

User Interface Design Elements for User-Friendly Reading Experience of Webcomic on Mobile Application

Nurlisa Athirah Baharuddin¹, *Anwar Fikri Abdullah²

^{1,2}College of Creative Arts, Universiti Teknologi MARA, Perak Branch, Seri Iskandar Campus, 32610 Seri Iskandar, Perak, Malaysia

nurlisaathirah05@gmail.com¹, anwar575@uitm.edu.my²

*Corresponding author

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ABSTRACT

The research is to identify the elements of interface design to improve the overall reading experience of webcomic applications. Webcomic, is a form of comic art that is primarily distributed and consumed on the internet. They are essentially comic strips or graphic novels that are published digitally and made accessible to a wide audience through various websites or dedicated platforms. It is of the utmost importance to understand how to create a user-friendly interface design that can cater to both comic creators and readers as webcomics continue to gain popularity in digital readers nowadays. This paper sets out to identify various interface design elements, mobile applications features and strategies that can contribute to a more user-friendly and visually pleasing interface for webcomic applications using applied literary analysis. Therefore, all the data was gathered through studies of past research and the data collected are made into use in designing a user-friendly webcomic application. This paper aimed at emphasizing the importance studies of user-friendly interface design elements in webcomic applications that can serve to promote artist's expression, storytelling, and improve community or digital reader's interaction.

Keywords: Comic, Webcomic, Digital Comic, Mobile Application, User Interface Design.



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1 INTRODUCTION

Webcomic is a thrilling and dynamic medium of reading that blends art and storytelling made available through online platforms. It offers an accessible, diverse, and interactive experience, enabling creators to reach a global reader to discover a vast array of captivating stories and art styles. Significantly, mobile devices have become essential for daily use, with smartphones being the primary access to the internet. Mobile applications have revolutionized people engaging with content, providing convenience, portability and personalized experience designed for mobile platforms. In relation to webcomics, adapting a user-friendly interface design element is crucial. Due to mobile screen present unique challenges and opportunities compared to desktop or traditional printed format of comics. This paper discusses interface design used in webcomic for mobile phone users.

2 DEFINITIONS OF COMIC

Comics are a form of visual art that combines images and text to convey a narrative or tell a story. Comics stories can be varied including comic strips, newspaper comic strips, comic books, graphic novels, webcomics, and manga. Through the combinations of images and text, it allows creators to convey their story or idea in a sequential and visually engaging way. The word 'comic' can be derived from the Greek word 'komikos', that means "of or relating to farce or comedy". Based on widely recognized definition from a comic artist, and theorist, Scott McCloud, he provided an accepted

explanation in his book "Understanding Comics: The Invisible Art" (1993). According to McCloud, comics consist of "juxtaposed pictorial and other images in deliberate sequence, intended to convey information and to produce an aesthetic response in the viewer." This description highlights comics' sequential aspect as well as the deliberate arrangement of images to create a narrative.

2.1 Webcomics/ Digital Comics

Webcomics or also known as digital comics that were originally published on the Internet (Walters, M. (2009), it can be found as comic strips or comic books. Whereas a webcomic platform refers to an online service or website that provides a dedicated space for creators to publish and share their webcomics. These platforms offer various features and tools that facilitate the creation, distribution, and discovery of webcomics, fostering a community of readers and artists (Matthew Russel, 2023). They often provide a centralized hub where webcomic enthusiasts can explore, read, and interact with a wide range of comics. Webcomic platforms typically offer creators a user-friendly interface to upload their comic pages or strips, organize their archives, and manage their content. These platforms may also provide tools for formatting, resizing, and optimizing images for online viewing. Some platforms include additional features such as scheduling posts, creating author profiles, and tracking reader engagement through comments, likes, and shares.

According to data analyzed from the Similar Web (2023), the top five most popular comics application downloaded by Malaysians are Webtoon taken the lead, followed by MangaToon, BILIBILI COMICS, MANGA Plus by SHUEISHA and WebComics. Digital comics are gaining popularity worldwide and one notable webcomic platform is Webtoon which is the world's largest digital comics platform that ranks in the Top 10 of the 2023 World's Most Innovative Companies, and No.1 in the Media Category (Business Wire, 2023). Webtoon offers a mobile app and website that hosts a wide variety of webcomics across different genres, including romance, fantasy, action, comedy, and more. The platform provides a user-friendly reading experience optimized for mobile devices, and it allows creators to monetize their work through ad revenue and optional in-app purchases. Webtoon has played a crucial role in the expansion of the webcomic industry and has provided a platform for both established and emerging artists to reach a global audience (Webtoon. (n.d).

Webtoon is the pioneer to vertical scrolling of digital comics and has inspired many more webcomic platforms in conveying their comic contents in the same way as Webtoon. Webtoon has grown globally while expanding their Korean culture through the platform and making endless webtoon-to-screen adaptations and making sure of the big thing in Korean Wave takeover (Patrick Frater, 2022). Making this great success of webtoon as a great example for Malaysia in making our own webcomic platform at the same time introduce our Malaysian culture to the world.

2.2 User Interface Design

User interface design refers to the process of creating visually appealing and intuitive interfaces for digital products, such as websites, mobile applications, and software systems, to enhance user interaction and overall user experience. A well-designed interface design considers various factors, including user needs, goals, and preferences, as well as usability principles and design guidelines. One widely recognized definition of user interface design comes from Jakob Nielsen, a prominent usability expert and co-founder of the Nielsen Norman Group. In his book "Usability Engineering," Nielsen (1993) defines user interface design as; "User interface design is the design of computers, appliances, machines, mobile communication devices, software applications, and websites with the focus on the user's experience and interaction. The goal of user interface design is to make the user's interaction as simple and efficient as possible, in terms of accomplishing user goals (user-centered design). His definition highlights the user-centered approach of interface design, emphasizing the importance of simplicity and efficiency in achieving user goals. The goal is to create interfaces that are easy to use, visually appealing, and provide a seamless experience for the users. Supported by an article written by Callie Malvik (2020), Steve Johnston a product manager at Infragistics highlighted user experience is to

enhance usability and design experiences that are both straightforward and enjoyable. Hence, usability and user experience design are also the key points that need to be paid attention to when designing a user-friendly interface design.

2.3 Mobile Application

A mobile application, commonly referred to as an app, is a software type of application specifically designed to run on mobile devices such as smartphones, tablets, or smartwatches. Mobile apps are developed to provide users with specific functionalities, services, or entertainment options that can be accessed and utilized directly from their mobile devices. According to the book written by Hooper, S., & Berkman, E. (2011), a mobile application is a software program developed for mobile devices, providing various services and functionalities tailored for on-the-go usage. These applications are designed to run specifically on smartphones and tablets, offering users a convenient and portable way to access information, perform tasks, and interact with digital services. The book reinforces the concept of mobile applications as software programs designed for mobile devices, highlighting their purpose in providing convenient and portable access to information and services (Hooper, S., & Berkman, E. (2011).

3 METHODOLOGY

This paper adopted a qualitative research approach to identify and explore the interface design elements to design a user-friendly webcomic application. The explorative has emphasized applying contextual document review to identify the interface design elements that has contributed to user-friendly reading experience of webcomics on mobile phones. The focus is on collecting, and analyzing literature on interface design elements for webcomic applications through data from past researcher which includes, case studies, articles or any relevant material that related to reach this paper main objectives. Using the information gathered, it should be possible to determine the interface design elements that contributed to designing a user-friendly webcomic application for mobile phones.

4 ANALYSIS AND FINDINGS

Astria Dhita Wandani (2023) in her research title “Designing an Interactive Comic for Mobile Phones Based on User Preferences in Malaysia”, listed the preferred and appropriate interface design elements that include, comic panel layout, comic display, intuitive navigation, typography and other features like bookmark, comic library, and color. Below are her analysis and findings from five scholars:

4.1 INTERFACE DESIGN ELEMENTS

Table 1. Summary of preferred interface design elements listed by Astria Dhita Wandani.

Interface Design Elements Guideline				
Comic Panel Layout	Comic Display	Typography	Intuitive Navigation	Other Features
(C.A. Brown, 2013. <i>What Panel Layout Should I Use in My Webcomic?</i>)	(Astria Dhita Wandani, 2013)	(Jaye Hannah, 2021. <i>How To Use Typography in UI Design: A Beginners Guide.</i>)	(Rebeka Costa, 2021. <i>Mobile Navigation: Patterns and Examples.</i>)	(Tarun Nagar, 2023. <i>How To Develop an App Like WEBTOON: A Comics App.</i>)
Multiple panel layout	Colored comic content	Typeface	• Tabs	• Comic library
Single panel layout	Clear images	Font size	• Bottom feed	• Bookmark
Fixed panel layout	Zoom in	navigation		• Personalized home
		Top navigation		
		Offline reading		




(Source: Astria Dhita Wandani, 2013)

Based on the finding above, below is the current contextual review of every element mentioned.

4.1.1 Comic Panel Layout (C.A. Brown, 2013)

Based on the article written by C.A. Brown (2013), an independent comic artist, he categorized comic panel layout into three different types of layouts. The layout that has been mentioned were single panel layout, fixed panel layout and multiple panel layout. Single panel layout can commonly be used in making comedic or satirical comics, while fixed panel layout format common use for comics that have minimum characters and does not have continuous story between comics. Lastly, multiple comic layout explained as the name suggests, whereas this layout format panel can be in different sizes and sometimes the number of the panels in each page can be different. This kind of panel layout is commonly used in graphic novels.

Table 2 Example types of comic panel layout based on C.A. Brown (2013)

Multiple panel layout	Single panel layout	Fixed panel layout
	 <p><i>A single panel darkhumor comic called 'Call Me Stupid!' By Zunar.</i></p>	 <p><i>Lawak Kampus comic by Keith used fixed comic panel, source taken from official Instagram post by official. lawakkampusaccount.</i></p>

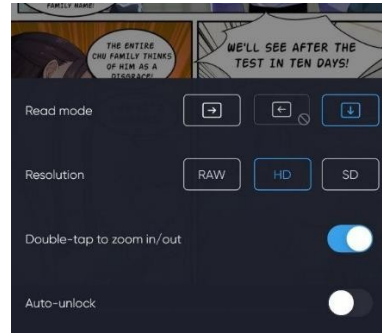
4.1.2 Comic Display (Astria Dhita Wandani, 2013)

Preferred comic display would be a colorful comic content while black and white comic content can be rare whereas it depends on to suit the comic genre like horror story, as example horror webcomic by Fyyaa123 titled Nocturne in Webtoon. Comics as we know are a form of visual art that combines images and text to convey a narrative or tell a story. Therefore, it is a must to display the image clearly on mobile phone screen for reader to be able enjoy the story fully. Hence, this can be executed by applying the zoom in features or displaying a single panel at a time.

Table 3. Example of preferred comic display based on A.D. Wandani (2013)

Colorful Comic Content

Clear Image and Zoom In



Bottom navigation setting, screenshot from Bilibili Comic reading page

A cut from 'Martial God Asura' by Shan Liang de Mi Feng taken from Bilibili Comic App.

(Source: Bilibili Comic Apps, 2024)

Figure above show mode of reading display for convenient reading either vertical or horizontal, image quality setting for better image and also zoom in or out setting.

(Source: Bilibili Comic Apps, 2024)

(Source: Bilibili Comic Apps, 2024)

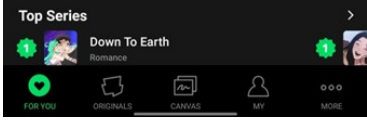
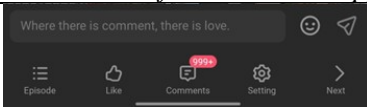
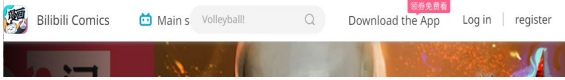
4.1.3 Typography (Jaye Hannah, 2021)

Based on the article by Jaye Hannah (2021), the two main principles of typography in interface design are readability and scalability, which this two are important for users to digest and perceive the information conveyed by the text. Therefore, the first crucial is choosing the typefaces, whereas it should stick to one typeface within a single design rather than multiple typefaces, as it can be overwhelming for the user to read as well as navigate through the application. The readability, which is also associated with the overall reading experience can be achieved by determining the right font size, whereas the general font size on a mobile screen should be between 12pt to 16pt. This is to ensure the overall user-friendly experience to the digital reader.

4.1.4 Intuitive Navigation (Rebeka Costa, 2021)

An intuitive navigation would be the foundation of any application, mobile navigation design which is also associated with the user experience is all about users' interaction with the apps. Designing a simple and intuitive navigation should be considered, as users prefer familiarity to the prevalent navigation of the webcomic apps on the market. The best practice of interface design components for mobile navigation that should be considered used in webcomic apps would be the tabs navigation, bottom navigation, and top navigation.

Table 4. Example of UI components for mobile navigation in webcomic apps.

<p>Tabs Navigation</p>	 <p><i>A screenshot from Webtoon App Homepage</i></p>
<p>Bottom Navigation</p>	 <p><i>A screenshot from MangaToon reading page.</i></p>
<p>Top Navigation</p>	 <p><i>A screenshot from Bilibili Comic homepage.</i></p>

(Source: WebtoonApp, MangaToon App and Bilibili Comic Apps, 2024)

4.1.5 Other Features (Tarun Nagar, 2023)

Tarun Nagar (2023) the last category consists of others additional features such as comic library, bookmark, personalized home feed and offline reading. These features play important roles in exhilarating users experience to stay longer in the apps and increase user's check in.

Table 5 Example of UI components for mobile navigation in webcomic apps

Other Features	Characteristic
Comic Library	<ul style="list-style-type: none"> • Comic library features is to helps user organize theirbookmarks save and sort their favorite comic as well as keep up with the weekly updated comic.
Bookmark	<ul style="list-style-type: none"> • Bookmark features to ensure user's smooth reading whenever they want to go back to old episodes or navigate back to their last episodes visit. Besides, bookmark featureslet users decide which comic series they want to read next.
Personalized Home Feed	<ul style="list-style-type: none"> • Personalized home feed features can be described as a homefeed that adjusts to each user. It functions to suggest variantof comics based on users reading history or their comic library contents. These personal suggestions somehow makethe user's reading experience better.
Offline Reading	<ul style="list-style-type: none"> • Offline reading makes it eligible for users to download the episodes or series to read it offline later. These features comein handy for users that have low internet connection or to those who like to read comics on the move.

(Source: Webtoon App, MangaToon App and Bilibili Comic Apps, 2024)

5 CONCLUSION AND RECOMMENDATION

In contrast to the past, the mobile phone is becoming an essential item for comic enthusiasts, especially for teenagers. Besides, keeping up with the market, the current mobile phone technology continuesto rapidly revamp with all the smartphone brands competing in producing smartphones with high definition (HD) screen resolution, multi-touch screen and larger screen size. This innovation introduces the possibility of exploration on how the technology can be useful to view comic conveniently. This paper sorts compile different interface design elements that can be used for convenient comic reading experiences.

To summarize the studies, designing a user-friendly and intuitive webcomic application can come in handy if the interface design elements described in this article be applied as well as put into the right use, then creating good practice of interface design for new webcomic can be achieved. At the end, by

understanding the user's needs and preferences is important in determining the interface design elements used in designing user-friendly webcomic applications.

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All authors played equal role in this paper.

CONFLICT OF INTEREST

There are no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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