# MEMOJI AS A CHARACTER DEVELOPMENT IN DIGITAL COMIC
# (DIGICOM)

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JUDUL:  [MEMOJI AS A CHARACTER DEVELOPMENT IN DIGITAL COMIC]

SESI PENGAJIAN:   [2020 / 2021]

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# MEMOJI AS A CHARACTER DEVELOPMENT IN DIGITAL COMIC (DIGICOM)

NURULHANAN BINTI ABDUL HALIM

This report is submitted in partial fulfillment of the requirements for the
Bachelor of Computer Science (Media Interactive) with Honours.

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY
UNIVERSITI TEKNIKAL MALAYSIA MELAKA

2021

**DECLARATION**

I hereby declare that this project report entitled

**[MEMOJI AS A CHARACTER DEVELOPMENT IN DIGITAL COMIC]**

is written by me and is my own effort and that no part has been plagiarized

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**(NURULHANAN BINTI ABDUL HALIM)**

I hereby declare that I have read this project report and found

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SUPERVISOR : _____ Date : 3/7/2021

([NAME OF THE SUPERVISOR])

# DEDICATION

To my beloved parents, family and friends, who have always encouraged and supported me through my educational journey. Also, to my supervisor Dr. Zulisman Maksom and all my friends who have guided, inspired and helped me to complete my project.

# ACKNOWLEDGEMENTS

# ABSTRACT

Comics are a visual medium for expressing ideas, and they are often paired with text or other visual content. It usually takes the form of a series of picture panels. Speech bubbles, captions, and onomatopoeia are examples of textual devices that can be used to indicate dialogue, narration, sound effects, and more. Comic books communicate to children in a language they understand and can relate to. Even after children have developed enjoyable reading skills, comics allow them to read content that incorporates images and text to convey satire, symbolism, point of view, suspense, puns, and humor in ways that text alone cannot. Children prefer to read comic books over books in other genres. People today, however, do not purchase comic books. As a result of its time- consuming and inflexible nature, the paper and manual method have become almost obsolete. This project is developed for Projek Sarjana Muda (PSM). The project's main goal is to determine the effectiveness of Memoji as a digital comic feature. This digital comic can improve comic books, which have been overlooked by many because today's kids do not read them and using Memoji as the character development would instill positive attitudes in digital comics. Besides, by using Memoji as the character development in digital comics, the topic for this project which is COVID-19 Awareness for Kids was chosen because creating awareness of the dangers of COVID and precautions that should be taken among children is needed. Through this project, the goal of instilling some knowledge and encouraging society to learn about COVID-19 awareness, threat, symptoms, and prevention among Malaysians.

# ABSTRAK

Komik adalah media visual untuk mengungkapkan idea, dan sering digandingkan dengan teks atau kandungan visual lain. Ia biasanya berbentuk siri panel gambar. Gelembung ucapan, kapsyen, dan onomatopoeia adalah contoh alat teks yang boleh digunakan untuk menunjukkan dialog, narasi, kesan bunyi, dan banyak lagi. Buku komik berkomunikasi dengan kanak-kanak dalam bahasa yang mereka fahami dan boleh dikaitkan dengannya. Walaupun kanak-kanak telah mengembangkan kemahiran membaca yang menyeronokkan, komik membolehkan mereka membaca kandungan yang menggabungkan gambar dan teks untuk menyampaikan satira, simbolisme, sudut pandang, ketegangan, kata-kata, dan humor dengan cara yang tidak dapat dilakukan oleh teks sahaja. Kanak-kanak lebih suka membaca buku komik berbanding buku dalam genre lain. Orang hari ini, bagaimanapun, tidak membeli buku komik. Akibat sifatnya yang memakan masa dan tidak fleksibel, kaedah kertas dan manual menjadi hampir usang. Projek ini dibangunkan untuk Projek Sarjana Muda (PSM). Matlamat utama projek ini adalah untuk menentukan keberkesanan Memoji sebagai ciri komik digital. Komik digital ini dapat meningkatkan buku-buku komik, yang sering diabaikan oleh banyak orang kerana anak-anak zaman sekarang tidak membacanya, dan menggunakan Memoji sebagai pengembangan watak akan menanamkan sikap positif dalam komik digital. Selain itu, dengan menggunakan Memoji sebagai pengembangan watak dalam komik digital, topik untuk projek ini iaitu Kesedaran COVID-19 untuk Anak-anak dipilih kerana kesadaran akan bahaya COVID dan langkah berjaga-jaga yang harus diambil di kalangan kanak-kanak sangat diperlukan. Melalui projek ini, tujuan menanamkan beberapa pengetahuan dan mendorong masyarakat untuk belajar mengenai kesedaran, ancaman, gejala, dan pencegahan COVID-19 dalam kalangan rakyat Malaysia.

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# LIST OF ABBREVIATIONS

CBR             -           Comic Book Archive

CBZ            -           Comic Book Zip (CBZ) format

FPS              -           Frame per Second

JPEG           -           Joint Photographic Experts Group

PDF              -           Portable Document Format

PSM            -           Projek Saujana Muda

UTeM           -           Universiti Teknikal Malaysia Melaka

# LIST OF ATTACHMENTS

# CHAPTER 1:  INTRODUCTION

## 1.1    Introduction

A digital comic is similar to self-published printed comics in that they can be generated by anyone with an Internet connection that is primarily viewed on an electronic device. This includes a webcomic which is comics viewed through a web browser, usually online, and eComics which are not viewed through a web browser, such as comics downloaded as pdf files, CBR files, or cbz files, etc. The number of people who read a book varies greatly; some are only read by the author's close friends and family, while others have audiences of over one million people. Animoji uses 3D emoji that map user face, allowing you to project user voice through an animated robot, alien, unicorn, or monkey that in turn opens its mouth, smiles, and moves when you do. Memoji lets users create 3D avatars of themselves that you can use in an equivalent way to Animoji. Memoji are personalized Animoji. It is Apple's version of Snapchat's Bitmoji or Samsung's AR Emoji. The comic will be hand-drawn or digitally drawn using suitable software.

Memoji was first introduced in the market by Apple as part of its messaging application, iMessage. In 2017, Apple added an 'Animoji' feature that used Apple's Face ID camera system to map popular emoji characters to the user's face. They appear to mimic the user's facial expressions. To create Memoji, we need Apple's Message apps, iOS 12 software or later, and an iOS device with the True Depth camera system. To study the effectiveness of Memoji in digital comics, Memoji technology will be used as the element in this project. This project will be user-friendly with a simple, easy way to use. Through this digital comic, users can get knowledge for the content and valuable information.

In this study, Memoji is a technology that combines with the digital comic to bring out and enhance the information that may be hidden or not immediately be understood. Studies were conducted to see how Memoji can improve comic books, which many overlook because today's kids do not read them. The research was undertaken to show that Memoji can instill positive attitudes in digital comics. According to (Wright, G. & Sherman R, 1999), the first step in developing a comic strip is the scripting of the story. Therefore, before designing the comic scenes, young learners are required to use their imagination and experiences in listening to stories to invent and write their own story. People can read the comic with high creativity and experience the character of themselves in the comic by using Memoji as the feature.

This research aims to design the effectiveness of Memoji as the main component of a digital comic in early childhood education. Aside from that, using an educational process that is both virtual and real-world could boost children's interest in learning. As a result, they feel more at ease, and the learning process becomes more enjoyable. Memoji, a digital comic feature, is a modern technology that can help children become more engaged with the content and learn faster.

## 1.2    Problem Statement

Nowadays, people do not buy comics; digital comics come to place. Like everything else in today's world of technology, even school has been moved to an electronic/computerized environment. Besides, people do not prefer comic because it is costly. Digital comic is easy to use and convenient where people can read it on their mobile phone anywhere and anytime. Furthermore, the comic has lacked interest for children to read because most digital comic does not have animation on it, most of them are developed in static form. Through this technology, a digital comic is created as a step on how to give knowledge by using Memoji as the character development, especially for children.

## 1.3    Objective

The objectives of developing this project are:

1. To study the Memoji as the main elements for digital comic.
2. To develop web-based digital storytelling using elements identified.
3. To evaluate the Memoji effectiveness on how successful this digital comic helps the young people in understanding about the Covid-19 awareness.

## 1.4    Project Scope

The scopes in developing this project are:

### 1.1.1    Target Audience

This project was designed to develop a web-based Digital Comic storytelling about Covid-19 awareness using Memoji/Animoji that the general public could easily access. The project's primary focus is on children or teens under the age of 15.

## 1.5    Project Significant

The purpose of this project is to determine the effectiveness of Memoji as a digital comic feature. Research was conducted to look at how Memoji can improve comic books, which many overlook because today's kids don't read them, and show that Memoji can instill positive attitudes in digital comics. In addition, this project will give a brand-new experience to the audience where they can read the comic with high imagination and experience the character of themselves in the comic by using Memoji as the feature. This research aims to design the effectiveness of Memoji as the main component of a digital comic in early childhood education. Aside from that, using an educational process that is both virtual and real-world could boost children's interest in learning. As a result, they feel more at ease, and the learning process becomes more enjoyable. Memoji, a digital comic feature, is a modern technology that can help children become more engaged with the content and learn faster.

## 1.6 Conclusion

From this project, the expectation is to develop a digital comic that aims at developing a fully functional computerized system by using Memoji/Animoji to maintain all day-to-day activity. The goal of the digital comic is to make learning fun and as accessible as possible for the learner. Besides, to foster a culture of reading among young people in addition to providing knowledge. The problem statements identify the situation from its current scenario and why it is necessary to develop this project. The objectives are clearly stated in the problem statement. The goals should be realistic and attainable. Research interests clarify the specific target user, framework, and usability.

This chapter consists of the introduction, project background, problem statement, objectives, research question, project scope, and project significance. To build this digital comic with Memoji/Animoji as the element, we must know the content, give measurable objectives, overcome the problem, and the most significant of this digital comic. Moreover, chapter 2 will discuss the methodology used for this project and literature review on previous articles regarding this project.

# CHAPTER 2:  LITERATURE REVIEW AND PROJECT METHODOLOGY

## 2.1    Introduction

This chapter explains the literature review and project methodology conducted to complete this digital comic development. Previous studies and research from publishing materials like case studies, technical documents, and online libraries play an essential role in the literature review. Generally, the purpose of the review literature is to search, collect, analyze, and draw a conclusion from all the material read and studied. For this Memoji as character development in the digital comic project, the methodology used is a Multimedia Production Process. This methodology consists of three phases: preproduction, production, and postproduction model is a basic model that holds for every type of animation. This methodology is widespread, and the professional always uses this for multimedia purposes.

## 2.2    Domain

As time goes by, technology development as well as rapidly progressing, and this is including a comic book. Suppose before this, the comic is the only static 2D drawing that we can see only in the paper, in this modern era. In that case, there is a digital comic that is flexible where users can read it through their phone, tablet, or laptop and enjoy reading them in animated form. "Books are the quietest and most constant of friends; they are the most accessible and wisest of counselors, and the most patient of teachers."- Charles W.Eliot.

One of the critical roles to be played by parents is to deliver information to children. Every parent has a distinctive way of understanding children but must permanently be changed according to the requirements and needs. Reading books aloud to children stimulates their imagination and expands their

knowledge of the world. It helps them develop language and listening skills and prepares them to understand the written word. Even after children learn to read by themselves, it is still essential for you to read aloud together.

In Malaysia, many children are reading less than ever before. They instead play on their phone than spend their time reading books in their free time. It is found that fewer children enjoy reading and that this dwindled with age: nearly twice as many five to eight-year-olds as 14 to 16-year-olds said they took pleasure from reading. Overall, just 53% of children said they enjoyed reading "very much" or "quite a lot" – the lowest level since 2013. Most of the children found that reading book is boring, the comic is better. But nowadays, the comic is also hard to attract them to reading because they are easy to draw with other things such as their phone and television, which has colorful animation, compelling character, fun story, and humor. They find it more interesting than anything, especially books.

Strategies or approaches need to be used to attract people, especially the young generation, to reading. Digital comics must be creative and adjust children's paths depending on the learning and favors. The child must adapt the information submitted and the continuity of their knowledge in the family, society, and the mass media. Therefore, parents should take note and use a variety of multimedia technologies that aim to influence the development of children's knowledge.

Digital comic is Digital comics (also known as electronic comics, eComics) are comics released digitally instead of in print. Digital comics commonly take the form of mobile comics. Webcomics may also fall under the "digital comics" umbrella. The digital comic is still developed using pencils, inks, brushes, and dyes, but everything is digital, meaning that we never have to buy a paper comic; many people exclusively read digital comics. The easiest way of making it is to start by selecting a frame or page layout for the user comic. Next, import images from the user phone's camera roll as the illustrations for the panels. After the user arranges the photos, apply filters that make them look like panels in a printed comic. Memoji is a character that a

user-created, or Apple's AR Animoji used modern AR Technology that looks just like us. Memoji are personalized Animoji. It is Apple's version of Snapchat's Bitmoji or Samsung's AR Emoji. These Animoji can look precisely like users (or a version of users with yellow skin, blue hair, a mohawk, a 'fro, man bun, or a cowboy hat). For this project, Memoji/Animoji will be used as the main element for this digital comic. There are few types of animation such as hand-drawn, stop-motion, characters, effect, and visual effect of live-action that will be added in this project.

For this project, Memoji or Animoji characters will combine with 2D or 2-Dimensional computer animation techniques. The development of moving pictures in a two-dimensional world, such as through traditional cell animation or computer animation software, is 2-Dimensional. Twining, morphing, onion skinning, and interpolated rotoscoping are digital computer versions of conventional animation techniques.

## 2.3    EXISTING SYSTEM

According to (Christophe Ponsard, Mar. 2009), the idea of reading comics on a computer screen is certainly not new. On the other side, the first digital comics already appeared in the mid-eighties. Furthermore, many young authors also actively use computer software for the creation process.

Besides, according to Jen Aggleton (2018), many print comics are now created using digital software. There are e-book versions of comics available and apps such as comiXology, which provide a digitally mediated reading experience. Some digital comics are created intentionally to be read in digital format (digital-born), while others are from print publications (print-born). Some of these comics make explicit digital technology through hyperlinks, animation, or sound, while others strongly resemble print comics but have been published on digital platforms.

According to Sayid Mataram, Deny Tri Ardianto (2018), research on comics, especially those discussing structure and constituent elements, has been widely carried out. One of them was about the comic visual language