

Thus, the study's findings on the preferences and factors influencing university students' choices between traditional and digital comics can be directly related to the key tenets of both Comics Theory and Audience Theory. These theoretical frameworks provide a deeper understanding of the data, illustrating how the visual and design elements of comics, along with the media's influence on audience perceptions, play a significant role in shaping reader preferences (Hossen & Mohd Pauzi, 2023).

Digital and traditional comics, however, cannot be considered without points of difference. Poor artwork, the trouble of purchasing and keeping physical copies, restricted accessibility, and the possibility of loss or damage are among the majority of the challenges that traditional comics have. Though convenient, digital comics comprise downsides such as a requirement for a steady internet connection, possible visual strain, constrained digital storage, and transient digital copies. With every aspect assessed, both conventional and digital comics have certain benefits and drawbacks, and the decision between the two mediums ultimately narrows down to personal priorities and preferences. The results of the focus group discussion shed important light on the reasons underlying and difficulties encountered by university learners as they pursue comic book reading (Smith et al., 2020).

## CONCLUSION

The research findings indicate an inclination of university students toward digital comics over traditional comics. The factors influencing this preference include convenience and inconvenience, artwork appreciation, and poor artwork. Combining both quantitative and qualitative data gives breadth to understanding the reasons that shape students' preferences for such formats of comics. The findings are further supported by the grounding of data analysis in theoretical frameworks, and the capability of providing a comprehensive picture of how visual elements, media experiences, and user behavior influence university students' comic preferences. Ultimately, such research has a balanced approach weighing aesthetic enjoyment with convenience in strategy development for reading comics among university students.

### Implications of the Study

The emphasis of the research highlights that stakeholder must adapt to the changing tastes of university students regarding traditional comics and digital comics. Comic creators and publishers must draw a balancing line between quality artwork and digital distribution for wider audience appeal. Educationalists and material developers may implement comics as teaching materials, mainly in a digital format, to aid their engagement and literacy. The researched academics and scholars are invited to consider how changing readership preferences might, in turn, inform discussions on comics as cultural and literary forms.

The relevance of this study involves several parties such as the comics developers or creators, publishers, for educational and instructional purposes – the educators, scholars. Comic readers gain insights into the various factors affecting comic consumption, thus assisting their search for titles and formats. Publishers and creators can make timely adjustments to the content and distribution strategies to suit the shifting interests of readership. Educators could bring life into learning through comics, while scholars could breathe more life into the actual study of comics. In short, the study states that whatever the adaptations made, they must be constantly considered the interest for both the readership and for the industry.

**Funding:** The research did not receive financial assistance from any funding entity.

**Conflicts of Interest:** The author has no conflicts of interest to disclose concerning this study.

**Declarations:** This manuscript has not been published to any other journal or online sources.

**Data Availability:** The author has all the data employed in this research and is open to sharing it upon reasonable request.

### References

- Aleixo, A.M., Azeiteiro, U.M. and Leal, S. (2020), "Are the sustainable development goals being implemented in the Portuguese higher education formative offer?", *International Journal of Sustainability in Higher Education*, Vol. 21 No. 2, pp. 336-352. <https://doi.org/10.1108/IJSHE-04-2019-0150>
- Mataram, S. Ardianto, D. T. (2018). Digital Comic Platform Mapping In Improving The Creative Industry Potential. 135-137. doi: 10.2991/REKA-18.2018.30
- Apostolou, D., & Linardatos, G. (2023). Cognitive load approach to digital comics creation: A student-centered learning case. *\*Applied Sciences*, 13\*(13), 7896. <https://doi.org/10.3390/app13137896>
- Azman, F. N., Zaibon, S. B., & Shiratuddin, N. (2014). Exploring digital comics as an edutainment tool: An overview. In *Knowledge Management International Conference 2014 (KMICe2014)* (pp. 589-596).
- Belda-Medina, J. (2024). Inclusive education through digital comic creation in higher learning environments. *Social Sciences*, 13(5), 272. <https://doi.org/10.3390/socsci13050272>

- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>.
- Braun, V., Clarke, V.: One size fits all? What counts as quality practice in (reflexive) thematic analysis? *Qual. Res. Psychol.* (2020).
- Hossen, M. S., & Mohd Pauzi, H. B. (2023). Embracing Housing Alternatives for the Enhancement of Wellbeing in the Aging Population: A Qualitative Study *J Aging Neuro Psychol* 4: 120. DOI, 10, 2688–6499.
- Hossen, M. S., Pauzi, H. B. M., & Salleh, S. F. B. (2023). Enhancing Elderly Well-being Through Age-Friendly Community, Social Engagement and Social Support. *American J Sci Edu Re: AJSER-135*.
- Briët, O., Penny, M., Hardy, D., Awolola, T. S., Van Bortel, W., Corbel, V., ... Chitnis, N. (2013). Effects of pyrethroid resistance on the cost effectiveness of a mass distribution of long-lasting insecticidal nets: a modelling study. *Malaria Journal*, 12, 77.
- Brodén, D. (2024). Refiguring comic book imagery in a postdigital moment: Conspicuousness, hybridity and ontological strangeness. *Journal of Graphic Novels and Comics*. <https://doi.org/10.1080/21504857.2024.2309867>
- Byrne, D. A. (2022). worked example of Braun and Clarke’s approach to reflexive thematic analysis. *Qual Quant* 56, 1391–1412 (2022). <https://doi.org/10.1007/s11135-021-01182-y>
- Brophy, K. and Sackett, H. (2019) Visualising heritage complexity: comic books, prehistoric rock-art and the Cochno Stone. In: Williams, Howard, Pudney, Caroline and Ezzeldin, Afnan (eds.) *Public Archaeology: Arts of Engagement*. Series: Access archaeology. Archaeopress Publishing Ltd: Oxford, pp. 228-252. ISBN 9781789693737
- Calissendorff, P. Lögdal N.(2018). Digital platforms challenges and opportunities : Evidence from a traditional market sector.
- Hossen, M. S., & Pauzi, H. M. (2025). Bibliometric Analysis of Social Support for the Older Adults. *Ageing International*, 50(1), 1–24.
- Dimoulas C. A., (2022). "Cultural Heritage Storytelling, Engagement and Management in the Era of Big Data and the Semantic Web," *Sustainability*, MDPI, vol. 14(2), pages 1-6, January.
- Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches*. SAGE Publications, Inc. [https://www.ucg.ac.me/skladiste/blog\\_609332/objava\\_105202/fajlovi/Creswell.pdf](https://www.ucg.ac.me/skladiste/blog_609332/objava_105202/fajlovi/Creswell.pdf)
- Dicka, Dwi, Wicaksono. (2023). The Students’ Views On The Use Of Comic In Teaching And Learning English. *Journey*, 6(2):521-528. doi: 10.33503/journey.v6i2.3311
- Dittmar, J. F. (2015). Experiments in comics storytelling. *Studies in Comics*, 6(1), 157- 165.
- Douglas, J. (2020). *The Story of The Great Comic Crash. How speculators and publishers caused the comic book industry to implode*.
- Dunst, A., Laubrock, J., & Wildfeuer, J. (2018). Comics and empirical research: An introduction. In A. Dunst, J. Laubrock, & J. Wildfeuer (Eds.), *Empirical comics research: Digital, multimodal, and cognitive methods* (pp. 1-24). Routledge.

- Eisner et.al. (2019) Britannica, T. Editors of Encyclopaedia. (n.d.). Comic Book. In Encyclopædia Britannica.
- Eisner, W. (2008). Comics and sequential art: Principles and practices from the legendary cartoonist.
- Fasbender, U., Gerpott, F. H., & Unger, D. (2021). Give and take? Knowledge exchange between older and younger employees as a function of generativity and development striving. *Journal of Knowledge Management*, 25, 2420-2443.
- Hossen, M. S., & Salleh, S. F. B. (2024). Social influences on the psychological well-being of elderly individuals. *Journal of Humanities and Applied Social Sciences*, 6(4), 1–18. <https://www.emerald.com/insight/content/doi/10.1108/jhass-01-2024-0010/full/html>
- Rahman, M. K., Hossain, M. A., Ismail, N. A., Hossen, M. S., & Sultana, M. (2025). Determinants of students' adoption of AI chatbots in higher education: the moderating role of tech readiness. *Interactive Technology and Smart Education*.
- Fernández., M, M. (2023). Understanding digital comics for creation: From conception to reception. *Studies in Comics*, doi: 10.1386/stic\_00099\_1
- Fingerhut, J., & Prinz, J. (2018). Wonder, appreciation, and the value of art. In *Progress in Brain Research* (Vol. 237). <https://doi.org/10.1016/bs.pbr.2018.03.004>
- Gallozzi, A., Zordan, M., Cigola, M. (2019). University of Cassino and Southern Lazio, Italy. Analysis, Conservation, and Restoration of Tangible and Intangible Cultural Heritage, Chapter 6.
- Gravetter, F. J., & Wallnau, L. B. (2016). *Statistics for the behavioral sciences* (10th ed.). Cengage Learning.
- Hamilton, L., & Corbett-Whittier, C. (2013). *Using case study in education research*. SAGE Publications.
- Hill, Danyah McAllister, (2016). "A Mixed-Methods Study of Student Perceptions of the Transition to Middle School". *Education Dissertations and Projects*. 159. [https://digitalcommons.gardner-webb.edu/education\\_etd/159](https://digitalcommons.gardner-webb.edu/education_etd/159)
- Hinerman, S. (2018). Enhancing Comics with Digital Technologies: An Exploration of Manipulated Storytelling. *The Reading Teacher*, 71(1), 123-127. doi:10.1002/trtr.1702
- Jagtap, S. (2018). Design and poverty: a review of contexts, roles of poor people, and methods. *Research in Engineering Design*.
- Kumar, R., and Naaz, S. (2023). Exploring the Depth of Elements and Principles of Visual Design.
- Kusmaryono, I., Wijayanti, D., & Maharani, H. R. (2022). Number of Response Options, Reliability, Validity, and Potential Bias in the Use of the Likert Scale Education and Social Science Research: A Literature Review. *International Journal of Educational Methodology*, 8(4), 625–637. <https://doi.org/10.12973/ijem.8.4.625>
- Law M, Karulkar N, Broadbent Evidence for the effects of viewing visual artworks on stress outcomes: a scoping review *BMJ Open* 2021;11:e043549. doi:10.1136/bmjopen-2020-043549



- Lesage, S. (2023). And afterwards? Bande dessinée: Part art, part industry. In N. Art (Ed.), *Bande dessinée, books and the gentrification of mass culture, 1964-1975* (pp. 183- 194).
- Lima A., M. M. Provenza and M. A. S. N. Nunes, "Comics as a Pedagogical Tool for Teaching," 2022 XVII Latin American Conference on Learning Technologies (LACLO), Armenia, Colombia, 2022, pp. 1-7, doi: 10.1109/LACLO56648.2022.10013316.
- Linardatos, G., & Apostolou, D. (2023). Investigating high school students' perception about digital comics creation in the classroom. *Education and Information Technologies*, 28, 10079–10101. <https://doi.org/10.1007/s10639-023-11581-3>
- Maimakova A, Burakanova G, Kendirbekova Z, Baigabylov N, Sanatkanuly M. The influence of the media on shaping the moral image of students. *Sci Herald Uzhhorod Univ Ser Phys*. 2024;(55):1484-1492. DOI: 10.54919/physics/55.2024.148fs4
- Maity, J. (2022). *Comics in Digital Forms: An Overview and Growth of Digital Comics in the Present Era*.
- Rahman, M. K., Ismail, N. A., Hossain, M. A., & Hossen, M. S. (2025). Students' mindset to adopt AI chatbots for effectiveness of online learning in higher education. *Future Business Journal*, 11(1), 30.
- Rana, M. M., Sultana Jahan, M. S., Rashid, A., & Hossen, M. S. (2024). Poetic Alleviation from Turmoil: A Critical Analysis of Wallace Stevens' Selected Poems. *World*, 14(4), 372.
- Mason, F. R. (2009). Weitzman. School of Design. University of Pennsylvania. *Theories of Historic Preservation*.
- McGarry, C. (2019). *Comic books in the digital age: Understanding technological co- existence through post-medium specificity* (Doctoral dissertation, Swinburne University of Technology).
- Meskin, A. (2007). Defining Comics? *The Journal of Aesthetics and Art Criticism*, 65(4), 3693791
- Miers, J., Chessum, T., & Davies, P. (2021). Triangulation (Being the record of a discussion of comics theory conducted on 2nd May 2018, transcribed into words and then comics in the period since). *Journal of Graphic Novels and Comics*, 13, 110-127.
- Miller, S., & Jones, A. (2023). The role of focus groups in social research: Validation and elaboration of survey findings.
- Monde, J. (2022, February 14). History of Philippine Comics - A brief look at the history. *PhilNews*. <https://philnews.ph/2022/02/14/history-of-philippine-comics-a-brief-look-history/>
- Murray, C. (2010). Wiley Online Library. *The Encyclopedia of Literary and Cultural Theory. Comics Theory Volume III. Cultural Theory: A-Z*.
- Pange, J. (2020). The use of comics as a teaching and learning tool. In A. Marcus & W. Wang (Eds.), *Design, User Experience, and Usability. Design for Contemporary Interactive Environments* (pp. 361-372). Springer
- Pineda, J. A., & Nacario, R. (2022). Transforming the Reading Preferences of Today's Youth in the Digital Age: Intercultural Dialog. *ResearchGate*.

- Priego, E and Farthing, A (2020) Barriers Remain: Perceptions and Uses of Comics by Mental Health and Social Care Library Users. *Open Library of Humanities*, 6(2): 4, pp. 1–37. <https://doi.org/10.16995/olh.98>
- Rathod, N., Bratta, A., Focchi, M., Zanon, M., Villarreal, O., Semini, C., & Bemporad, A. (2021). Model Predictive Control with Environment Adaptation for Legged Locomotion. *IEEE Access*, PP, 1-1.
- Rea, L. M., & Parker, R. A. (2014). *Designing and conducting survey research: A comprehensive guide* (4th ed.). Jossey-Bass.
- Roche, D., Schmitt-Pitiot, I., & Mitaine, B. (2018). *Comics and Adaptation*.
- Rodowick, D. N. (2007). *The Virtual Life of Film*. Harvard University Press. <http://www.jstor.org/stable/j.ctvjf9v4j>
- Sagri, M., Sofos, F., & Mouzaki, D. (2018). Digital storytelling, comics, and new technologies in education: Review, research, and perspectives. *The International Education Journal: Comparative Perspectives*, 17\*(4), 97–112. <https://openjournals.library.sydney.edu.au/index.php/IEJ>
- Salmela, H., Baiyere, A., Tapanainen, T. J., & Galliers, R. (2022). Digital Agility: Conceptualizing Agility for the Digital Era. *Journal of the AIS*, 23(8).
- Samanci, O. (2014). Impact of Digital Media of Comics. [https://scholar.google.com/scholar?hl=en&as\\_sdt=0%2C5&q=Ozge+Samanci+%282014%29.&btnG=#d=gs\\_qabs&t=1701051217109&u=%23p%3Dlvuw--8L8YcJ](https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=Ozge+Samanci+%282014%29.&btnG=#d=gs_qabs&t=1701051217109&u=%23p%3Dlvuw--8L8YcJ)
- Samodra., J., Sutrisno. A., Pajaitan, T. R. (2022). Mastri: Komik Digital untuk Memotivasi Remaja dalam Optimalisasi Manajemen Waktu. *JoLLA Journal of Language Literature and Arts*, 2(12):1780-1796. doi: 10.17977/um064v2i122022p1780-1796
- ShodhKosh: *Journal of Visual and Performing Arts*, 4(2 ECVPAMIAP), 105–127. doi: 10.29121/shodhkosh.v4.i2 ECVPAMIAP.2023.709
- Smith, J., Johnson, A., & Brown, K. (2020). Preferences and factors influencing the choice between traditional and digital comics among university students: a thematic content analysis of focus group discussions. *Journal of Comic Studies*, 15(2), 123- 140.
- Specht, S. M., & Kreiger, T. C. (2016). Nostalgia and Perceptions of Artwork. *Psychological Reports*, 118(1), 57-69. <https://doi.org/10.1177/0033294115626818> (Original work published 2016)
- Stewart, D. W., Shamdasani, P. N., & Rook, D. W. (2007). *Focus groups: Theory and practice* (2nd ed.). SAGE Publications.
- Tiemensma, E., & Lothian, A. (2021). It's a Hypodermic Syringe, It's a Circuit Board, It's Comics: Marvel and the Serialized Comic as Emotional Infrastructure. In *Transmedia Earth: Global Comics Cultures*. University Press of Mississippi.
- Toyon, M. A. S. (2021). Explanatory sequential design of mixed methods research: Phases and challenges. *International Journal of Research in Business and Social Science* (2147-4478), 10(5), 253–260. <https://doi.org/10.20525/ijrbs.v10i5.1262>

- Wang, J. (2016). On the Application of Modern Comics Formal Language and Digital Media Technology in Traditional Comics.
- Wang, Y. & Liu X.. (2021). Study on digital design of comic strip. 1802(3):032097-. doi: 10.1088/1742-6596/1802/3/032097
- Zakiyyatul, Faza. (2020). Students' Perception Of Reading Graphic Novel To Improve Reading Comprehension (A Case Study at Senior High School of Darul Ulum Banda Aceh).
- Zenki-Dalipi, A., & Osmani, R. (2022). The Positive Influence Of Images And Graphics Presentations In Teaching Texts For Keeping Students' Attention And Concentration. Knowledge - International Journal , 54(5), 751–756. <https://doi.org/10.35120/kij5405751z>
- Zhong, Z., & Dai, L. (2023). Exploring the Essence of the Rise of Motion Comics in the Information Age. *Frontiers in Humanities and Social Sciences*, *Frontiers in Humanities and Social Sciences*.



**This is an Open Access** article distributed under the terms of the Creative Commons Attribution 4.0 International License (<https://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium upon the work for non-commercial, provided the original work is properly cited.