

ANALYZING THE RELATIONS BETWEEN MENU FEATURES AND
CUSTOMER INTENTION TO USE FOR SELF SERVICE KIOSK AT
MCDONALD'S DURING COVID-19 ENDEMIC



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CUSTOMER INTENTION TO USE FOR SELF SERVICE KIOSK AT
MCDONALD'S DURING COVID-19 ENDEMIC

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This Thesis Is Submitted In Partial
Fulfilment Of The Requirement For The Award Of Bachelor Of Technology
Management (High Technology Marketing) With Honour

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UNIVERSITI TEKNIKAL MALAYSIA MELAKA

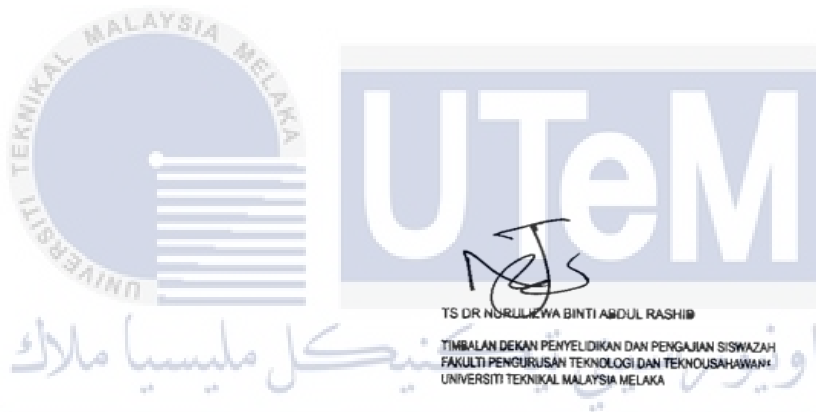
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JAN 2023

APPROVAL

'I hereby declare that I have read and go through this dissertation/report/thesis and certify that, this dissertation/report/thesis is satisfactory in the sense of scope and quality as a partial fulfilment the requirements for the award of Bachelor of Technology Management (High Technology Marketing) with Honours and will submitted to the Universiti Teknikal Malaysia Melaka.'



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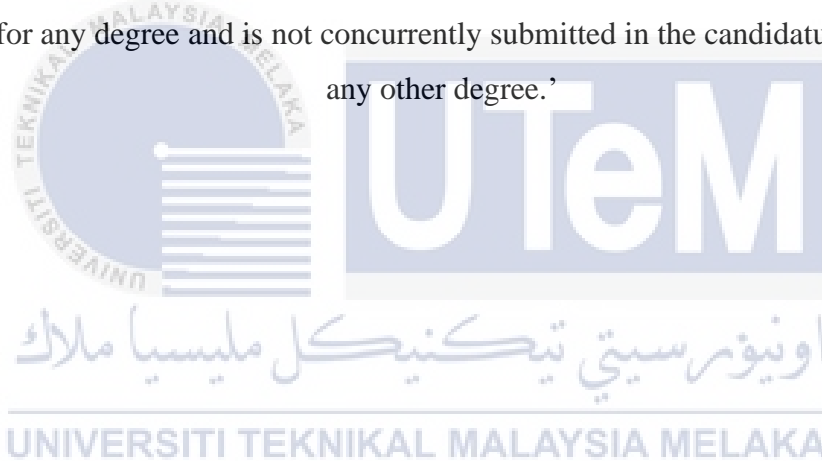


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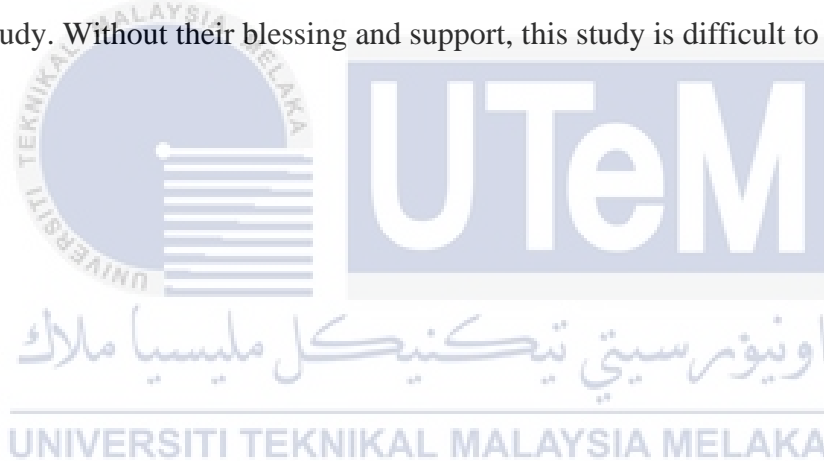
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DEDICATION

I would like to express my deepest appreciation to my precious family members who have always aided and inspired me all the time in various spiritual, economical, and motivational ways. In addition, I would also like to devote my sincere gratitude to my beloved supervisor, Dr. Nurulizwa Binti Abdul Rashid, who are willing to spend much time and patiently guided me in the whole process of this research and my classmates/friends who share their knowledge during the study. Without their blessing and support, this study is difficult to complete.



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ABSTRACT

This study aims to analyse gen X intention in using self-service kiosk (SSK) services during the endemic COVID-19. Where this time, raising problems one of the social distancing that affects a service provided, especially on services that use technology that applies SSK. This study develops from previous research where the customer has satisfaction in using SSK services at McDonald's. The kiosks are part of McDonald's modernization program called NXTGEN and are designed to allow customers "a digitized alternative to order and pay for their McDonald's favourites" and "provides a more seamless transaction process,". Hence, this study will discover about the indirect effects of the menu visual appeal, menu informativeness, design and perceived control when they use kiosk instead go to the counter at McDonald's during COVID-19. In completing this study of research project, the quantitative method was chosen for data collection and the Statistical Package from the Social Science (SPSS) Version 22 will be utilized for data analysis. The constructed questionnaires will distribute to 150 of target respondents as well as X-generations in Malaysia that have use Kiosk At McDonald's during endemic of COVID-19 by the URL or links of Google Form through WhatsApp, Telegram, Facebook, and other network-based applications. By the analyse of collected data from target populations, the findings reveal that four independent variables have significant relationship toward dependent variable and beneficiary for McDonald's in adapting to retain their competitive even though the crisis of COVID-19 endemic.

Keywords – *Menu visual appeal, Menu informativeness, Design, Perceived Control, Consumer intention to use, X-generations, SPSS.*

ABSTRAK

Kajian ini bertujuan untuk menganalisis niat gen X menggunakan perkhidmatan kiosk layan diri (SSK) semasa pandemik COVID-19. Di mana kali ini, menimbulkan masalah salah satu penjarakkan sosial yang menjejaskan sesuatu perkhidmatan yang diberikan khususnya pada perkhidmatan yang menggunakan teknologi yang mengaplikasikan SSK. Kajian ini dibangunkan daripada kajian lepas di mana pelanggan mempunyai kepuasan dalam menggunakan perkhidmatan SSK di McDonald's. Kiosk tersebut adalah sebahagian daripada program pemodenan McDonald yang dipanggil NXTGEN dan direka bentuk untuk membolehkan pelanggan "alternatif digital untuk memesan dan membayar kegemaran McDonald's mereka" dan "menyediakan proses transaksi yang lebih lancar,". Oleh itu, kajian ini akan mengetahui tentang kesan tidak langsung daya tarikan visual menu, kemakluman menu, persepsi risiko COVID-19, reka bentuk dan persepsi kawalan apabila mereka menggunakan kiosk sebaliknya pergi ke kaunter di McDonald's semasa COVID-19. Dalam menyiapkan kajian projek penyelidikan ini, kaedah kuantitatif telah dipilih untuk pengumpulan data dan Pakej Statistik daripada Sains Sosial (SPSS) Versi 22 akan digunakan untuk analisis data. Soal selidik yang dibina akan mengedarkan kepada 150 responden sasaran serta generasi X di Malaysia yang telah menggunakan Kiosk Di McDonald's semasa pandemik COVID-19 melalui URL atau pautan Borang Google melalui WhatsApp, Telegram, Facebook dan lain-lain berasaskan rangkaian. aplikasi. Dengan analisis data yang dikumpul daripada populasi sasaran, penemuan mendedahkan bahawa empat pembolehubah tidak bersandar mempunyai hubungan yang signifikan terhadap pembolehubah bersandar dan benefisiari untuk McDonald's dalam menyesuaikan diri untuk mengekalkan daya saing mereka walaupun dalam krisis pandemik COVID-19.

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LIST OF ABBREVIATIONS

ABBREVIATION	MEANING
IV	Independent Variable
DV	Dependent Variable
SPSS	Statistical Package For Social Science
COVID-19	Coronavirus 2019
F&B	Food and Beverages
Gen X	X Generation
MOH	Ministry of Health of Malaysia
URL	Uniform Resource Locator
MVS	Menu Visual Appeal
MIF	Menu Informativeness
DGN	Design
PC	Perceived Control
MCO	Movement Control Order
SSK	Self-Service Kiosk

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CHAPTER 1

INTRODUCTION

1.0 Introduction

Chapter 1 is about the outline of the study that will elaborates a general view of the background study which related to the relations between menu features and customer intention to use for self-service kiosk at McDonald's during COVID-19 endemic. Thus, the readers may get information and understand about the types of menu features from this chapter. Besides, this chapter will discuss about the problem statement with giving the meaning of consumer intention to use. Apart from that, this research also comprises of research questions and research objectives, the scope of study, significant of study and limitation of study.

1.1 Background of Study

COVID-19's outbreak in early 2020 has a tremendous impact on the global economy. The essential criteria of COVID-19 prevention and control is "no touch, no gathering." It has hastened the evolution of service models in numerous industries, as well as changing consumer behaviour patterns. The client experience with SSK in an offline self-service setting is mostly determined by interactions with machines, equipment, and facilities. Customers' attitudes and intentions to use these gadgets will surely be influenced by the qualities of these devices and the characteristics of the environment in which they function (Guan et al., 2021) .

Self-service technologies have been defined as a technical interface that allows clients to create services without the assistance of a service representative (Meutner, 2000). As the food service sector grows, technology advances that improve service operations are being developed and deployed at a rapid pace. According to (Kimes & Uk, 2008), self-serving technology can increase the speed of service by allowing for more accessible customization of meals in accordance with the needs of customers, which is typically difficult when ordering through traditional cashiers, lowering the rate of error, and influencing customer satisfaction.

McDonald's has launched self-service kiosks in Malaysia, with the initial sites in Bukit Bintang and Bangsar Telawi. This follows shortly after the introduction in neighbouring markets, Singapore, and Hong Kong. Customers may utilise the service to place orders and make payments without waiting in line. At the self-service kiosks, customers may customise their burgers according to their tastes. Place any order, whether a la carte or a set meal, pay, and wait for the pickup counter to call your number.

1.1.1 Menu on Self-Service Kiosk

There's a lot of research talking about the menu that attract a lot of people to adopt Self-Service Kiosk. According to the (Hou et al., 2017a), picture which reflect dishes with ambiguous names, have a positive impact on verbalizers, unlike visualizers. (Rabab'ah & Al-Qudah, 2022) revealed that sensual, emotional, desire, pleasure, and thought and brand appeals were used to persuade the restaurants' customers of the menu dishes. (Sari et al., 2022) revealed the context of a restaurant, where the menu description will also make it clearer about the composition of the menu so that it will make it easier for consumers to decide which menu to choose. Previous research has explained that an increase in visualization, such as adding photos to the menu will increase the positive attitude of consumers related to the existing menu (Hou et al., 2017a).

1.1.2 Definition of Menu Features

A menu is a list of food items that are available to be served in a specified order or a list of drink and beverage items that are available to be served. The menu is an important part of the foodservice concept since it defines the product offering, creates crucial financial factors such as price and contribution margin, and serves as a potent marketing tool. A caterer's F&B objective is encapsulated in a menu. People usually dine out for a variety of reasons. As a result, the menu announces to guests the variety of food products offered, which is an important component in popularising a restaurant and encouraging F&B sales.

Prior research has revealed issues with product positioning on menu screens, with the major purpose of menu features in kiosks being to promote the caterer's desired products. This paper investigates how menu features influence customer intention to use McDonald's self-service kiosk. The value of the menu to restaurant operations and customer experiences is described by the essential qualifications assigned to it. In fact, modern definitions of menu include both material and metaphysical aspects. A menu is a list that describes the food and beverage selections that a restaurant offers (Ozdemir & Caliskan, 2014). Immaterial

meanings of menu emphasise that it is a medium that influences customers' perceptions of restaurant experiences (Wansink et al., 2005a), as well as an element of restaurant management that necessitates critical managerial activities like planning, pricing, designing, and analysing (Jones & Miffl, 2016)

1.1.2.1 Types of Menu

À la Carte

This term is a 19th-century French loanword that means 'according to the menu.' A la Carte is a menu containing a range of foods priced separately. It allows customers to choose their preferred menu from a wide range of options, which may include additional main courses and toppings. In another way, each category will feature a diverse range of items. And these courses are charged separately, which means that the price varies depending on the consumer's method. Whereby the cost is based on the things the customer orders.

Based on the previous information McDonald's use a la carte menus because customer can buy items almost anything individually. Thus, the a la carte makes this possible. In an à la carte price strategy, the customer sets up a product package and determines the purchase price depending on product options. Utilizing a la carte pricing with the proper rules can help to develop a more efficient income generation system.

1.1.2.2 Menu Design

The menu is a listing of available or offered food and drink products that are mostly based on consumer demand and designed to achieve organisational objectives. It is the pivot point around which all other components of the food service system revolve. The menu has been meticulously crafted to appeal to the establishment's intended clientele. The greatest advantage of a well-planned menu is that it leads to customer happiness. In addition, it helps drive the restaurant personnel to deliver responsible and outstanding service.

A menu is a marketing strategy for a restaurant since it seeks to develop consumer perceptions (McCall & Lynn, 2008a). The majority of restaurant menu research has centred on product placement and how particular goods with the biggest profit potential for the restaurant may be located (Bowen & Morris, 1995; Mill, 2001; Guéguen et al., 2012). For instance, it is found that properly organised menu design may support the sale of complementary menu items (Bowen & Morris, 1995); Raab et al. (2010) consider of advancing in menu technology which take account of the profit margins and sales volumes for menu items; and Fang & Hsu (2014) take into account profit margins and the influence of various menu items on efficiency of business operations.

Some of this product's placement studies include eye tracking to analyse the scan paths of menu-browsing clients. For instance, eye-tracking technology is utilised to determine that the actual scan patterns of customers do not correspond to the industry's current understandings of menu design (Yang, 2012). Even though the physical and design features of a menu determine impression size and service quality, the current menu research mostly disregards this fact (Wansink & Love, 2014; Verhoeven et al., 2009; Reynolds et al., 2005).

- **Font style**

According to Doyle and Bottomley (2004), the use of a particular typeface for a certain product or brand can have a positive effect if the association of font is effectively exploited and the font is not suitable for conveying the intended image. However, the researcher was unable to locate any academic studies that evaluated the effect of menu fonts on perceived client size or anticipated quality of service in restaurants. Several sorts of study have been conducted outside of the restaurant industry. For instance, it has been determined that the use of italicised text in study materials has improved the educational outcomes of pupils, resulting in enhanced memory performance by italicised typefaces (Diemand-Yauman et al., 2011). These findings are founded on motivational theories that argue that more elaborate designs generate excitement and are more valued if they are articulated (Berlyne, 1971; Hirschman, 1980).

According to Underwood (2003), some marketing study focuses on product packaging as a visual equity trigger, however Doyle and Bottomley (2004) demonstrate that font adequacy in the images of a brand may also play a significant role in the formation of visual equity. In a restaurant setting, Bowen and Morris (1995) assert that the menu provides physical evidence of the establishment's desired image. The level of service provided is a crucial component of the branding and image of a restaurant, as research indicates that level of service can generate company brand equity (Berry, 2000). Consequently, the concept of visual equity and the cognitive hypothesis that font can affect the dimension and perceptions of service are also important.

- **Background Colour**

Colour conveys symbolic and associative information and is a crucial means of expressing product and brand significance, contrast, and innovation (Garber et al., 2000; Schmitt & Pan, 1994). The use of colour on items such as packaging, labelling, and logo influences customer perceptions of the product and brand (Grossman & Wisenblit, 1999; Aslam, 2006). As with font type, research

on the effect of dining menu background colour on the perception of service quality is rather limited and has demonstrated that consumers' ability to rate a product on a menu is extremely limited (Litsikas, 1996). What scant research exists on the influence of restaurant menu colour is mostly anecdotal as opposed to empirical.

A product's colour may be an important indicator of its quality and price (Kerfoot et al., 2003). This study investigates gold and white colours. According to research, gold or silver backgrounds are widely used to signify prominent and luxury items (Allen, 2013). Consumers in the United States associate gold with "beautiful, great, pleasant, sharp, vibrant, and energetic" and white with "calm and calming" (Madden et al., 2000). The impacts of colour are theoretical anchor in grounded cognition (Barsalou, 2008) and visual equity (Lightfoot and Gerstner, 1998).

Thus, the PSS component of the fundamental cognition theory (Barsalou, 2008) supports the notion that colours may be psychologically related to particular importance, as PSS suggests that a single multimodal human intelligence system may accommodate several modes of information interpretation. Moreover, sensory inputs may have a distinct but related effect on decisions (Lakoff & Johnson, 1980; Williams & Bargh, 2008). Moreover, visual equity also supports the notion that colours, as they contribute to branding efforts, may be psychologically associated with certain meanings.

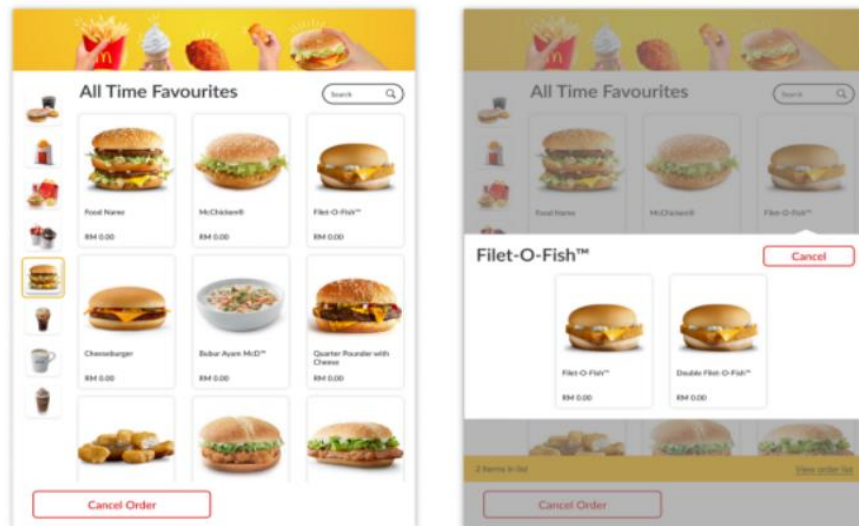


Figure 1.1: Main menu & Food selection



Figure 1.2: Drink Customisation

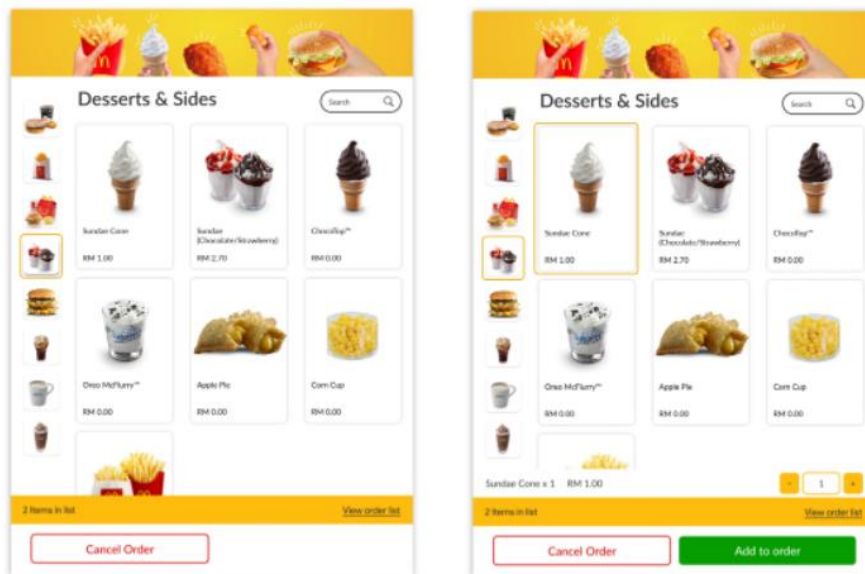


Figure 1.3: desserts & Sides

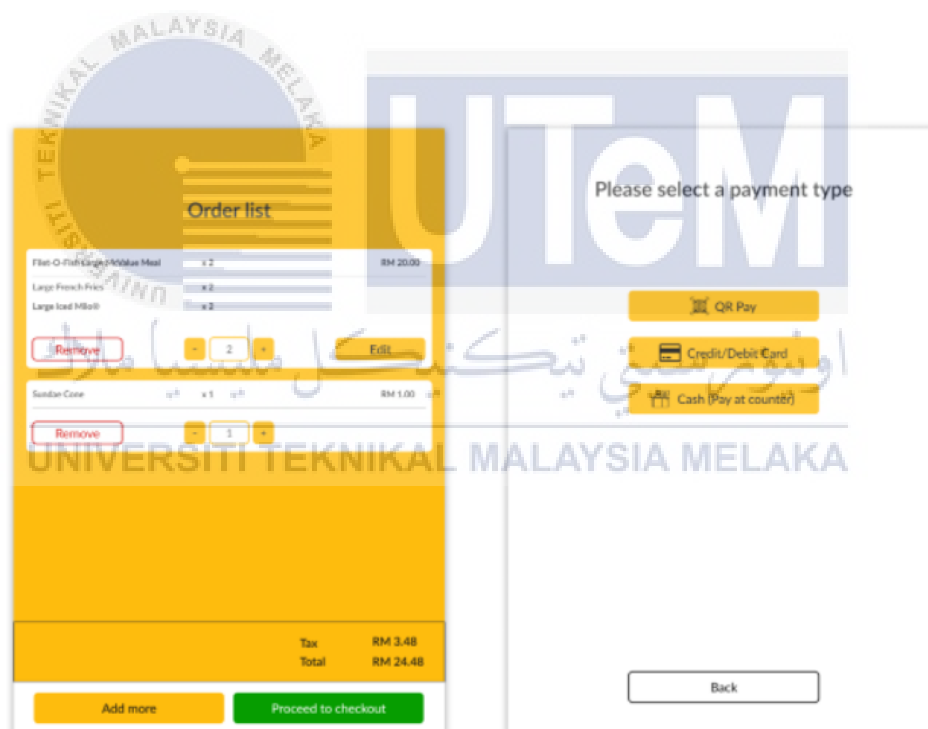


Figure 1.4: Order list & Payment types

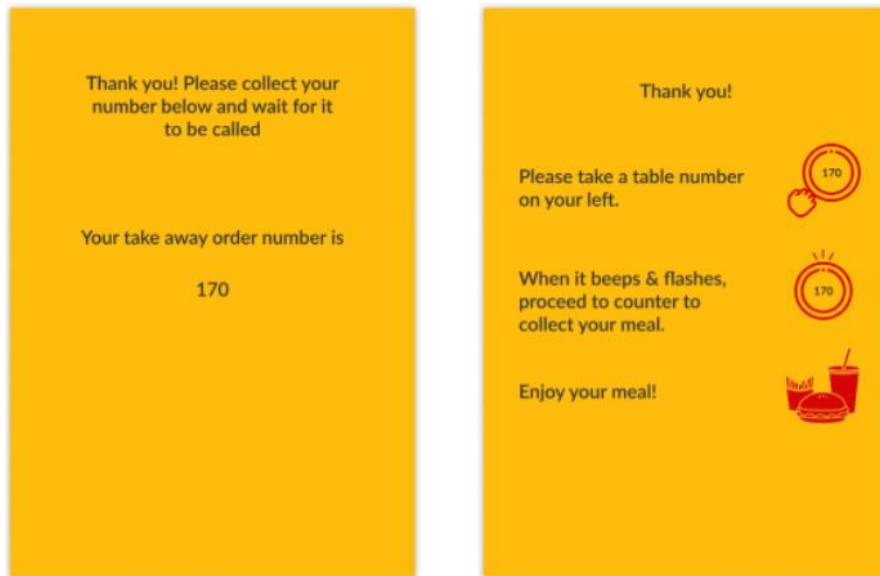


Figure 1.5: Thank you pages (Take Away & Dine In)



1.1.3 The Effect of COVID-19 in Malaysia

The COVID-19 pandemic outbreak is a major problem on a global scale because it has a significant influence on several industries and, consequently, the national economy. It is a virus that has spread around the planet and can kill humans. In Malaysia, the number of newly confirmed cases would increase gradually beginning in January 2020. However, the frequency of COVID-19-positive cases in Malaysia climbed progressively when a Tablighi Jamaat religious gathering was organised in Sri Petaling, Kuala Lumpur. After a few weeks of the religious event, Malaysia has become the most afflicted country in Southeast Asia due to the quick increase in cases (Elengoe, 2020).

As COVID-19 instances have increased in Malaysia starting March 2020, the government has announced the implementation of Movement Control Order (MCO) to prevent the spread of viruses through social isolation. With the introduction of MCO, public limitations and the permanent closure of several enterprises followed. Consequently, the COVID-19 pandemic has had an impact on the economy of a country comprised of several industries (Che Omar et al., 2020). The COVID-19 pandemic is a long-term threat on a global scale since there was little time to stop its spread. Figure 1.6 depicts the global incidence of COVID-19 infections as reported by the Ministry of Health of Malaysia (MOH) until December 16, 2020. From the graph, it is evident that the total number of cases of COVID-19 pandemic infection in afflicted countries throughout the world may be determined.



Figure 1.6: Statistic of Infected COVID-19 Cases Worldwide

The COVID-19 epidemic in Malaysia can have a wide range of effects on several business sectors, as the public's ability to travel freely and make purchases has been curtailed, therefore altering their shopping habits. According to The Edge Markets. (2020), the unexpected breakout of COVID-19 has had a significant impact on restaurant operators who lacked an effective response strategy. Aspects of the demand and supply for potential clients might provide difficulties for restaurant managers. COVID-19 has a negative impact on the sales and earnings of restaurateurs that rely on conventional marketing to conduct their businesses.

1.2 Problem Statement

As discussed in the preceding section, despite the introduction of these innovative self-service technologies that were designed to improve the consumer's life and facilitate the completion of their daily activities, consumer acceptance and actual adoption of self-service technologies has been viewed as lagging and less than it should be, and the number of consumers using these services has not increased to the extent expected (Flavián, Torres & Guinalú 2004).

One such problem is the difficulties experienced by older adult during the use of SSK (Laura Boniello Miller, 2019; Park Ju-Young, 2019; Sean Poulter, 2017). Many older adult users find it difficult to read text information displayed on SSK (Hagen & Sandnes, 2010), figure out the correct user action sequence for a given SSK task (Barnard et al. 2013), and perform prolonged standing while conducting an SSK task (Park Ju-Young, 2019). Many describe the experience as stressful, unpleasant, and physically demanding. These difficulties can be largely attributed to the failure in considering the personal, attitudinal, and situational characteristics of older users in the design of SSK (H. J. Lee & Lyu, 2019). Aging is associated with significant declines in perceptual, cognitive and motor control abilities, and muscular strengths (Iancu, I. and Iancu, B., 2017; Caprani et al., 2012). The older adults are also characterized by technology anxiety and lack of confidence towards technologies that negatively affect task performance during the use of technologies (e.g., Dean, 2008; Wang et al., 2012; Gelbrich and Sattler, 2014). These attitudes are known to be invoked by situational stressors, such as time pressure and the presence of others.

The difficulties described above represent a significant problem as they can seriously compromise the functioning and well-being of the older adults in everyday life. Indeed, they should be understood as barriers that exacerbate the current generational digital divide for the aged population (Van Dijk, 2006). The digital divide, defined as inequities in terms of who accesses and benefits from the digital landscape (Fang et al., 2019), is deeply related to decreased social

engagement and lower life independence (Hill et al., 2015). It is also known to produce a new form of social isolation referred to as “digital exclusion” (Seifert et al., 2018). Hill et al. (2015) described digital exclusion as a “cumulative, self-propelling spiral of isolation whereby the digitally rich continue to become included and the digitally poor continue to become isolated within a culture where more of society's business and culture is conducted through technology.”

This study has the limited research study about what factors that encourage the adoption of self-service kiosk (SSK) especially in the developing country such as Malaysia among the X generation. Thus, to fulfil the gap in the literature, this research on factor of gen X intention to use self-service kiosk at McDonald's needs to study since there is lack of research related to it. Since this study would contribute significantly to the typical literature by expanding the knowledge and understanding of customer preferences to a more extensive framework of conceptual in the context of restaurant menus on SSK. Hence, this research aimed to investigate the problem that related to customer intention to use self-service kiosk focuses menu features at McDonald's among gen X. Based on previous research by (H. J. Lee & Lyu, 2019), the proportion of the older population is growing, most of the research on technology adoption behaviour, such as the adoption of self-service technologies (SSTs), tends to focus on younger consumers. To fill the gap, the research is designed to explore factors which motivate older consumers' adoption of SSTs by applying Gatignon and Robertson's diffusion process model.

From year 2020, the unexpected crisis of COVID-19 pandemic in Malaysia had brought many impacts to different industries such as economy and commercial sectors. The lockdown announcement by government aims to restrict the movement of public and thus cause all the businesses forced to close their operations temporarily except essential services (Elengoe, 2020). Due to forced shutdown, companies are facing lots of uncertainties in various phases of their operations such as change in demand of customer, supply chain, retention of people, payment of salaries and wages and daily operation activities (Nurunnabi, 2020). When the movement control order was finally rolled out on 18 March 2020 (Tang 2022). All business premises, including McDonald's have been allowed to operate

according to the hours set by the government. Therefore, using SSK can reduce the risk of COVID-19 spreading.



1.3 Research Questions

In order achieve to the objectives, this study of measuring impact of self-service kiosk focuses on menu features that effecting customer use intention during Covid-19 among gen X will try to answer the following research question:

- i. What are the factors of menu features affecting gen X use intention of self-service kiosk in McDonald's?
- ii. What are the relations between menu features and gen X intention to use self-service kiosk at McDonald's?
- iii. What is the most significant factor of gen X intention to use self-service kiosk at McDonald's?



1.4 Research Objectives

To complete my research, this study will search problem that related to customer intention to use self-service kiosk focuses menu features at McDonald's. Below are the objectives of this research:

- i. To investigates factors of menu features affecting gen X use intention of self-service kiosk in McDonald's.
- ii. To measure the relations between menu features and gen X intention to use self-service kiosk at McDonald's.
- iii. To determine the most significant factor of gen X intention to use self-service kiosk at McDonald's.

1.5 Scope of Study

This study will explain the relationship between menu features and customer intention to use for self-service kiosk on McDonald's. Through this study, the researcher also will be discussing the factor of gen X use intention on self-service kiosk in Malaysia. This research will focus on the SSK and the survey questionnaire will be employ.

This study will emphasis on the gen X use intention towards self-service kiosk focuses on menu features at McDonald's during COVID-19 pandemic in Malaysia. In this research, the target respondents will emphasis on McDonald's customer that using self-service kiosk during COVID-19 among gen X. This research is using quantitative method; thus the questionnaires will distribute randomly to the target respondent via online survey such as Google Form. Through this research, the researcher will discuss about the relationship between the effects of self-service kiosk that focuses on menu features at McDonald's towards gen X use intention during COVID-19.

1.6 Significant of Study

To archive the objectives of this research, the researcher can get more understand on factor the gen X use intention of self-service kiosk at McDonald's. Moreover, the researcher can examine the most significant factor of customer intention to use self-service kiosk at McDonald's during the endemic of COVID-19 among gen X and relationship between the factors of self-service kiosk on menu features and customer use intention during the endemic of COVID-19. This research can provide readers an information especially owner of fast-food restaurant about the factor will affect onto customer intention to use self-service kiosk on menu features during this COVID-19 endemic crisis.

1.7 Limitation of Study

In this study, the endemic of COVID-19 has limited the researcher's ability to carry out paper survey to the target population with the form of questionnaire. Therefore, the researcher can only randomly distribute the online survey form to target respondents from different regions. Furthermore, the difficulty of data collection from limited sample size of respondents participates in this research. Last with the limitation of time to conduct and complete the study for this research project. It is only had around 9 months for researcher to comprise completely all sections of the research project.

Summary

The overview of the research study has summarised in this section. The background of the study focused on the factors that affect gen X use intentions in SSK during the endemic of COVID-19, types of online menu, and applications of menu design. After that, the study is accompanied by the descriptions of problem statement, research objectives, research questions, scope of study, significant of study, and limitation of study. The literature review will be further explored and discussed in Chapter 2.

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

The literature review is a detailed assessment of relevant material gathered from many sources. The purpose is to provide an understanding of the research issue. This research aims to examine the intention of gen X to use the self-service kiosk at McDonald's during the coronavirus epidemic. Hence, this chapter will analyse the analysis based on a list of published articles concerning the aspects of self-service kiosk menus influencing consumers' intention to use during the COVID-19 crisis. In addition, research on Menu Visual Appeal (MVS), Menu Informativeness (MIF), Design (D), and Perceived Control (PC). Based on this chapter, the review will conclude all relevant research, including the study covered in Chapter 2.

2.1 Pandemic of COVID-19 in Malaysia

In the outbreak of infectious disease, individuals may become fearful, anxious, concerned, and overwhelmed by news, laws, and restrictions under these stressful circumstances. Self-quarantining and social distancing are examples of public health measures that can elicit significant emotions in both children and adults, resulting in shifts of eating and sleeping patterns (Centres for Disease Control and Prevention, 2020). Prior study showed that people were less likely to restrain temptation and more food intake to make themselves feeling good emotionally when they were stressed (Zellner et al., 2006; Fedorikhin & Patrick, 2010). According to the results of this research, consumers would most likely prefer for convenience services from an online restaurant in order avoid closing contact with other individuals during the COVID-19 pandemic.

When a marketing stimulus was performed with this social stimulus, such as the restaurant menu appealing of an online meal ordering business, customers' intermediary states are likely to be facilitated, which is mirrored in their purchase decisions. Due to the huge number of advertisements and information on the Internet, restaurant operators will continue to have difficulties in properly promote their establishments. In this digital competitive world, creating an engaging menu for online restaurant is one of the primary motivating elements in directing intention to use of consumers.

Especially during this COVID-19 crisis, eateries should not only rely on their service performance of dine-in but also on their performance of online service to generate a competitive advantage. Firstly, it is recommended that management need to identify the products necessary then recognize that menus may have a big impact on customers perception of a dish during the phases of pre-purchase, purchase, and post-purchase. By doing so, it will affect consumer satisfaction and loyalty as well as impacts directly to the current and future financials of business. Furthermore, small business restaurateurs are

recommended to be reliable on business developments where to stay competitive and current as well as acquire sustainability among other competitors during this outbreak of disease.

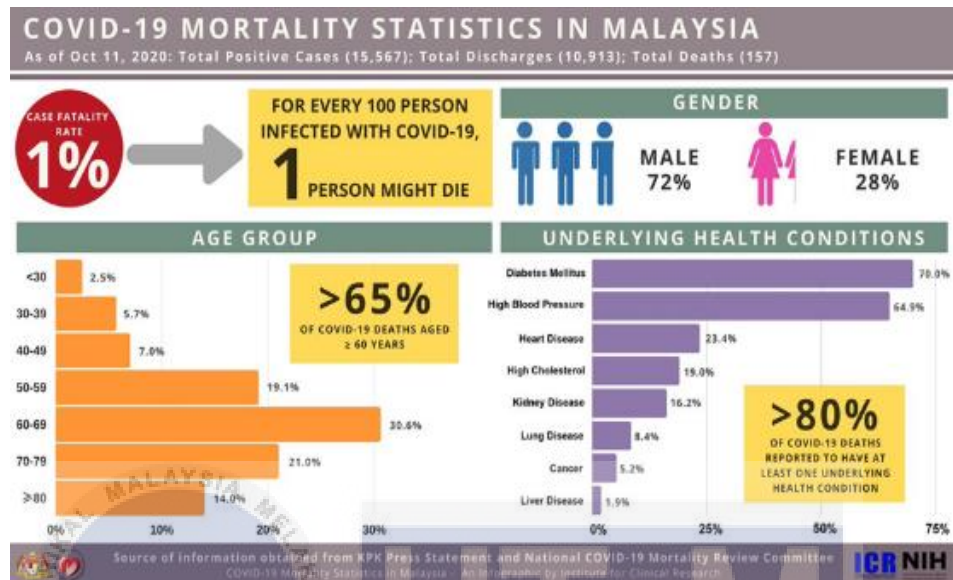


Figure 2.1: COVID-19 mortality statistics in Malaysia

2.2 Introduction of Self-Service Kiosk in Malaysia

A self-service kiosk is a tool that enables customers to engage directly with a company and make purchases at their leisure. For instance, self-service kiosk adaption may be seen while purchasing rail or bus tickets. A consumer approaches a self-service kiosk, pays the required fee, and obtains a ticket. This method is rapid thanks to a kiosk automation system, so there is no need for lengthy wait or personnel to do the job manually. Another excellent example is restaurants. A kiosk expedites direct ordering to the kitchen. This approach helps clients remain secure and prevents the transmission of the Covid-19 virus by minimising human touch. These kiosks extend beyond the realm of commerce. They are also helpful for hotel check-in and check-out. In addition, offices use them to check-in guests. And airports use their capacity to allow you to check in for your flight to save you and the airline time.

A self-service kiosk's primary purpose is to ease client engagement, enabling a fast and straightforward transaction for both sides. Commonly, these kiosks include payment alternatives, check-in help, branding or advertising, and inventory management. You may use NFC to secure payment choices on a self-service kiosk, allowing the purchase of several digital services via an automated device. Self-service kiosks facilitate the check-in process for hotels and airlines, saving much more time than alternative check-in options. Promotions may be displayed prominently on the kiosks, allowing the organization to satisfy the branding and promotional objectives without additional effort quickly. With so many people and substantial foot traffic to these kiosks, a service must be provided swiftly, which the kiosks offer, guaranteeing that automation is maintained at a high level.

2.2.1 Self-Service Kiosk for Food Industry

Self-service ordering kiosks are rolling out across the nation, transforming the fast food and restaurant sector in a significant way. Self-service kiosks designed to give prompt service, eliminate the ordering line, and increase sales revenue. Incorporating technology into the hospitality business is one of the methods that restaurateurs have chosen. The modification of menus to include images and nutritional information is one example of how restaurant managers are now utilising technology to improve customer service (Buchanan, 2011a; Hsu et al., 2013a; Huber et al., 2010). According to (Markovic Suzana et al., 2010), the restaurant industry is a competitive sector where customers expect to receive excellent service and an entertaining dining experience. Therefore, to maintain existing consumers, attract new business, and increase market share, the restaurant industry must stay abreast of technology advancements and apply new technologies (Kimes & Sheryl E 2008; Johanthan Maze 2017).



Figure 2.2: Kiosk for food ordering

2.2.2 Self-Service Kiosk for Hotel Industry

Vendfun, a Melaka-based developer of hospitality kiosk solutions, has introduced a revolutionary 2-in-1 kiosk that combines self-service check-in and check-out capabilities with vending capabilities, hence aiding hotel operators in managing resources and reducing operational expenses. A 50-inch touch-screen panel on the Vendfun Hybrid Kiosk enables customers to check-in and check-out, receive promotional vouchers, and purchase items such as food and beverages. The Vendfun Hybrid Kiosk, for which a patent is pending, is sold to budget hotels and homestays in Malaysia and is available for rental and rent-to-own straight from Vendfun (TTG Asia, 2021). The Vendfun Hybrid Kiosk is equipped with a cashless payment option, a passport scanner, a receipt printer, a room card dispenser, and vending capabilities. The Hybrid Kiosk is also compatible with any hotel property management system (PMS) software, allowing hotels to customise certain features.



Figure 2.3: Vendfun Hybrid Kiosk installed at GM Hotel Sunway Metro

2.2.3 Purchase Public Transport Ticket



Figure 2.4: Self-Service Kiosk at Melaka Sentral

Self-service bus ticket kiosks connect carriers with public administration, providing statistical and detailed information, while reducing financial costs and focusing human attention on areas of greater relevance. The Kiosk implementation is very easy to use and even users satisfied with the services offered because it is so effective.

2.2.4 Payment for Parking Ticket



Table 2.5: Parking Autopay at Pavilion KL

An automated parking system based on a self-service kiosk, or a parking automated payment machine makes it possible to combine different elements - barrier gates, an automated cash desk, a parking ticket machine in one device. At the same time due to the flexible software our parking payment kiosks can be an independent, effective solution for both small and medium-sized parking lots as well as a part of a large system that combines a tracking system for monitoring free parking places, a parking navigation system, video monitoring and a license plate recognition.

2.2.5 Ticket Kiosk for Movie Cinema



Table 2.6: Ticket Kiosk at Mid Valley Megamall outlet

Customers can buy cinema ticket through kiosk to buy the ticket movie. For the kiosk cinema booking system, users can print or buy the cinema ticket through kiosk. The first kiosk ticketing system was My Bilet which is in Turkey while the first kiosk ticketing system in Malaysia was deployed by Longbow (Anon., 2015). This system was located at TGV Cinema since September 2015. This kiosk system usually will be located at malls or cinema. This will save users time as users no need to have a long queue to buy the tickets. This system supports debit or credit card, online banking, and e-wallet payment. Users cannot buy the ticket anytime and anywhere as the location of kiosk system is specified such as mall and this specified location will be closed on certain time. After the business hours of certain location, users must wait until it opens.

2.2.6 myATM

myATM has been involved in the ATM and self-service kiosk (SSK) industry over 10 years. They are the first pioneers to deploy SSKs in Malaysia and have an established partnership with Touch 'n Go. myATM helped clients improve their revenue collection and customer service also build a solid reputation in the handling a high volume cash transactions. According to the (Anthony Lim, 2018), Thruway concessionaire Additionally has reported that in expansion to the existing client benefit centres or reload paths, and interstate clients can presently top-up their PLUSMiles or Touch 'n Go cards at 32 self-service booths (SSK) at chosen rest and benefit zone (RSA) areas and toll squares.

The SSK machines, located in some RSAS with closed ATMs and food court sections, are open 24 hours a day. They are available at the RSAS in Tapah (both directions), Seremban (both directions), Sungai Perak (both directions), Ayer Keroh (both directions), Pagoh (both directions), Dengkil (southbound), Gunung Semangol (northbound), Sungai Buloh overhead bridge eatery (both directions), and Simpang Pulai lay-by (both directions) (southbound). Additionally, SSK machines are now accessible at certain toll plaza operations offices on Bidor, Bukit Beruntung, Bukit Raja, Jalan Duta, Kajang, KLIA, Kota Damansara, Nilai, Rawang, Rawang Selatan, Seafeld, Setia Alam, Subang, Sungai Besi, Tanjung Malim and USJ.



Figure 2.7: Touch n' Go Kiosk

2.3 Self-Service Kiosk at McDonald's

Modern technological advancements are transforming human activities, processes, and behaviours. More individuals are avoiding going to libraries because of the rise of mobile devices like smartphones. This community's traditional reading culture has also been affected. Many people are currently concentrating on their professional goals and objectives. People cannot visit public institutions because of the long lines they encounter. The choice to provide self-service kiosk will change the current scenario by encouraging more citizens to use this service.

A self-service kiosk is an interactive tablet or touchscreen computer that enables clients to access information or services without interacting directly with a person. Self-service kiosks can help a business grow operations more rapidly and cost-effectively. Visitors may perform self-service operations without waiting for

assistance, allowing employees to focus on other duties that provide more excellent value to clients or benefit from the face-to-face connection.

Self-service kiosks are becoming more common. In addition to McDonald's example, KFC self-service kiosks are now available in the UK, currently in service stations throughout the highway network. Burger King self-service kiosks are also available in similar locations. With such high volumes of consumers year-round, it is reasonable to implement queue and order time reduction strategies to boost income by processing more orders in a shorter length of time using self-service kiosks for fast food transactions. This type of 'touch 'n' buy' self-service kiosk in food and beverage establishments is not for everyone. Visitors to a traditional restaurant are unlikely to wish to order from a screen since they value the staff's service and the whole experience of having their order taken and handled personally. Both sorts of experience are welcome in the food and beverage industry for the time being. (Alexander et al., 2010)

Furthermore, although using a kiosk did not necessarily accelerate the service process, it provided more time to consider options and less time to wait to be served. The kiosks also featured clear menu categories with photos, straightforward English directions, and typically straightforward ordering and payment procedures. Compared to the quantity of menu, ingredient, discount, and promotion information supplied at the service counter, the kiosks gave more detailed and precise information. Thus, McDonald's kiosks allowed customers to customize meals, discuss menu options, and change orders without feeling like they were bothering an employee or holding up other customers. This sensation of empowerment and control alleviated the pressure to place orders quickly at the service counter or delay other customers.

2.4 Factors of Customers use in Self-Service Kiosk at Mcdonald's

2.4.1 Menu Visual Appeal

There are many studies related with this research by previous researchers which is about the designs of menu to enhance fast food restaurant profitability. These analyses have included the effects of restaurant menu descriptions on diners' behavioural intentions (Fakih et al., 2016; McCall & Lynn, 2008a), the influence of restaurant menu design on consumers' perceptions (Magnini & Kim, 2016), the outcomes of descriptive menu labels on sales (Wansink et al., 2005a), and the effect of pictures and food names on menu evaluations (Hou et al., 2017b). Although many of these attempts have shown some effectiveness in enhancing consumers' purchasing intentions and actions, little study has been undertaken on how menus' aesthetic attractiveness and informativeness impact consumers' intermediate states and intention to use. Specifically, few researchers have examined how self-service kiosk menus affect customers' need for eating, the perceived convenience of self-ordering, and intention to use during a stressful pandemic.

According to (Dini 2021), When compared to traditional menus, e-menus can provide more interesting, detailed and interactive information. Views like this are expected to improve the overall customer experience. it replaces or assists human roles and active inputs into service encounters by visually integrating interactive digital content into the physical environment (de Keyser et al., 2019). Menus can be considered as the customers' first point of communication with the restaurants (A. Lee & Kim, 2020). Menus' visual appeal has been widely researched. For example, Brewer and (Brewer & Sebby, 2021; Tonkin et al., 2019) found that menus' appeal influenced how consumers felt about the food they purchased. Therefore, the visual appeal and informativeness of a menu provide important tools for increasing consumers' interest, desire, and decision to purchase (Hou et al., 2017c). Scholars indicated that pictures are more effective in drawing customers' attention, creating positive images, attitudes, and behavioral intentions (Hou et al., 2017c).



Figure 2.8: Menu Visual Appeal

Furthermore, the goal of menu design in the restaurant industry is to draw clients' attention to the places that provide the most marketable meals (Kochilas, 1991). The attractive menu informs customers and helps food businesses increase earnings (Dayan & Bar-Hillel, 2011). The background, text colours, textures, photos, fonts, menu size, dialogue boxes, products, and pricing placement are all visual components of the menu design that impact the intents and responses of customers (Reynolds et al., 2005). According to previous research on the effects of photographs on dining menus, various ethnic and cultural groups have distinct preferences for restaurant menu photos of food products. The addition of graphics to each dining menu item increased positive feelings about the menu among customers who receive verbal information and construct mental images (Hou, Yang and Sun, 2017)

Pictures combined with item labels on menus are a common practice in the restaurant industry. However, it is not sure if adding photographs to menus always result in positive outcomes. Because more restaurant owners use perplexing names for their dishes, it's also necessary to look at how pictures of different food names influence customer perceptions and behaviour. The current research investigates the combined impact of visuals, food names, and individual information processing processes on consumer attitudes, willingness to pay, and intention to use. According

to the findings, the inclusion of photos to popular descriptive food names had a positive influence on consumers' attitudes regarding the menu item, their willingness to pay, and their purchasing intentions. Furthermore, visuals only positively influenced verbalizers when it came to confusing food names. After seeing meals with ambiguously labelled photographs, visualizers show less favourable attitudes and behavioural effects than after viewing dishes without photos. (Hou, Yang and Sun, 2017)

In the United States, particularly at casual and fast-food restaurants, the menu typically contains images and names of articles to carry further information and promote sales. Unlike dish titles, photos usually fill much of the limited and valuable space on the menus. Marketing experts concentrated on the impact of images, particularly in advertising, on marketing communication. Careful examination of food names shows the intriguing tendency that descriptive terms such as tender chicken are given more and more products rather than standard names, grilled chicken. (Wansink, van Ittersum and Painter, 2005).

Initially, (Wansink, 2001a) tried to examine the influence of dish titles on sensory and sales impressions. However, this research was confined to comparing descriptive names with common names. There have many practising restaurants have now gone one step further and have begun using a different kind of food name, unclear name of food, which is more unusual and abstract than both regular and descriptive names. Similarly, in many Sichuan restaurants' menus, the popular Chinese dish of transparent noodles with ground pork is named "Ants Climbing a Tree." According to (Wyer et al., 2008), the inconsistent results of the addition of images to verbal information may also be attributable to variations in the styles of information processing that persistently affect visual and verbal information integration. If the same mix of the images and item names is displayed on the menus, different customers might utilise various information processing techniques. The main distinction between verbalizers and visualizers is whether visualizers can make cognitive photos when they interpret spoken data (Wyer et al., 2008).

Product information and brand names, for example, may be recalled if photographs are included (Kisielius & Sternthal, 2018). Moreover, multiple studies demonstrate that visuals might improve client attitudes and increase intention to use. For example, Mitchell & Olson (1981) found that photo advertising generates better brand perceptions than images. More recently, (Pennings et al., 2014) found that including photographs in instructional nutrition booklets can increase the number of time consumers spend looking at product labels and hence increase the likelihood of making healthy food choices.



2.4.2 Menu Informativeness

The thorough menu descriptions have been studied to favourably affect consumers choice of meals (McCall & Lynn, 2008a) then enhance restaurant revenues (Wansink, 2001). According to Rozin et al. (2011), very slight cumulative decreases in food intake may be enough to have significant effects, such as the elimination of obesity over time. With two studies, one a lab study and the other a real-world examination, researchers evaluate the influence of changing the position of various meals on a dining menu. The items placed at the beginning or end of the list were twice as conspicuous as those in the middle. Given this effect, a more comprehensive range of healthier menu items at the bottom or top of the menu, and fewer healthy items at the centre, such as calorie-free beverages and recommended drinks, should result.

The proportion of Americans dining out from home is quickly rising, with over half of all US food spending in eateries (Morley et al., 2013; Pulos & Leng, 2010). Now, eateries are under increasing obligation to make a constructive contribution to this challenge (Josiam & Foster, 2009). Governments are also increasingly concerned on this problem. A range of Menu Laws have been implemented in many countries, including the Truth-in-Menu as well as Menu Education and Labelling bill (MEAL) in US (Giles & Temby, 2014), in which the information on calorie content, saturated fat, fat, sodium, cholesterol, total carbohydrates, sugar, fibre and protein is now to be provided for standard items of menu (Kim et al., 2013). However, according to Din et al. (2012), these menu labelling requirements are still limited to wealthy Western economies.

Furthermore, several food experts questioned customers' choice of food rather than government-led food consumption decisions (Mills & Thomas, 2008). Modern clients need greater visibility in menu items; they need to know as much as possible about the products and where they originate from (Hartwell & aleEdwards, 2009). The restaurant menu is the primary dissemination technique (McCall &

Lynn, 2008). Further study has shown that additional menu item descriptions can impact consumer evaluations, restaurant-quality perceptions, satisfaction, price expectations, customer attitudes, and decision-making processes (Wansink & Love 2014). (Mills & Thomas, 2008). Menus' informativeness has also been investigated and utilized as a means for increasing revenues from food purchases (Brewer & Sebby, 2021).

Product information, nutritional information, and meal preparation are the three basic categories of menu information offered by the Customer Information Expectancy Restaurant Menu (CIERM) concept (Mah & Timmings 2015). Individually, these three menu information categories impact customer satisfaction, restaurant profitability, and performance (Kang et al., 2015). According to Hartwell & Edwards (2009), product characteristics and origins information are particularly important since they provide purchasers with a sense of quality and lower perceived risks. The descriptions of meals provided on menus can also have an impact on customers' purchase behavior (Peters & Hervé Remaud, 2020). According to previous studies, customers' responses to menu information vary depending on the characteristics of consumers and establishments (Yoon & George, 2012). The information provided can influence customers' behavioral intentions such as intention to purchase (Peters & Hervé Remaud, 2020). Customer reactions to food information vary in fast-food restaurants regarding food quality; the higher the price of a menu item, the more details the consumer expects (Alexander et al., 2010).

2.4.3 Design

Unlike to the traditional way of making food order, a staff will serve the customer with the menu and make order via communication, rather than seeing a colourful image and the interesting menu design and more likely to make food order more enjoyable (Hsin Yang & Geetha, 2019). Because it communicates the message to customers and immediately effects sales (Buchanan, 2011b; Mills & Thomas, 2008; Wang, 2012), a menu has been regarded a marketing tool and printed advertisement. The addition of special promotions and cross-selling strategies to what had previously been a relatively static sales strategy offered by the standard order taking procedure has been made possible by a menu with an electronic display.

Restaurant owners must concentrate on the menu's presentation for it to fulfil its functions (McCall & Lynn 2008). Customers are impacted by the visual elements of a menu, such as layout, design, and artwork, according to a research by (Wang, 2012). As a result, a well-prepared menu should improve its image, establish the customer's demand in terms of food and service quality, and provide a reasonable return on investment (Kwong, 2005). Restaurant owners must make their menus appealing in terms of a variety of aspects that impact consumer reaction, such as colour, layout, format, text, and graphic designs. Because a menu is viewed as a primary form of marketing at a restaurant to attract clients, a menu with poor design might leave a negative impression (Buchanan, 2011b; Hsu et al., 2013b; Wang, 2012). A well-designed menu will reinforce the company's image, set the customer's expectations for the meal in terms of food and service quality, and provide a positive return on investment (Kwong, 2005).

Furthermore, menu layout is regarded as a crucial indication of menu design since it demonstrates the coordination and positioning of menu items in order to capture consumers' attention throughout the ordering process (Buchanan, 2011b). The layout should be created such that the menu items are presented in a simpler

and easier-to-understand manner, promoting sales (McVety, 2009; Pulos & Leng, 2010). According to research by (Kwon & Mattila, 2017), menu designs often present the menu on numerous pages, although single-page menus are more common in today's digital environment. The author went on to say that it should be created to be clear and understandable to increase the sale of high-profit menu items while reducing the challenges that clients may have when using the menu (Buchanan, 2011b; McVety, 2009).

In terms of originality, the usage of colours has a significant influence on the consumers' mood (Buchanan, 2011b; Reynolds et al., 2008). According to (Singh et al., 2006), colours should be selected carefully since they may alter people's moods in a variety of ways. Colours like yellow, orange, and blue, for example, are thought to be pleasant, whereas brown, black, and red are seen to be melancholy. According to the authors, certain restaurants may employ blue to create a relaxing atmosphere, while yellow attracts guests' attention, resulting in more time spent together and consequently increased revenue. a well-designed menu will direct customers' attention to a particular menu item and facilitate its sale (Hou et al. 2017a).

Aside from that, the usage of images and graphics aids in the design of a restaurant's interior and offers guests with a concept as well as a sense of the organization's theme (Buchanan, 2011b; Caryn Rousseau, 2011; Michael L. Kasavana, 2011). Furthermore, an attribute-based menu has the potential to increase customer perceptions of variety by allowing them to process and choose menu items independently (Kwon & Mattila, 2017). A well-designed menu should entice customers to purchase or eat by helping them to make an informed decision (Davis et al. 2018). However, restaurateurs should avoid cramming their menus with images and pictures, as this will divert consumers' attention away from the culinary options.

2.4.4 Perceived Control

Perceived control is an individual's beliefs about the resources and opportunities needed to use a service, such as the necessary skills required (H. J. Lee & Lyu, 2019). It refers to an individual's belief that he or she would be able to control a situation and manage the resources required to perform a certain action successfully (Bae & Chang 2020). A conviction in one's ability to command and exert influence over the process and outcome of a self-service interaction is referred to as perceived control in the self-service context (Collier & Sherrell, 2009). According to (Ward & Barnes 2001), the author discovered that environmental stimuli and control feelings influenced the level of arousal or enjoyment obtained from an encounter. In this study, we want to see if there's a link between perceived control and efficiency, which is defined as optimising service performance with the least amount of waste of customer resources (Fließ & Kleinaltenkamp, 2004)

Previous qualitative self-service research has found that the perceived speed or efficiency of the transaction is one of the most important factors in deciding to forsake full-service in favour of self-service (Meuter et al., 2018; Pujari, 2004). Customers' perceptions of the transaction's efficiency are predicted to improve if they feel in charge of the self-service process. Customers desire to control the pace and interactivity of a hedonic self-service experience to get the most out of it. According to previous study, customers' perceptions of control have a direct impact on the good emotions they feel during an experience (Hui & Bateson, 1991; Ward & Barnes, 2001a). Customers' level of control, according to (Collier & Sherrell, 2009), has a direct impact on their enjoyment of using self-service technology. Customers who feel in charge of the service process are more likely to enjoy the experience rather than be concerned about the next steps they must take.

2.5 Classification of Older Customers

Three illustrative notions were employed to categorize customers on the dimension of aging. Historically, chronological age has been the most common factor in differentiating younger and older consumers (Kotter-Grühn, Neupert & Stephan 2015). Individuals of the same chronological age do not always experience the same subjective aging in their lifespan's physical, psychological, or social elements (Kastenbaum et al., 1995). Therefore, a subjective sense of age was proposed since chronological age cannot fully anticipate the motivational or behavioural changes associated with aging.

Second, the subjective sense of age might vary across several aspects for different individuals (Barrett & Montepare, 2015). Using chronological age as a reference point, for instance, a person may feel physically older yet socially younger. Also included in the subjective sense of age is the idea of age identity, which is established by how old an individual seems. (Kleinspehn-Ammerlahn et al., 2008). Therefore, subjective age perception is a more significant predictor of an individual's personality than chronological age (Chapman et al., 2007). Subjective age represents specific aging in various aspects, but there is a constraint in that less weight is given to the time that individuals are always conscious of (Ramsey & Gentzler, 2014). As a result, the concept of a future time perspective was introduced to account for those who constantly consider time as they progress through life's phases (Carstensen et al., 1999). Over a lifetime, aging brings every individual closer to death. This change not only heightens people's awareness of the remaining time but also heightens their perception that the remaining time is dwindling or restricted (Lang & Carstensen, 2002).

Third, the future time perspective, a fundamental characteristic of socioemotional selectivity theory, distinguishes between an individual's expansive (i.e., open-ended) or constrained (i.e., running out) vision of future time (Kessler & Staudinger, 2009). Changes in an individual's temporal orientation affect the objectives pursued and motivation for the same action (Carstensen et al., 2003). For

instance, for the same behaviour of drinking wine, a person with an open-ended future time perspective may want to learn about alcohol for knowledge-related motives, whereas a person with a limited future time perspective may want to enjoy themselves with close friends for pleasurable social motives. As a result, unlike chronological or subjective age, perceived openness or limitation of future time modifies an individual's aim or drive and is, thus, a motivator.

2.6 X Generation Intention to use Self-Service Kiosk

Cognitive capacities are profoundly affected by ageing (Mathur & Moschis, 1994) highlight that "older adults may use credit cards less frequently due to lifestyle changes and other age-related conditions, not age itself." According to neurobiological studies (Cabeza et al., 2002; Hedden & Gabrieli, 2004), age is related to a reduction in morphological and functional structures, which are crucial resources for perceptual abilities, working memory, processing speed, and the recording of information into episodic memory. However, the study of cognitive performance in elderly participants does not reveal a general deterioration in coordination capacities when complex cognitive tasks are performed (de Ribaupierre & Ludwig, 2003). In addition, linguistic and computer abilities are at their peak between the ages of 30 and 50 and diminish relatively slowly beyond age 50. (Hedden & Gabrieli, 2004). As a result, it is anticipated that age would correlate adversely with perceived service complexity.

The preceding generation was the X generation, who were digital immigrants because they were born during the earliest phases of technology's introduction, requiring them to learn something completely new and foreign. This generation X communication strategy favours face-to-face interactions when it comes to purchasing and financial decisions (Linnes & Metcalf, 2017). Older persons had weaker self-efficacy in terms of cognitive functioning and perceive a

loss in their own cognitive capacities during the learning process (Hertzog and Hultsch, 2000). As a result, many senior citizens assume they are "too old" to master new technology. Across all demographics, it is consistently discovered that age has the most substantial and negative impact on technological anxiety (Simon & Usunier 2007).

2.7 conceptual frameworks

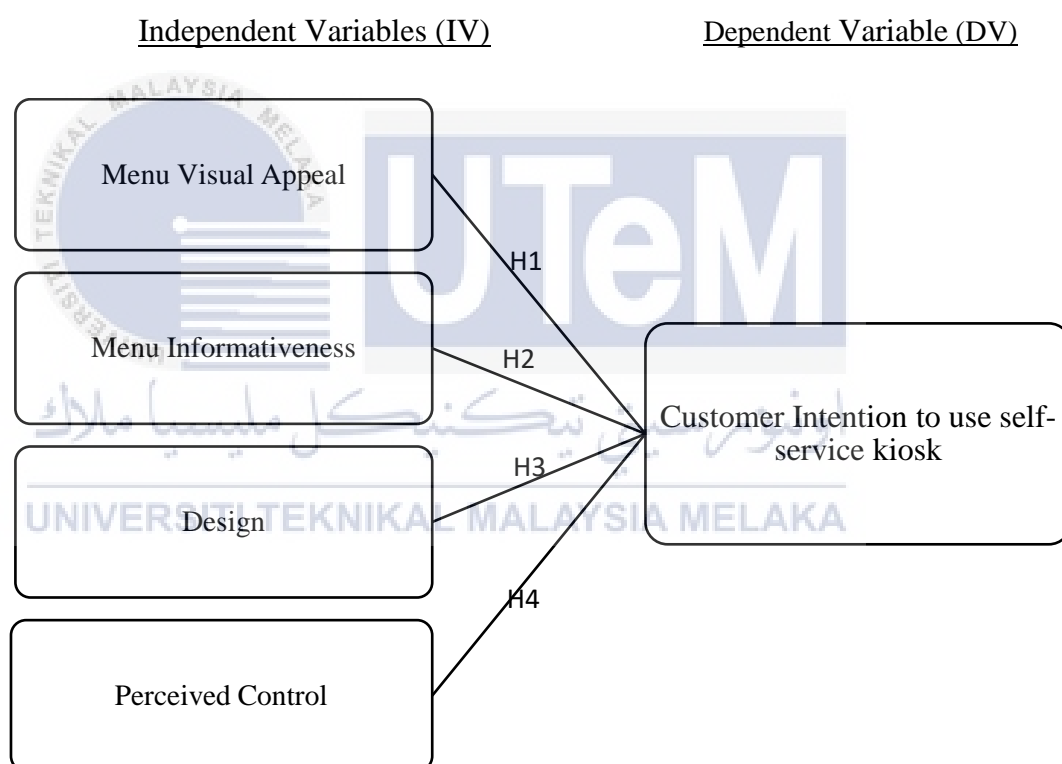


Figure 2.9: Conceptual Framework of Research

This conceptual model is developed based on (Collier & Barnes 2015; Junsawang, Chaiyasoonthorn & Chaveesuk 2020; Brewer & Sebby 2021) . the figure shows the independent variables (IV) are Menu Visual Appeal, Menu Informativeness, Design, Perceived Control and Customer Intention to use Self-service Kiosk as dependent variables (DV) of this research. All these constructs

were used to measuring the relations between menu features and customer intention to use for self-service kiosk at McDonald's during COVID-19 endemic among gen X.

2.8 Summary of the effect of menu features affecting gen X use intention of self-service kiosk in McDonald's

Authors	Abstract	MVS	MIF	D	PC
(Brewer & Sebby, 2021)	This research found the indirect effects on consumer intention to use from the aspects of menu visual appeal and menu informativeness.	+	+		
(Li & Xie, 2019)	The menu's visuals should contain a high quality of design where the images are shot professionally to generate good results if photos are included in the menu.	+			
Stoner, 1986	The menu design influences directly how consumers perceive the operation.	+			
Bowen & Morris, 1995	Menus can be a sort of promoting situation and		+		

	are related to professional speech.				
(Dayan & Bar-Hillel, 2011)	The appealing menu not only gives consumers with information but also assists food sectors to improve profits.	+	+		
(Reynolds et al., 2008)	Background, textures, text colours, images, fonts, menu size, items, dialog boxes, and price positioning are all visual elements of the menu design that influence consumers' responses and reactions.	+		+	
(Hou, Yang & Sun 2017)	Adding images to each item of restaurant menu improved their favourable perspectives toward the menu among consumers who receive verbal information developing mental pictures.	+	+		
Peters & Remaud, 2020	The outcomes of result have examined those expectations of consumers to see in a menu that includes nutrient details, ingredients, and	+	+		

	procedures of food preparation.				
(McCall & Lynn 2008)	This study investigated those thorough descriptions of menu items favourable effect consumers' food selections. The dining menu is the major stream of communicate such information.		+		
(Wansink 2001)	This study stated that more menu items' description can affect consumers' pre and post consumption's evaluations, consumer's satisfaction, perceived restaurant quality, and pricing expectations.		+		
Lin, 2020	Most people are concerned about being contaminated with COVID-19, which increases the uncertainty of encountering others who may be diseased.		+		
(Klatzkin et al., 2018)	The researchers identified that when individuals were subjected to high degree of chronic stress, food				

	intake was associated with a reduction in bad emotions.				
Mojica, 2020	Based on a study that collected more than 7300 responses during the early epidemic era, researchers discovered that individuals consume more than usual, were fewer energetic, and became more worried and lonelier.				
Jacoby & Kaplan, 1972	Perception of risk was included various elements, such as economic risk, psychological risk, functional risk, social risk, and general risk.				
(Lobb et al., 2007)	The study was investigated that risk perception as a major element affecting consumer intention to use.				
(Wang, 2012)	Customers are impacted by the visual elements of a menu, such as layout, design, and art work.			+	

(Kwong, 2005)	The researcher identified that well-designed menu will reinforce the company's image, set the customer's expectations for the meal in terms of food and service quality, and provide a positive return on investment.			+	
(Buchanan, 2011b)	the researcher identified that the usage of images and graphics aids in the design of a restaurant's interior and offers guests with a concept as well as a sense of the organization's theme.			+	
(Hui & Bateson, 1991)	This study stated that customers' perceptions of control have a direct impact on the good emotions they feel during an experience.				+
(Fließ & Kleinaltenkamp, 2004)	This study investigates the link between perceived control and efficiency, which is defined as optimising service performance with the least amount of waste customer resources.				+

(Collier & Sherrell, 2010)	The researcher identified that customers' level of control has a direct impact on their enjoyment of using self-service kiosk.				+
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Table 2.1: Summary of the effect of menu features affecting gen X use intention of self-service kiosk in McDonald's.

(MVS= Menu Visual Appeal, MIF= Menu Informativeness, D= Design, PC= Perceived Control)

(‘+’= Positive Relationship)



CHAPTER 3

RESEARCH METHODOLOGY

3.0 Introduction

This chapter will examine various approaches or methods for obtaining and gathering the data necessary for the research based on each variable. There are various ways that the researcher might employ and include to obtain a trustworthy and accurate test. Researchers can increase their awareness and learn how to handle practical problems through the study of research. Researchers typically employ quantitative techniques approaches to complete the job when conducting a study. The researcher can select the most appropriate technique to aid in the data collection procedure. Finally, this chapter contains a detailed discussion of the data analysis tools that the researcher will utilize to collect data for this final year study.

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3.1 Theoretical Framework

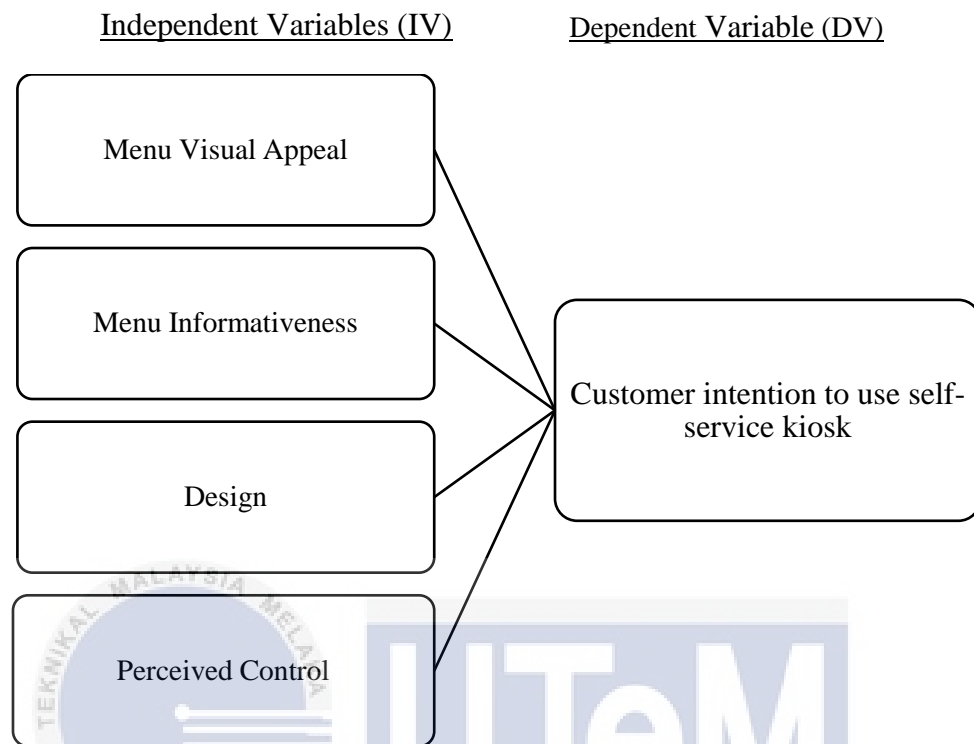


Figure 3.1 : Conceptual Framework of the Research

Source : (Brewer & Sebbby, 2021; Collier & Barnes, 2015; Junsawang et al., 2020a)

This theoretical framework is used to examine the determinants of customers' use intention towards self-service kiosk at McDonald's. The independent variables, including Menu Visual Appeal (MVS), Menu Informativeness (MIF), Design (D), and Perceived Control (PC), are discussed in previous few paragraphs, while dependent variable is Customer Intention to Use for Self-Service Kiosk. In short, the proposed framework in this study helps the public and readers to obtain a deeper insight into the relations between menu features and customer intention to use for self-service during COVID-19 endemic among gen X.

3.1.1 Hypothesis Testing

There are 5 hypothesis which can help to measure the relations between features and customer intention to use for self-service kiosk during COVID-19 endemic in Malaysia will illustrated as below:

Hypothesis 1

Menu Visual Appeal

H1₁: Menu visual appeal positively influence gen X use intentions.

H1₀: Menu visual appeal negatively influence gen X use intentions.

Hypothesis 2

Menu Informativeness

H2₁: Menu informativeness positively influence gen X use intentions.

H2₀: Menu informativeness negatively influence gen X use intentions.

Hypothesis 3

Design

H3₁: Design is positively associated with gen X use intentions.

H3₀: Design is negatively associated with gen X use intentions.

Hypothesis 4

Perceived Control

H4₁: Perceptions of control will have a positively relationship with gen X use intentions.

H4₀: Perceptions of control will have a negatively relationship with gen X use intentions.

3.2 Research Design

The research design could provide researcher an overview of this study for better understanding. According to (Sovacool et al., 2018), Research design is the technique in which such a method or approach is implemented in a specific study. The purpose of a research design should be to give sufficient information to make the study clear, enabling readers to evaluate the study in light of the stated research aims and promoting replication. There have 3 types of research designs which is exploratory design, explanatory design, and descriptive design. It will allow a greater value of information needed as well as help researcher to make decision in the entire study of project.

To obtain more accurate information regarding this research, the researcher will use the descriptive research design in this research. It can be considered as a concept that entails observing and evaluating the items, functions, and behaviour without affecting it in any manner. Thus, descriptive research's primary objective is to analyse events, phenomena, and situations. Because the description is based on scientific observation, it is intended to be more precise and accurate than a casual description (Akhtar, 2016). Then, it will used to learn the relations between menu features and customer intention to use for self-service kiosk during COVID-19 endemic.

Additionally, this research employs a casual analysis, which can aid in determining the root cause of some situations and providing answers. In this research, the researcher will come out with the variables which contribute to the relation between menu features and customer intention to use self-service kiosk at McDonald's during COVID-19 endemic. Through the analysis, the researcher can discover the most significant factors that affect towards customer use intention towards kiosk on McDonald's during the endemic COVID-19. Thus, the researcher can look deeply into the conclusion made after analysing the data. As a result, the descriptive research design is the most appropriate for conducting this investigation.

3.2.1 Research Approach

The research methodology is a method and strategy that progresses from broad assumptions to highly specific data gathering, analysis, and interpretation procedures. This research strategy is divided into two components: data gathering and data analysis. This research will employ the deductive technique since it often begins with a theory-driven hypothesis that guides data gathering and analysis. This technique quantifies and tests the link between independent and dependent variables.

According to (Bonner et al., 2021), deductive analysis techniques are based on theory-driven structures may be used to detect various implementation difficulties. A deductive application of theory ensures that all psychological constructs pertinent to behaviour are included, even if not all have been established through study. Since these theoretical frameworks are largely influenced by psychology theory, the internal motivation aspect is more precisely defined than the external opportunity aspect. The deductive researcher “works from the ‘top down’, from a theory to hypotheses to data to add to or contradict the theory”(Soiferman, 2010).

3.2.2 Questionnaire Development

The core data for this study were collected quantitatively via a survey form. For quantitative analysis, an identical set of questions from a questionnaire survey will be distributed to many target respondents. Quantitative research frequently entails applying statistical analysis to establish a link between what is known and what can be discovered through inquiry. Quantitative data collection and analysis require understanding the relationships between variables via descriptive or inferential statistics (Soiferman, 2010). The questionnaire will design through Google Form and will distribute to the target respondents in the format of URL or link. Due to the endemic COVID-19, using Google Form as a platform of questionnaire survey can runs efficiently. By doing this, the researcher can spread the survey form through social media, email, or other online-based applications that work well with contactless during this crisis. The people who are supposed to get the questionnaire can easily get it through a computer, a phone, a tablet, or any other device that can connect to the internet. As a bonus, it also saves time by making it easier to get the data into an Excel spreadsheet.

There are 3 sections in the questionnaire form which are Section A, Section B, and Section C. Section A will emphasis on the general information of respondents. In Section B, the questions will relate to the independent variables such as Menu Visual Appeal (MVS), Menu Informativeness (MIF), Design (D), and Perceived Control (PC) which are the factor of between menu features and customer intention to use self-service kiosk at McDonald's. while section C will focus on the dependent variable which is the relations between menu features and customer intention to use self-service kiosk at McDonald's during the endemic COVID-19 based in Malaysia from the perspective of respondents' view. This survey form is created with the aim of address and achieve all the research questions and research objectives, was thus set based on the past study by other researchers.

Section A	Respondents' Background
Section B	Factors of self-service kiosk that effect onto customers' use intention during the Endemic of COVID-19
Section C	Customer use intentions during COVID-19 Endemic in Malaysia

Table 3.1: Sections in Questionnaire

Based on the questionnaire design, respondents will answer the questions by using Likert scale with 5 marks based on their opinions toward factors that affect customers' use intentions during endemic of COVID-19. The respondents need to choose for the most suitable and relevant response scale for each question. There have 5-point scale which starting from 1 to 5 represents strongly disagree, followed by disagree, neutral, agree and strongly agree.



3.2.3 Operationalization Construct

Constructs	No of Items	Scale of Measurement
Menu visual appeal (MVS)	5	Likert Scale (1-5)
Menu informativeness (MIF)	5	Likert Scale (1-5)
Design (D)	5	Likert Scale (1-5)
Perceived Control (PC)	5	Likert Scale (1-5)
Intention to use (PCI)	5	Likert Scale (1-5)

Table 3.2: Operationalization of Construct

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Table 3.3: Likert Scale from 1 to 5

3.2.3.1 Variables

Label	Items	Source
MVS	Menu Visual Appeal	
MVS 1	The way the restaurant displays its online menu is attractive.	(Brewer & Sebby, 2021)
MVS 2	The online menu is visually appealing.	
MVS 3	I like the look and feel of this online menu.	
MVS 4	I like the layout of this online menu.	
MVS 5	I like the graphics of this online menu.	

Label	Items	Source
MIF	Menu Informativeness	
MIF 1	The way the restaurant displays its online menu is informative.	(Brewer & Sebby, 2021)
MIF 2	The menu provides a good description of the food being offered.	
MIF 3	The menu provides clear details about ingredients and food preparation methods.	
MIF 4	The menu provides potential diners with a comprehensive picture of the food being offered.	
MIF 5	The menu provides enough details for me to decide whether the food being offered would be a good fit for my appetite.	

Label	Items	Source
DGN	Design	
DGN 1	The operation of the firm's SSKs is interesting.	(Issa et al., 2018; Junsawang et al., 2020a)
DGN 2	The firm's SSKs have interesting additional functions.	
DGN 3	The firm's SSKs provide me with all relevant information.	
DGN 4	The layout of the firm's SSK is aesthetically appealing.	
DGN 5	The firm's SSK appears to use up-to-date technology.	

Label	Items	Source
PC	Perceived Control	
PC 1	I felt in control with the self-service option	(Junsawang et al., 2020a; Mexen et al., 2015)
PC 2	The self-service option lets me be in charge	
PC 3	The self-service aspect of getting my (product) lets me be decisive.	
PC 4	The self-service aspect of getting my (product) gives me more control over the process.	
PC 5	Self-service kiosks are less intrusive as opposed to interpersonal interactions with front desk staff.	

Table 3.4: The Variables



3.2.4 Pilot Analysis

A pilot test is a crucial component of this research that utilises a questionnaire to collect data. Pilot testing enables the researcher to secure a high response rate and a representative sample size in this research. It is preferable to conduct small-scale studies to increase the practicality of the questionnaires and hence the entire research study's performance. Hence, a pilot analysis was carried out to measure the survey questionnaire among the selected respondents who order food through SSK during the crisis of COVID-19 based in Malaysia.

In this research, the researcher will send the survey form to 150 respondents depending on the sample size were to carry out a pilot test and pre-test on the questionnaire. The researcher will collect and record the feedback or reaction from the respondents to accomplish the questionnaire and evaluate whether it is reasonable. Therefore, the researcher can upgrade and adjust the design of the questionnaire, such as re-scaling or re-wording the specific statements before it is delivered to the end respondents. Then the final version of the questionnaire will be revised and adapted for the actual survey in this research.

3.3 Data Collection

This research uses a quantitative approach to collecting the data needed. This technique is to get new knowledge to understand the factors of self-service kiosk menus that affect customer use intention at McDonald's during the COVID-19 endemic. Thus, a questionnaire will be conducted at Google Form in this research. This questionnaire will be distributed to gen X in URL or link through e-mail, WhatsApp, Telegram, Facebook, and other social media platforms. This survey will be confidential to protect and respect the data of respondents.

The process of collecting data will involve primary and secondary data for this research. The primary data with the purpose of gather the first-hand information for determination of the study by examine the variable of interest. According to (Hox, 2005) , primary data are data obtained specifically to solve the research problem at hand, using the methodologies that are most appropriate for the research problem at hand. Each time primary data is obtained, it adds to the existing social knowledge collection. Thus, through the questionnaire it can ensure the reliability of data and does not damaging the finding. In this research the outcome may be vital for study or not.

Next, Secondary data is also used in this research to acquire the necessary information. The secondary data set comprises a variety of different types of information that may be gleaned through reading materials such as journals, books, articles, and other web-based sources. (Hox, 2005) identified that using secondary data poses a variety of distinctive difficulties for researchers. Researchers must initially locate data sources that may be pertinent to their study topic. Second, they must be able to recover relevant information. Thirdly, it is essential to determine the extent to which the data satisfy the quality criteria of the present research and the methodological requirements of suitable scientific practice. Therefore, the documents that are important yet useful for this study of research will select and gather from the database of ScienceDirect, Google Scholar, IEEE Xplore, and Emerald Insight.

3.3.1 Sampling Technique

To answer the research questions, it is unlikely that the researcher should be able to collect data from all cases. Thus, there is a requirement to pick a sample (Taherdoost, 2016). There are 2 sort of sampling techniques which is probability or representative sampling and non-probability sampling. Probability sampling consists of simple random, systematic random, stratified random, cluster and multi-stage approach. While non-probability sampling includes of quota, volunteer, purposive, and haphazard.

This study used the sampling method of purposive sampling. According to (Sekaran & Bougie, 2005), purposive sampling is a non-probability sampling design in which information or data for the research is acquired from individuals of the population who are the only ones who meet the criteria stated by the researcher and can thus supply the needed information. In this instance, only McDonald's customers who use the self-service kiosk were randomly selected, as this study focuses solely on customer satisfaction among the elderly who use the SSK.

Probability sampling was chosen for this research study. The questionnaires were created using Google Forms, making it easy for the researcher to fill out and collect data from final responders. The questionnaires will be allocated to a link, such as a URL, that the target respondents may easily access via E-mail, social media, or internet-based applications such as WhatsApp, Telegram, or Facebook. According to Table 3.5, the sample size was determined based on the X-generation's intention to use for self-service kiosk during the COVID-19 epidemic in Malaysia.

3.3.2 Sampling Size

Based on the analysis, the cluster is chosen for this study which is X-generation intention to use for self-service kiosk during the COVID-19 endemic in Malaysia. (Hinkin, 1995) stated that while the population cannot be precisely defined, it can be addressed through the study of research. To have an optimal sample size, each set of scales should have an item to response ratio between 1:4 and 1:10. Since this research has 25 items, the optimal sample size will be between 100 and 250 respondents. However, (Hinkin, 1995) emphasized that a sample size of 150 respondents is sufficient to obtain the most accurate and reliable results. As a result, according to (Hinkin, 1995) the sample size for this study will be 100 questionnaires, which will be distributed to the target respondents (X-generation's intention to use self-service kiosk at McDonald's during COVID-19 endemic) by using Google Form.

3.3.3 Key Informants

The research's informants are the X-generations in Malaysia. The respondents of this study will be customer within age 41 until 56 who have used self-service kiosks at McDonald's restaurants in Malaysia, particularly during the COVID-19 endemic. It will collect data on various factors such as age, gender, race, education level, self-service kiosk usage, types of menus, and frequency of self-service kiosk during the COVID-19 endemic.

3.4 Data Analysis

After collecting all data from respondents, it is necessary to analyse them to produce a conclusion for this research and each hypothesis. Due to advancements in technology, a system is known as SPSS (Statistical Package for Social Sciences). This computer software can assist with analysing and interpreting the results based on the data collected in this report. Thus, SPSS is used in this report because the research is conducted quantitatively. SPSS is adept at managing significant amounts of data and may significantly speed up the data collecting and tabulation evaluation procedures.

According to Pallant (2010), SPSS employs standard multiple regression to ascertain the data's reliability, correctness, and validity. SPSS can also test the hypotheses made during the questionnaire's administration. Additionally, standard multiple regression analysis will assist in evaluating the acquired data to determine areas for improvement and strengthen the variables' validity. SPSS can also help the researcher do hypothesis testing with all variables considered. Then, four data analysis approaches must be used for this research: descriptive, reliability, validity, Pearson correlation, and multiple regression analysis (Hoque et al., 2018).

3.4.1 Descriptive Analysis

Descriptive statistics are critical because they aid the researcher in comprehending the data dissemination and examining the relationships between variables. It is a technique used to explain the fundamental characteristics of a study by providing a summary of the data. According to (Sloman, 2010), a descriptive-analytic approach entails continuously or intermittently recording behaviour and environmental events for research objectives. This approach records ecological

events and behaviour independently during the observation and then examines the relationships between these occurrences. This method will be used to measure the frequency distribution, tables, histogram, charts, central tendency such as mean, median and mode. The Demographic Respondents segment containing the personal details of the respondents, such as age, gender, race, education level, self-service kiosk usage, types of menu, and frequency of self-service kiosk will be presented using the descriptive study. Likewise, this research will employ frequency distributions, and the data will be expressed in percentage terms to describe the elements affecting the self-service kiosk menu during the COVID-19 issue. The mean and standard deviation values are used to describe the results. The mean score level can be classed as low, medium, or high, depending on the mean range shown in Table 3.6.

Range of Mean	Level
0.00 – 1.67	Low
1.68 – 3.33	Medium
3.34 – 5.00	High

Table 3.5: Mean Score

3.4.2 Reliability and Validity Analysis

The reliability and validity analysis are critical components for researchers doing quantitative studies to achieve the highest possible quality of research. The reliability test is employed in this analysis to ensure that the dependent variable and all independent variables have an internal reliability consistency. Additionally, all variables in this inquiry research should have the same underlying structure. In contrast, the validity test is concerned with the measure's accuracy and precision. The researcher can obtain reliable output data by ensuring consistent and correct measurements.

In this research, Cronbach's Alpha is applied to calculate the average correlation of each item/measurement in all variables. It is frequently used to evaluate the consistency of data. The value of the alpha coefficient lies between 0 and 1. Hoque & Awang (2016) claimed that the alpha coefficient value of 0.5 and above can be identified as the measure is acceptable to prove the dependability of all variables. Table 3.7 displays the Cronbach's Alpha Coefficient Range and its internal consistency. The Cronbach's Alpha that exceeds 0.7 is deemed acceptable; more than 0.8 is outstanding, while 0.9 and above are denoted as great. In this investigation, both the dependent variable and independent variables will be utilised to identify its reliability and validity.

Cronbach's Alpha Coefficient	Internal Consistency
$\alpha \geq 0.9$	Excellent
$0.8 \leq \alpha < 0.9$	Good
$0.7 \leq \alpha < 0.8$	Acceptable
$0.6 \leq \alpha < 0.7$	Questionable
$0.5 \leq \alpha < 0.6$	Poor
$\alpha < 0.5$	Unacceptable

Source: George and Mallery (2003)

Table 3.6: Cronbach's Alpha Coefficient Range and Strength of Association



3.4.3 Pearson Correlation Analysis

Pearson Correlation Analysis determines the existence and degree of correlations between dependent and independent variables. This analysis is regarded as quite beneficial because it can shed light on the possibility of a relationship between the two variables. This study will produce values ranging from 0 (random) to 1 (perfect linear relationship) or -1 (perfect negative relationship), demonstrating the square. The closer the correlation coefficient, r , is to zero (0), the greater the deviation of the data from the best fit line. While the correlation coefficient, r , approaches 1 /-1, the deviation of the data from the line of best fit is reduced. The Pearson Correlation Coefficient Range is shown in Table 3.8. Thus, the researcher will utilize Pearson Correlation Analysis to determine the strength of the relationship between six variables measuring the relations between menu features and customer intention to use the self-service kiosk at McDonald's during the COVID-19 epidemic.

Coefficient Range	Strength of Correlation
± 0.00 to ± 0.30	Weak
± 0.40 to ± 0.60	Moderate
More than ± 0.70	Strong

Table 3.7: Pearson Correlation Coefficient Range

3.4.4 Multiple Regression Analysis

Multiple regression is a statistical technique for analysing the relationship between a single dependent variable and many independent variables. Multiple regression analysis's objective is to use known independent variables to predict the value of a single dependent variable. In addition, this analysis can help to examine the course of the relationship, the degree of research and the strength of the relationship. "Guilford's rule of thumb used to interpret the degree of relationship whether the relationship is low or high. It will be one of the most effective tools to analyse the data of quantitative research. The results of outcomes will be probed and estimated based on the set of independent variables on dependent variable.

The general form of the multiple regression equation is as follow: -

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4$$

Where:

Y	Dependent variable (Customer intention to use self-service kiosk during COVID-19 endemic)
a	Constant
b ₁	Influence of X ₁ (Menu Visual Appeal)
b ₂	Influence of X ₂ (Menu Informativeness)
b ₃	Influence of X ₃ (Design)
b ₄	Influence of X ₄ (Perceived Control)
X ₁ , X ₂ , X ₃ , X ₄ ,	Independent variables

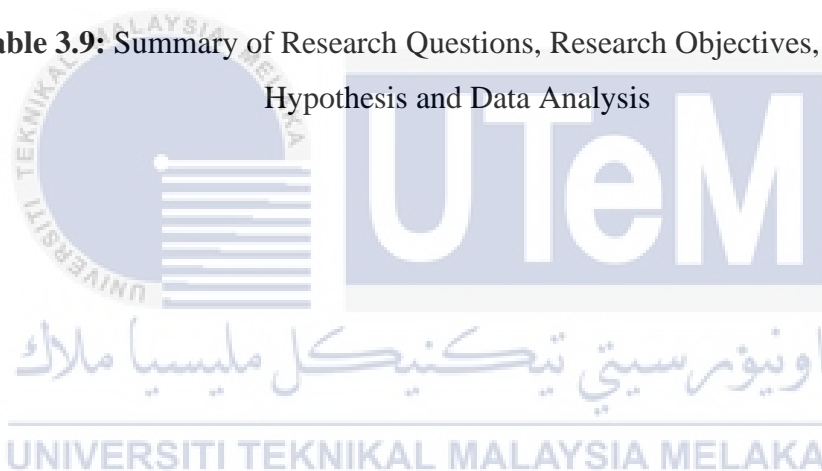
Table 3.8: Equation of Multiple Linear Regression Analysis

3.5 Summary

Research Question	Research Objective	Research Hypothesis	Data Analysis
RQ1: What are the factors of menu features affecting gen X use intention of self-service kiosk in McDonald's?	RO1: To investigate factors of menu features affecting gen X use intention of self-service kiosk in McDonald's		Descriptive Analysis, Mean, Standard Deviation, Crosstabulation, Cronbach's alpha
RQ2: What are the relations between menu features and gen X intention to use self-service kiosk at McDonald's?	RO2: To measure the relations between menu features and gen X intention to use self-service kiosk at McDonald's		Correlation Coefficient
RQ3: What are the most significant factor of gen X intention to use self-service kiosk at McDonald's?	RO3: To determine the most significant factor of gen X intention to use self-service kiosk at McDonald's	H1: Menu visual appeal positively influence gen X use intentions. H2: Menu informativeness positively influence gen X use intentions.	Multiple Regression

		<p>H3: Design is positively associated with gen X use intentions.</p> <p>H4: Perceptions of control will have a positively relationship with gen X use intentions.</p>	
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Table 3.9: Summary of Research Questions, Research Objectives, Research Hypothesis and Data Analysis



CHAPTER 4

DATA ANALYSIS

4.0 Introduction

This chapter will be presenting the discussion and results of the study. The findings were analysed according to the objectives in this research which include to investigate factors of menu features affecting gen X use intention of self-service kiosk in McDonald's; to measure the relations between menu features and gen X intention to use self-service kiosk at McDonald's; and to determine the most significant factor of gen X intention to use self-service kiosk at McDonald's. All of these objectives will be achieved and obtained related results from the responses of respondents.

As discussed earlier, the researcher will utilize quantitative method of research by distributing online questionnaires to X-generation. By doing so, the data for a total of 150 McDonald's customer have been collected by the researcher in this study. Moreover, SPSS Version 22 will be used to analyse the total 150 responses collected. Researcher will discuss on the descriptive analysis, reliability analysis and validity test, Pearson correlation analysis, regression analysis and hypothesis test in this chapter.

4.1 Descriptive Analysis

4.1.1 General Information of Respondents

General information of respondents refers to the demographic profile which gender, race, education level, occupation, usage of self-service kiosk, frequency usage of self-service kiosk, and state. A total of 150 respondents (X-generation) as demographic sample profiles have been gathered by the researcher in this study. All these respondents intend in using self-service kiosk at McDonald's during COVID-19 endemic.

4.1.1.1 Profiling of Gender

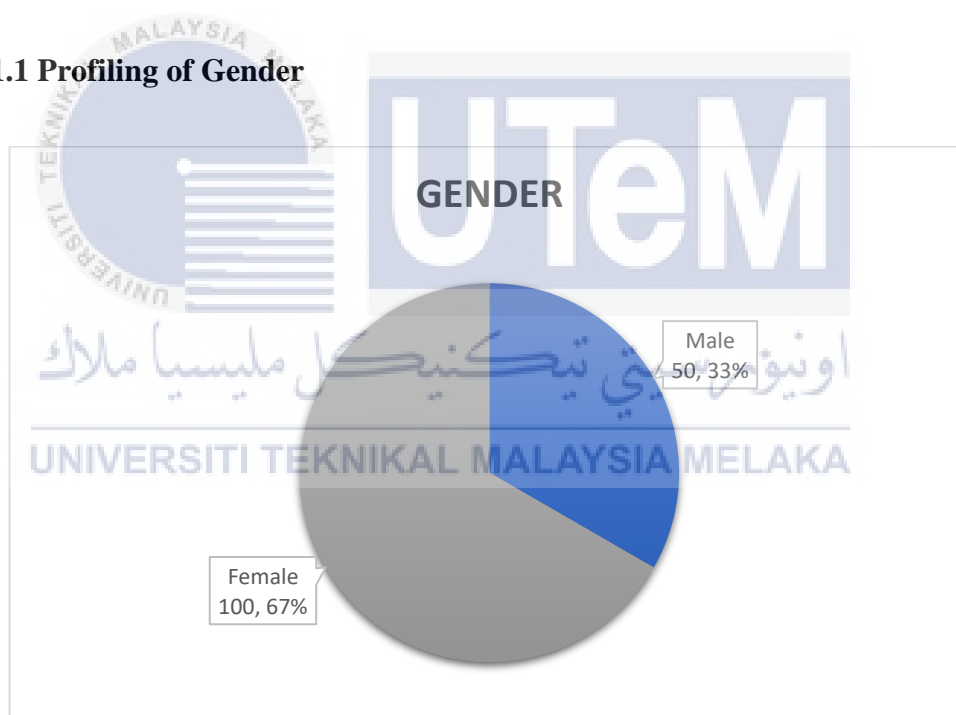


Figure 4.1: Profiling of Gender

Figure 4.1 above is related to the information of genders which were obtained from the survey among 150 respondents. The findings show that 33% (n=50) were male and 67% (n=100) were female respondents.

4.1.1.2 Profiling of Races

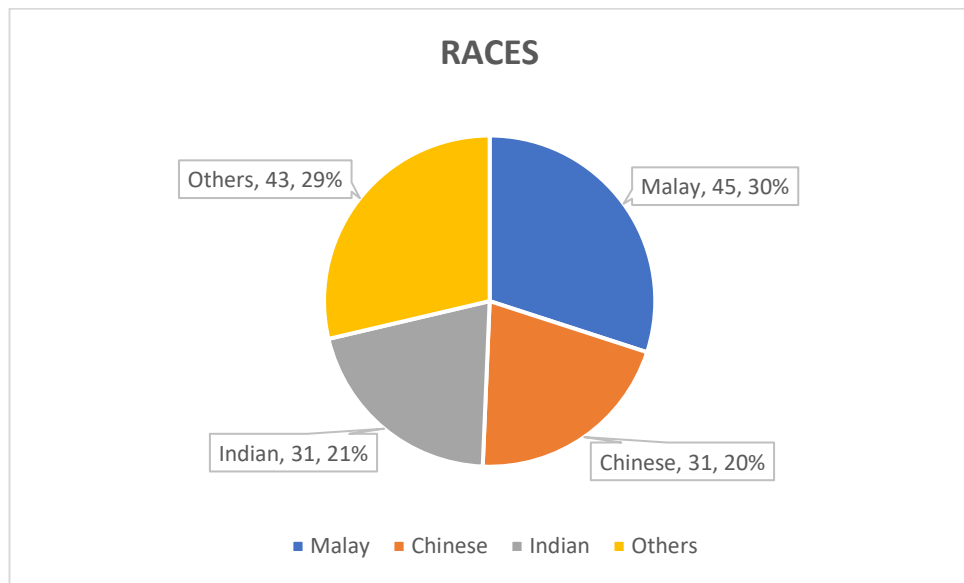


Figure 4.2: Profiling of Races

Figure 4.2 above presented the age of respondent has been divided into 4 categories which are Malay, Chinese, Indian, and others. The highest age group that response to the survey was Malay, where total 45 (30%) out of 150 respondents. It is then followed by the race group of others with total 43 respondents (29%). Then there were 31 respondents (21%) are from race group of Indian. Next, followed by Chinese were 31 respondents (20%).

4.1.1.3 Profiling of Educational Level

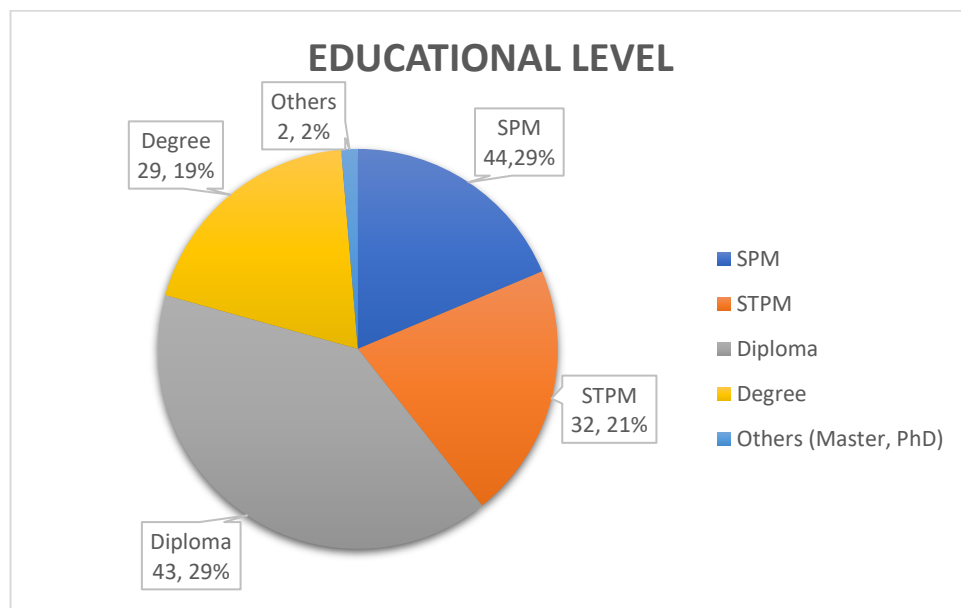


Figure 4.3: Profiling of Educational Level

Figure 4.3 refers to the educational level of respondents from a total of 150 X-generation. The findings show that most of the respondents where total 44 (29%) were SPM group. It is then followed by Diploma group total 43 (29%). Next, followed by STPM were 32 (21%). Then, Degree group were total 29 (19%). While only 2 (2%) respondents were Master and PhD students.

4.1.1.4 Profiling of Occupation

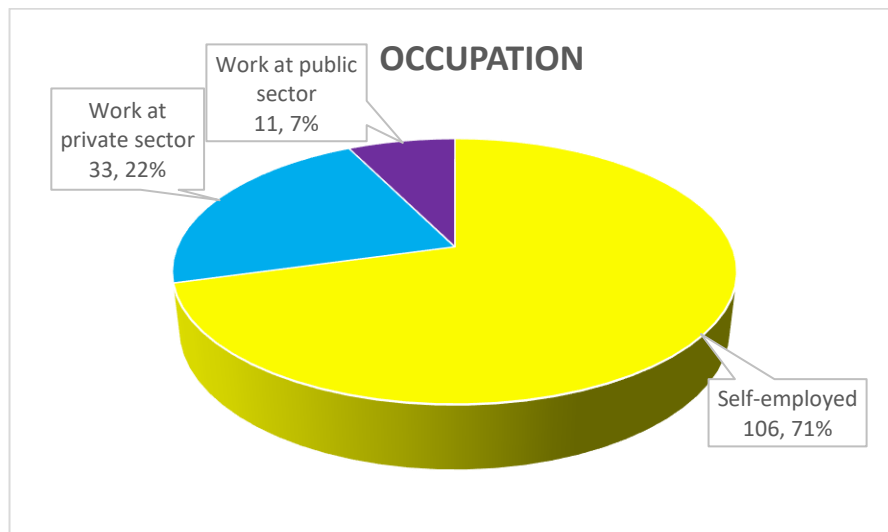


Figure 4.4: Profiling of Occupation

According to Figure 4.4, it shows the most of the respondents were Self-employed where total 106 (71%), followed by respondents were Work at private sector are 33 (22%) out of 150 respondents while only 11 (7%) respondents were Work at public sector.

4.1.1.5 Frequency usage of Self-service kiosk

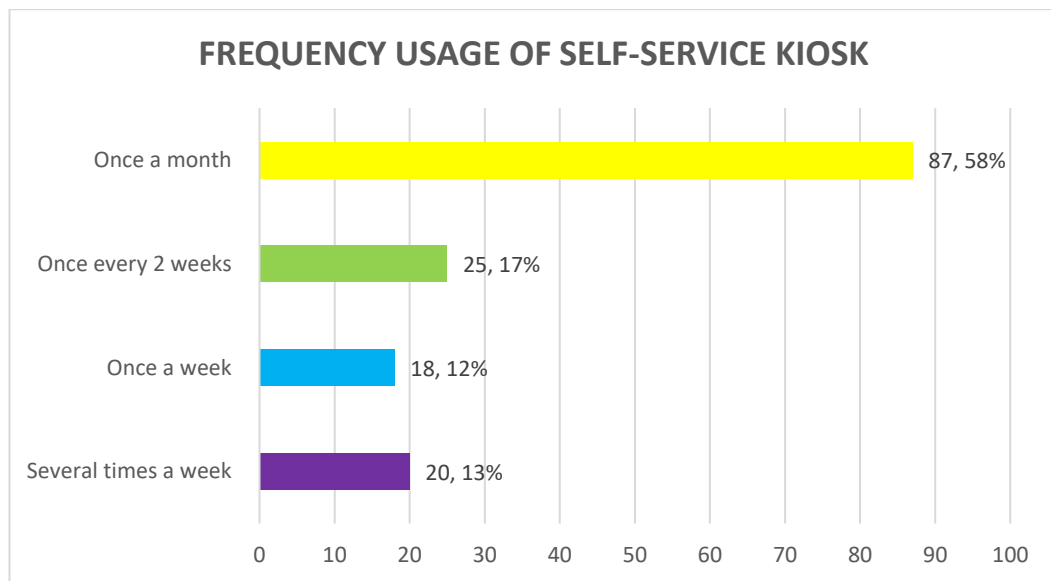


Figure 4.6: Frequency usage of self-service kiosk

Based on figure above, it defines on how often the respondents using self-service kiosk (SSK) during COVID-19 endemic. The result show that a total of 87 (58%) respondents are using SSK once a month while 25 (17%) out of the total 150 respondents using SSK once every 2 weeks. Besides, it followed by 20 (13%) that using SSK at McDonald's in several times a week. Lastly, there were only 18 (12%) respondents are using SSK once a week.

4.1.1.6 Profiling of states

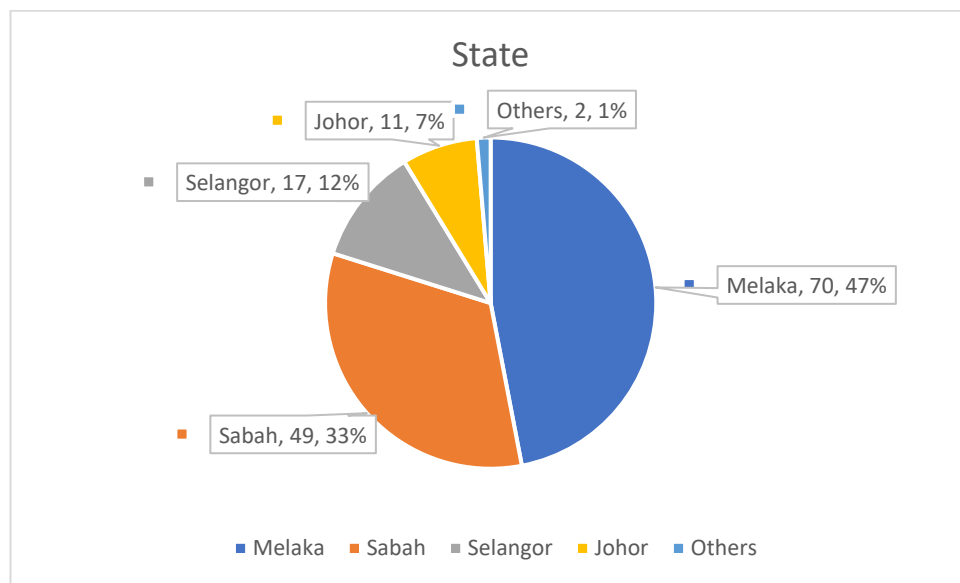


Figure 4.7: Profiling of states

According to figure 4.7, it is shows that the state that respondents belong to. Based on the data, most of the respondents were came from Melaka which is total 70 (47%). After that, among the total of 150, there were 49 (33%) respondents from Sabah and followed by Selangor which is 17 (12%) respondents. Next, there were 11 (7%) respondents from Johor. At last, there were only 2 (1%) respondents that from Perak, and Terengganu.

4.1.2 Mean Score Analysis for Variables

Mean score analysis used to identify and receive the information related to the characteristics of specific problems. The results will show on all variables such as Menu Visual Appeal (MVS), Menu Informativeness (MIF), Design (DGN), Perceived Control (PC) and Purchase Intention (PCI) that used for the study of factors of X-generation use in Self-Service Kiosk at McDonald's. The data will be determined through minimum, maximum, mean, and standard deviation. Besides that, the researcher utilizes a 5-point Likert Scale for measuring total 25 items that related to the study of research.

4.1.2.1 Menu Visual Appeal

	Measurement Items	N	Minimum	Maximum	Mean	Std. Deviation
MVS1	The way the restaurant displays its online menu is attractive.	150	2	5	3.79	.846
MVS2	The online menu is visually appealing.	150	1	5	3.72	.868
MVS3	I like the look and feel of this online menu.	150	1	5	3.55	.848
MVS4	I like the layout of this online menu.	150	2	5	3.79	.838
MVS5	I like the graphics of this online menu.	150	1	5	3.74	.878

Table 4.0: Descriptive Statistics for Menu Visual Appeal

Table 4.1 describes the descriptive statistics of the independent variable which is Menu Visual Appeal (MVS). It illustrates that the scale of minimum rating for each item is 1 while the maximum rating is 5. According to the table, the results show that the highest mean value is 3.79 with the item of “The way the restaurant displays its online menu is attractive” and “I like the layout of this online menu” and its standard deviation value is 0.846 and 838. It shows that the display and layout of an online menu will affect people’s purchase intention. Next, the item of “The online menu is visually appealing” showed the mean value of 3.72 and the standard deviation was 0.868. Besides, item of “I like the graphics of this online menu” had a mean value of 3.74 and standard deviation of 0.787 while item of “I like the graphics of this online menu” with the mean value of 3.74 and standard deviation of 0.878. At last, the lowest mean value is 3.55 form the item of “I like the look and feel of this online menu” and its standard deviation value is 0.848.

4.1.2.2 Menu Informativeness

	Measurement Items	N	Minimum	Maximum	Mean	Std. Deviation
MIF1	The way the restaurant displays its online menu is informative.	150	2	5	4.41	.696
MIF2	The menu provides a good description of the food being offered.	150	2	5	4.34	.749
MIF3	The menu provides clear details about ingredients and food preparation methods.	150	2	5	4.33	.849
MIF4	The menu provides potential diners with a comprehensive picture of the food being offered.	150	2	5	4.32	.838
MIF5	The menu provides enough details for me to decide whether the food being offered would be a good fit for my appetite.	150	2	5	4.39	.758

Table 4.1: Descriptive Statistics for Menu Informativeness

Table 4.1 refers to the descriptive statistics of Menu Informativeness (MIF). From the table, it shows the scale of minimum rating for each item is 2 while the scale of maximum rating is 5. The results revealed that the item “The way the restaurant displays its online menu is informative.” scored the highest mean value 4.41 and its

standard deviation value is 0.696. This proved that the reliability of information provided is high and most of the respondents are agree about it. Next, item of “The menu provides enough details for me to decide whether the food being offered would be a good fit for my appetite” had the mean value of 4.39 with standard deviation of 0.758 while the item of “The menu provides a good description of the food being offered.” had the mean value of 4.34 with standard deviation of 0.749. The item of “The menu provides clear details about ingredients and food preparation methods” showed a mean value of 4.33 and standard deviation of 0.849. Lastly, the item of “The menu provides potential diners with a comprehensive picture of the food being offered.” had the least mean value which was 4.32 with standard deviation of 0.838.

4.1.2.3 Design

Measurement Items	N	Minimum	Maximum	Mean	Std. Deviation
DGN1 The operation of the firm's SSKs is interesting.	150	2	5	4.27	.711
DGN2 The firm's SSKs have interesting additional functions.	150	3	5	4.03	.831
DGN3 The firm's SSKs provide me with all relevant information.	150	3	5	3.99	.803
DGN4 The layout of the firm's SSK is aesthetically appealing.	150	2	5	4.39	.758
DGN5 The firm's SSK appears to use up-to-date technology.	150	2	5	4.21	.756

Table 4.2: Descriptive Statistics for Design

Table 4.2 refers to the descriptive statistics of Design (DGN). From the table, it shows the scale of minimum rating for each item is 2 while the scale of maximum rating is 5. The results revealed that the item “The layout of the firm's SSK is aesthetically appealing” scored the highest mean value 4.39 and its standard deviation

value is 0.758. This proved that the reliability of information provided is high and most of the respondents are agree about it. Next, item of “The operation of the firm’s SSKs is interesting” had the mean value of 4.27 with standard deviation of 0.711 while the item of “The firm’s SSK appears to use up-to-date technology” had the mean value of 4.21 with standard deviation of 0.756. The item of “The firm’s SSKs have interesting additional functions” showed a mean value of 4.03 and standard deviation of 0.839. Lastly, the item of “The firm’s SSKs provide me with all relevant information” had the least mean value which was 3.99 with standard deviation of 0.803.

4.1.2.4 Perceived Control

	Measurement Items	N	Minimum	Maximum	Mean	Std. Deviation
PC1	I felt in control with the self-service option	150	2	5	4.23	.718
PC2	The self-service option lets me be in charge	150	3	5	4.12	.843
PC3	The self-service aspect of getting my (product) lets me be decisive.	150	2	5	4.51	.749
PC4	The self-service aspect of getting my (product) gives me more control over the process.	150	2	5	4.47	.757
PC5	Self-service kiosks are less intrusive as opposed to interpersonal interactions with front desk staff.	150	3	5	4.14	.811

Table 4.3: Descriptive Statistics for Perceived Control

Table 4.3 refers to the descriptive statistics of Perceived Control (PC). From the table, it shows the scale of minimum rating for each item is 2 while the scale of

maximum rating is 5. The results revealed that the item “The self-service aspect of getting my (product) lets me be decisive” scored the highest mean value 4.51 and its standard deviation value is 0.749. This proved that the reliability of information provided is high and most of the respondents are agree about it. Next, item of “The self-service aspect of getting my (product) gives me more control over the process” had the mean value of 4.47 with standard deviation of 0.757 while the item of “I felt in control with the self-service option” had the mean value of 4.23 with standard deviation of 0.718. The item of “Self-service kiosks are less intrusive as opposed to interpersonal interactions with front desk staff” showed a mean value of 4.14 and standard deviation of 0.811. Lastly, the item of “The self-service option lets me be in charge” had the least mean value which was 4.12 with standard deviation of 0.843.

4.1.2.5 Purchase Intention

Measurement Items	N	Minimum	Maximum	Mean	Std. Deviation
PCI1 After seeing the menu, I intend to order food from the McDonald's.	150	2	5	4.09	.870
PCI2 After seeing the menu, the probability of me ordering food from the McDonald's is high.	150	3	5	4.09	.806
PCI3 I rate my chance of ordering food from the McDonald's as high.	150	3	5	4.16	.812
PCI4 I am very likely to make order again from the McDonald's in the future.	150	3	5	4.25	.647
PCI5 I would recommend others to order food from the McDonald's.	150	2	5	4.13	.830

Table 4.4: Descriptive Statistics for Purchase Intention

Table 4.4 refers to the descriptive statistics of Purchase Intention (PCI). From the table, it shows the scale of minimum rating for each item is 2 while the scale of maximum rating is 5. The results revealed that the item “I am very likely to make order again from the McDonald’s in the future” scored the highest mean value 4.25 and its standard deviation value is 0.647. This proved that the reliability of information provided is high and most of the respondents are agree about it. Next, item of “I would recommend others to order food from the McDonald’s” had the mean value of 4.13 with standard deviation of 0.830 while the item of “I rate my chance of ordering food from the McDonald’s as high” had the mean value of 4.16 with standard deviation of 0.812. Lastly, the item of “After seeing the menu, the probability of me ordering food from the McDonald’s is high” and “After seeing the menu, the probability of me ordering food from the McDonald’s is high” had the least mean value which was 4.09 with standard deviation of 0.870 and 0.806.



4.2 Reliability Analysis and Validity Test

Table 4.5 below presents the reliability analysis of the data collected on all independent variables and dependent variable in this research. As refer to the above table, it shows reliability value of total 25 items in the online survey with 150 respondents. The result of Cronbach's Alpha shows 0.952 which is significantly higher than 0.70. According to Malhotra (2012), the measurement of Cronbach's Alpha in reliability analysis indicates the value ≤ 0.60 considers as not reliable and poor. However, if the reliability value more than ≥ 0.70 , it considers as highly and excellent for acceptable. Overall, the reliability analysis of this study is highly acceptable.

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.952	.950	25

Table 4.5: Reliability Analysis of All Items

Table 4.7 illustrates on the reliability analysis of Cronbach's Alpha for each variable in the study included independent and dependent. The range of all variables is situated between 0.746 to 0.903. These high reliability values prove that the whole alpha coefficient value for each variable is acceptable and good condition. As refer to the table above, the Cronbach's Alpha value for menu visual appeal ($\alpha=0.846$), menu informativeness ($\alpha=0.903$), design ($\alpha=0.846$), perceived control ($\alpha=0.868$), and purchase intention ($\alpha=0.902$).

	Variables	Cronbach's Alpha	No. of Items	Result
Independent Variables	Menu Visual Appeal	.846	5	Good
	Menu	.903	5	Good
	Informativeness			
	Design	.846	5	Good
	Perceived Control	.868	5	Good
Dependent Variable	Purchase Intention	.902	5	Good

Table 4.6: Reliability Analysis of Each Variable

4.3 Pearson Correlation Analysis

Pearson correlation analysis is a method that applied to analyse the relationship between one dependent variable and one independent variable. This technique can also be utilized to identify the effectiveness or strength relationship between dependent variable in this study which is Consumers Purchase Intention and independent variables which include Menu Visual Appeal, Menu Informativeness, design, and perceived control. In relates the strength of relationship, the value of correlation coefficient is varying between +1 and -1. Besides, the value that closer to +1 or -1 indicate that the strength of relationship which is strong among two variables whereas the relationship is weak when the value is closer to 0.

Correlations						
		MVS	MIF	PCV	PC	PCI
Menu Visual Appeal	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	150				
Menu Informativeness	Pearson Correlation	.362**	1			
	Sig. (2-tailed)	.000				
	N	150	150			
Design	Pearson Correlation	.497**	.621**	1		
	Sig. (2-tailed)	.000	.000			
	N	150	150	150		
Perceived Control	Pearson Correlation	.492**	.654**	.848**	1	
	Sig. (2-tailed)	.000	.000	.000		
	N	150	150	150	150	
Purchase Intention	Pearson Correlation	.616**	.572**	.714**	.731**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	150	150	150	150	150
**. Correlation is significant at the 0.01 level (2-tailed).						

Table 4.7: Pearson Correlation Coefficient for Each Variable

Table 4.7 above illustrates the correlation result of all independent variables which include menu visual appeal, menu informativeness, design, and perceived control toward dependent variable which is consumer purchase intention during endemic. The above results clearly stated that all independent variables record a positive and significant relationship toward dependent variable as the correlation coefficient (r) values are higher than or in the range of 0.5 to 0.8. From the table, the correlation result of first variable which illustrate Menu Visual Appeal toward dependent variable, the test is significant as stated with the significant $r = 0.616$ while $p\text{-value} = 0.000$, $p < 0.001$. Thus, these two variables have a strong relationship.

Next, for the second independent variable which is Menu Informativeness, the correlation relation result toward consumer purchase intention during endemic stated that they have a significant relationship. This is because the value of test correlation coefficient, $r = 0.572$ while $p\text{-value} = 0.000$ where $p < 0.001$. Hence, these two variables illustrate a moderate relationship.

Apart from that, followed by the independent variable that is Design towards dependent variable, which is consumer purchase intention during endemic, the results indicate that the test is significant where, $r = 0.714$ whereas $p\text{-value} = 0.000$, $p < 0.001$. Therefore, both variables have a strong relationship.

Additionally, the independent variable which is Method of Payment toward dependent variable that is consumer purchase intention during endemic. According to the Table 4.7, the factor of method payment was significantly correlated to consumer purchase intention in positive correlation, where $r = 0.731$ and $p\text{-value} = 0.000$, $p < 0.001$. Thus, both variables indicate a strong relationship.

4.4 Inferential Statistics

Inferential statistics is a method that used random sample of data collected from the population to identify and analyse them. Results in inferential statistics are important and can assist in the analysis process, particularly when the evaluation on population is not optimal. Other than that, inferential statistics are also critical in interpretations of whether the variations among samples are dependable or are likely to arise by chance. Thus, inferential statistics help to provide inferences regarding the more general state of data collection.

4.4.1 Multiple Regression Analysis

Multiple regression analysis is a technique that used to forecast the value of a variable according to a value of two or more variables. This method can use to analyse correlation among the independent and dependent variables. Furthermore, multiple regression analysis helps to explain the relationship among all independent variables

(Menu Visual Appeal, Menu Informativeness, Design, and Perceived Control), and dependent variable (Consumer Purchase Intention during endemic the outcomes of the regression analysis will be shown in an equation.

4.4.1.1 Multiple Regression Analysis Between DV and IV

Table 4.8 revealed the results of regression analysis of relationship among independent variables and dependent variable. The independent variables that included for measurement are Menu Visual Appeal, Menu Informativeness, Design, and Perceived Control, while the dependent variable is consumer Purchase Intention during endemic. Based on the table above, the correlation coefficient (R) shows the value 0.803 and indicates as a strong degree of correlation. Hence, there is a positive and strong relationship been identified since the R value is more than 0.70. Moreover, the R square value in this model is 0.644 which indicates that dependent variable (consumer purchase intention during endemic) is affected 64.4% by the independent variables (menu visual appeal, menu informativeness, Design, and Perceived Control). While the remaining ($100\% - 64.4\% = 35.6\%$) are influenced by other factors that are not included in this research.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.803 ^a	.644	.634	.40816
a. Predictors: (Constant), PC, MVS, MIF, DGN				

Table 4.8: Model Summary of Multiple Regression Analysis

Table 4.9 below shows the ANOVA analysis of this study of research. Refer to the table, F-test is used to determine the data from survey that demonstrate a good fit in the model. The results show F value is 70.173 while the significant value, p is 0.000 which is lower than significance level 0.01. Thus, it is clearly showed that all independent variables (menu visual appeal, menu informativeness, Design, Perceived Control) are significantly influencing on the dependent variable (consumer purchase intention during endemic).

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	43.756	4	10.939	65.662	.000^b
	Residual	24.156	145	.164		
	Total	67.912	149			
a. Dependent Variable: PCI						
b. Predictors: (Constant), PC, MVS, MIF, DGN						

Table 4.9: Regression Analysis on ANOVA

Table 4.10 illustrates that the degree of coefficient beta values for each of the independent variables that have effect on the dependent variable. The results in the above table reveal that $B1 = 0.295$, $B2 = 0.119$, $B3 = 0.243$, and $B4 = 0.341$ respectively to all independent variables. According to the table, Perceived Control (PC) has the highest coefficient beta value where $B3 = 0.341$ with $t = 3.197$ and $p < 0.05$ as compared to other variables. It indicates that perceived control factor has the strongest influence on the consumer purchase intention during endemic (dependent variable). Additionally, this explores that there are 34.1% variation in dependent variable cause due to perceived control. Moreover, Menu Visual Appeal (MVS) is the second largest predictor of dependent variable as it has beta value of $B = 0.295$, $t = 5.334$ and $p < 0.05$. This shows that 29.5% variation in consumer purchase intention during endemic cause due to menu visual appeal. After that, follow by design (DGN) which recorded beta value of $B = 0.243$, $t = 2.274$ and $p < 0.05$ with the variation of 24.3%. Lastly, menu informativeness (MIF) has the lowest impact towards dependent variable as its $B = 0.119$, $t = 1.758$, $p > 0.05$ with a variation of 11.9%. Hence, the outcome marked that the independent variables which are Menu Visual Appeal, Menu Informativeness, Design, and Perceived Control act as important inputs for the prediction model.

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	
		B	Std. Error	Beta	
1	(Constant)	.052	.262		.198
	Menu Visual Appeal	.295	.055	.308	5.334
	Menu Informativeness	.119	.068	.117	1.758
	Design	.243	.107	.219	2.274
	Perceived Control	.341	.107	.317	3.197

a. Dependent Variable: PCI

Table 4.10: Regression Analysis on Coefficients

The relationship can be revealed as mathematically analysis equation below which according to the Table 4.12 above: -

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4$$

Where:

Y = Dependent variable (Gen-x Intention during endemic)

a = Constant term

b₁, b₂, b₃, b₄, b₅ = Coefficient

X₁ = Independent variable (Menu Visual Appeal)

X₂ = Independent variable (Menu Informativeness)

X₃ = Independent variable (Design)

X₄ = Independent variable (perceived Control)

Y (Dependent Variable) = 0.052 (Constant) + 0.295 (Menu Visual Appeal) + 0.119 (Menu Informativeness) + 0.243 (Design) + 0.341 (Perceived Control)

4.5 Hypothesis Test

The researcher measured significant values where to interpret the results that based on the proposed hypotheses been established in Chapter 3 previously. Hypothesis testing often used in statistics to identify the results of hypothesis that performed based on the sample data. The results of hypothesis testing will used to test the statistical sample for knowing whether the null hypothesis is accepting or rejecting. In this study of research, hypothesis test has been done to measure all variables using the data figure out through regression analysis. The outcomes that presented in Table 4.10 will be used to examine by measuring the significant value whether the value was lower or bigger than 0.05.

The Hypothesis for Menu Visual Appeal Factor

H₁₁: Menu visual appeal positively influence gen X use intentions.

H₁₀: Menu visual appeal negatively influence gen X use intentions.

Accept H₁₁

Table 4.10 revealed the relationship between menu visual appeal factor and gen-x purchase intention during endemic. The result marked significant value of menu visual appeal factor, $p = 0.000$ which is lower than 0.05. This shown that menu visual appeal has a significant relationship on gen-x purchase intention. Thus, H₁₁ is accepted in this study of research. There is a positive relationship between menu visual appeal and gen-x purchase intention during endemic.

The Hypothesis for Menu Informativeness Factor

H₁₁: Menu informativeness positively influence gen X use intentions.

H₁₀: Menu informativeness negatively influence gen X use intentions.

Reject H₁₁

Table 4.10 revealed the relationship between menu informativeness factor and gen-x purchase intention during endemic. The result shows that significant value of menu informativeness factor, $p = 0.086$ which is higher than 0.05. This shown that menu informativeness is not significant relationship on gen-x purchase intention. Thus, H₁₁ is rejected in this study. There is a negatively relationship between menu informativeness and gen-x purchase intention during endemic.

The Hypothesis for Design Factor

H3₁: Design is positively associated with gen X use intentions.

H3₀: Design is negatively associated with gen X use intentions.

Accept H1₁

Table 4.10 revealed the relationship between design factor and gen-x purchase intention during endemic. The result marked significant value of system quality factor, $p = 0.024$ which is lower than 0.05. This shown that design has a significant relationship on gen-x purchase intention. Thus, H1₁ is accepted in this research. There is a positive relationship between design and gen-x purchase intention during endemic.

The Hypothesis for Perceived Control Factor

H4₁: Perceptions of control will have a positively relationship with gen X use intentions.

H4₀: Perceptions of control will have a negatively relationship with gen X use intentions.

Accept H1₁

Table 4.1 revealed the relationship between perceived control factor and gen-x purchase intention during endemic. The result shows that significant value of method of payment factor, $p = 0.002$ which is lower than 0.05. This shown that perceived control has a significant relationship on consumer purchase intention. Thus, H1₁ is accepted in this study of research. There is a positive relationship between perceived control and gen-x purchase intention during endemic.

4.6 Summary

In a nutshell, this chapter has explained about all the findings and data collected in this study of research. Statistical Package for Social Science (SPSS Version 22) has been used to analyse the gathered data through online questionnaire from 150 respondents. On the other hands, the analysis method that applied to interpret the collected data are descriptive analysis, correlation analysis, reliability test, and multiple regression analysis. The researcher interprets and analyse the outcomes for achieving research objectives been established previously. Besides, this chapter also

presented the results of hypotheses which have discussed in Chapter 3. For the hypothesis testing, there hypotheses have been accepted in this study of research as the significant value, p is lower than 0.05 and one hypothesis have been rejected in this study of research as the significant value, P is higher than 0.05.

Research Question	Research Objective	Research Hypothesis	Data Analysis
RQ1: What are the factors of menu features affecting gen X use intention of self-service kiosk in McDonald's?	RO1: To investigates factors of menu features affecting gen X use intention of self-service kiosk in McDonald's		Descriptive Analysis, Mean, Standard Deviation, Crosstabulation, Cronbach's alpha
RQ2: What are the relations between menu features and gen X intention to use self-service kiosk at McDonald's?	RO2: To measure the relations between menu features and gen X intention to use self-service kiosk at McDonald's		Correlation Coefficient
RQ3: What are the most significant factor of gen X intention to use self-service kiosk at McDonald's?	RO3: To determine the most significant factor of gen X intention to use self-service kiosk at McDonald's	H1: Menu visual appeal positively influence gen X use intentions. H2: Menu informativeness positively influence gen X use intentions.	Supported Rejected

		<p>H3: Design is positively associated with gen X use intentions.</p>	Supported
		<p>H4: Perceptions of control will have a positively relationship with gen X use intentions.</p>	Supported

Table 4.11: Research Objective, Research Questions, Research Hypothesis and Result

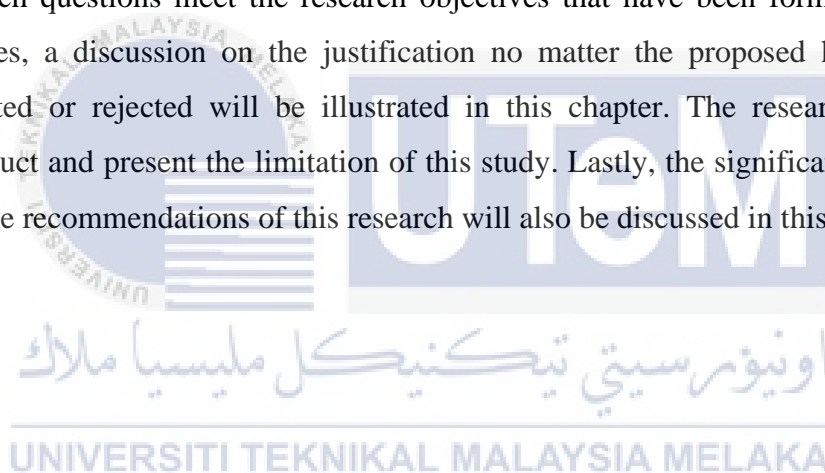


CHAPTER 5

DISCUSSION, CONCLUSION AND RECOMMENDATION

5.0 Introduction

This chapter will conclude all the findings of this study according to the data analysis outcomes in Chapter 4. The researcher will also conclude on whether the research questions meet the research objectives that have been formed previously. Besides, a discussion on the justification no matter the proposed hypotheses are accepted or rejected will be illustrated in this chapter. The researcher will also construct and present the limitation of this study. Lastly, the significant implications and the recommendations of this research will also be discussed in this chapter.



5.1 Discussion of Findings

5.1.1 Relationship Between Menu Visual Appeal and gen X intention to use self-service kiosk at McDonald's during COVID-19 endemic.

According to (S. Han et al., 2021), visual appeal has been shown to exert a positive effect on experiential authenticity. Based on the findings obtained in Chapter 4 (Data Analysis), the researcher found out that the correlation value of menu visual appeal is 0.616 which shows a strong relationship toward dependent variable that is consumer intention to use. Moreover, the researcher also found out that there was a significant value ($p < 0.05$) of menu visual appeal factor with consumer purchase intention. This revealed that there was a significant positive relationship between both variables ($\beta = 0.295$, $p = 0.000$). As a result, the hypothetical relation between menu visual appeal and consumer purchase intention was accepted. This also proven that the predictor of menu visual appeal significantly affects the gen X intention to use self-service kiosk at McDonald's during COVID-19 endemic.

The findings were associated with the previous research by (Wyer et al., 2008) where the menu visual appeal provide an important stimulus to pique customers' curiosity and intention to purchase. In addition, when reviewing a restaurant menu, Hou et al. (2017) discovered different information processing patterns among verbalizers and visualizers in a study on the joint influence of food names and food photos on customer's attitudes and behavioural intentions. As referred to the data analysis of menu visual appeal factor in Chapter 4, the item on 'The way the restaurant displays its online menu is attractive' and 'I like the layout of this online menu' had the highest mean among all the items in menu visual appeal. This shows that degree of consumers' intention to use is influenced by the experience on online restaurant menu. Besides, the item 'I like the graphic of this online menu' was the second significant item that affects consumer intention to use towards online restaurant. This was supported by the research from (Brewer & Sebby, 2021) that proposed menu visual appeal had a significant impact towards the consumers' intention to use during the pandemic of COVID-19.

Furthermore, the projected visual appearance of product must be enticing to attract consumers in an online retailing scenario where they can view or touch the actual products. Product images are essential tools for retailers to communicate with their consumers. According to (Hassanein & Head, 2007), these images have the potential to improve internet shoppers' enjoyment, intention to use, and trust. Next, (Li & Xie, 2019) demonstrated that professionally shot and high-quality photographs positively increased customer's engagement with social media posts as Twitter and Instagram grew in popularity. Hence, menu visual appeal is a critical component of the menus and play a significant role to affect gen-x intention to use during the time of endemic when they order at self-service kiosk in McDonald's.

5.1.2 Relationship Between Menu Informativeness and gen X intention to use self-service kiosk at McDonald's during COVID-19 endemic.

According to (Peters & Hervé Remaud, 2020), the descriptions of meals provide on menus can also influence customer's purchase behaviour. Based on the data analysis outcomes in this study, the researcher found out that the correlation value of menu informativeness is 0.572 which shows a strong relationship toward dependent variable that is gen X intention to use self-service kiosk at McDonald's during COVID-19 endemic. Next, the researcher also finds out that the hypothetical relationship among menu informativeness and gen x intentions to use SSK have a significant relationship. Thus, the second set of hypotheses formed is rejected. It indicates that a statistically significant negative relationship among menu informativeness and gen x intention to use during endemic where $\beta = 0.119$ and $p = 0.081$. As a result, the hypothetical relationship among two variables is rejected and there is a weak influence between them.

The finding of this study made has found out that it is aligned with several prior studies been made up. Previous studies by (J. Han et al., 2020) showed such nutrition information and menu information provided at fast food restaurant kiosks may not be available at other types of restaurants, such as casual-dining and full-service restaurants. As refer to the data analysis of menu informativeness factor in Chapter 4,

the item on 'The menu provides information diners with a comprehensive picture of the food being offered' had the lowest mean among all the items which was 4.32.

In contrast, this study reveals that menu informativeness has a weak significant effect on gen X intention to use self-service kiosk at McDonald's. The result is supported by the study of (Minge et al., 2014) Elders frequently struggle to use information and communication technology, and feelings of helplessness may be exacerbated by failed attempts and frustrations. Reduced vision is a common issue for the elderly, whose eyesight deteriorates with age. The size of the information display is especially important when the elderly have poor vision. (Hagen & Sandnes, 2010). As a result, menus' informativeness are negatively influence gen X intention to use SSK.

5.1.3 Relationship Between Design and gen X intention to use self-service kiosk at McDonald's during COVID-19 endemic

According to (Hsin Yang & Geetha, 2019), seeing a colourful image and the interesting menu design and more likely to make food order more enjoyable. Based on the data analysis outcomes in this study, the researcher found out that the correlation value of design is 0.714 which shows a strong relationship toward dependent variable that is gen X intention to use self-service kiosk at McDonald's during COVID-19 endemic. Next, the researcher also finds out that the hypothetical relationship among design and gen x intentions to use SSK have a significant relationship. Thus, the second set of hypotheses formed is accepted. It indicates that a statistically significant positive relationship among design and gen x intention to use during endemic where $\beta = 0.243$ and $p = 0.024$. As a result, the hypothetical relationship among two variables is accepted and there is a strong influence between them.

The outcome of this study made has examined that it is in line with other several studies previously. The design of SSK user interfaces for taking into account

the physical features of senior users has been the subject of several studies. Numerous research looked into how target size, button spacing, and inclination angle affected user behaviour and preference when using touchscreen interfaces. (Colle & Hiszem, 2004; Gao & Sun, 2015; Sesto et al., 2012; Kim et al., 2014; Jin et al., 2007; Murata & Iwase, 2005; Schedlbauer, 2007). According to (Galdolage, n.d.) interface design becomes very important in Kiosks since it helps customers to demarcate the functional features of a Kiosk which determines the efficiency and effectiveness from their perspective.

In short, the most significant selling tool in the food service sector is the menu, which can be presented in several ways including printed, tablet, or menu kiosk. For the purposes of this study, McDonald's implemented a menu ordering system utilising kiosk technology. The menu for a fast-food restaurant serves as a guide for the patrons by outlining the dishes and drinks that are offered there. According to (Rastegar & Conference, 2018) claimed that self-service kiosks can reduce errors and boost customer satisfaction by allowing for customised ordering. Furthermore, a visual recap of a customer's order improves accuracy and shifts liability to the customer. Hence, by putting a menu design on self-service kiosk allowed attract gen x to use SSK at McDonalds.

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5.1.4 Relationship Between Perceived Control and gen X intention to use self-service kiosk at McDonald's during COVID-19 endemic.

According to. Based on the data analysis outcomes in this study, the researcher found out that the correlation value of Perceived Control is 0.731 which shows a strong relationship toward dependent variable that is gen X intention to use self-service kiosk at McDonald's during COVID-19 endemic. Next, the researcher also finds out that the hypothetical relationship among design and gen x intentions to use SSK have a significant relationship. Thus, the second set of hypotheses formed is accepted. It indicates that a statistically significant positive relationship among design and gen x intention to use during endemic where $\beta = 0.243$ and $p = 0.002$. As a result, the hypothetical relationship among two variables is accepted and there is a strong influence between them.

The finding of this study made has found out that it is aligned with several prior studies been made up. Previous studies by (Binti, 2019) showed, with SSK customers can customize products for themselves, creating a meal based on their personal choices with more control over the process and can pay conveniently without standing in long lines. As refer to the data analysis of Perceived Control factor in Chapter 4, the item on 'The self-service aspect of getting my (product) lets me be decisive.' had the highest mean among all the items which was 4.51. This indicate that most respondents agree that the SSK of the McDonald's had provided aspect getting order be more decisive by the gen X where intend them to order through the kiosk of McDonald's.

In contrast, this study reveals that perceived control has a strong significant effect on gen X intention to use self-service kiosk at McDonald's. The result is supported by the study of (Shin & Dai, 2020), identify perceived control as a mechanism by which a customer's voluntary use of SSK leads to positive customer service experiences. Furthermore, customers are more likely to use SSK if their observations of other customers using it show that it is simple to use. As a result, perceived control is positively influencing gen X intention to use SSK.

5.2 Significant Implication of The Research

Based on the findings in Chapter 4, the implication of the study will discuss on the different implications which comprises of implication theoretical and implication managerial. This study of research could help McDonald's in adapting to retain competitive on endemic by offering implications of theoretical and managerial on how to identify appropriate product, deploy effective content marketing, and appeal to new markets.

5.2.1 Implication of Theoretical Contribution

The findings of this study of research had successfully examined the dimensions of conceptual model by Brewer and Sebbi in year of 2021. The constructs that discussed in this study were Menu Visual Appeal, Menu Informativeness, Design, and Perceived Control. These constructs had given sufficient traction to predict customers' decision-making process in the context of self-service kiosk. The concurrent examination of these framework also helped to the understanding of how customers process information and formation of intention to use, especially when they were in a circumstance that uncommon. As a result, future researchers may either add more variables into the current model in order to explore deeply about the decision-making process of consumers or adapt the model to different scenario in management of hospitality.

Based on the results, three independent variables had shown significant positive relationship and one are rejected with gen x intentions to use. Hence, all the proposed alternative hypotheses were accepted in this study. The discussions and outcomes of this research were based on the study done by P. Brewer & A.G. Sebbi (2021) where the author apply S-O-R model (Stimulus-Organism-Response) to assess the intention to use of consumers during COVID-19 pandemic. This study had contributed to enhance the literature knowledge regarding self-service kiosk menu at McDonalds in Malaysia as this factor is still in emerging phase and lack of research.



5.2.2 Implication of Managerial Level

On a managerial level, this study has offers various practical implications for the restaurant industry, including how to define the product, implement effective content marketing, and appeal to new markets. The self-service kiosk should consider adding appealing photographs for every single item of menu to boost sales, due to this study indicated that the menu visual appeal of an online restaurant positively affected consumer intention to use. However, some restaurateurs may be concerned about the advertising's accuracy. A visually attracting image of a menu item may heighten expectations of consumers to which self-service kiosk McDonald's may find difficult to deliver. So that, McDonald's should proceed with caution before adding images onto the menus. Photographs of menu items must be taken from the restaurant's actual dish, and the provided food must align equivalently with the image as possible. Existing research has noted that paying attention to little like arrangement of food and plating of meal can affect someone ability to recognise and trust the flavour of the menu item (Spence et al., 2016). Besides, someone experience of consuming the dish can change someone enjoyment and consumption behaviours of food. As a result, in addition to making a dish that perfectly corresponds to the photo on the menu, beautifully arranging and plating the meal can improve satisfaction of customers with the dish.

Furthermore, visuals can also affect someone judgement as to the quality of the ingredients, preparation of the meal, standards of the restaurant, and degree of the customer service when there is perceived insecurity regarding items of menu. According to Li and Xie (2020), the menu images need to be taken professionally and excellent-quality design where to ensure great results of menu visual. Visuals, as opposed to descriptive writing on menu items, are more likely to influence people's sensory perceptions on the dish and elicit hunger. Refer to the research by Kisielius and Sternthal (1984), it has examined that combining visuals with descriptive terms leads to greater behavioural intentions of consumer. So, to produce a menu that exceeds someone taste expectation and raises value perception, restaurant's management must be thorough and explicit, both visually and verbally.

The convenience of online food ordering through the webpage of a restaurant or platform of online meal ordering has benefited consumers with positive behavioural intentions through the convenience of information processing. An alternative process of transaction also allows for unusual circumstances, and invaluable feedback for another potential consumers and management. By adding of pleasing pictures and detailed menu item's descriptive has been proven to significantly improve intention to use for firms that use features (Kochilas, 1991). Even after the epidemic has passes and dine-in services have returned to normal, management must continue to monitor and enhance menu descriptions and visuals based on both dine-in and online customers' feedback. This will allow them to stay competitive and give their target market preferred menu items. In addition, it is recommended that restaurants should also embrace carryout and delivery customers as a critical revenue stream.

Last, McDonald's must focus on their performance of self-service kiosk while also where not just on their performance of dine-in service to get a competitive advantage. It is suggested that management acknowledge that a menu can greatly affect a consumers' view of food during the pre-purchase, purchase, and post-purchase stages in order to identify products needed. In other words, it has a consequence on customer satisfaction and loyalty as well as current and future financials. Therefore, in order to retain current, competitive, and achieve sustainability of the restaurant, it is recommended that McDonald's and managers need keep up with industry developments.

5.3 Limitation of The Study

There are some limitations that exist when the researcher conducts this research study. The first limitation identified is that the researcher finds it difficult to conduct research because time and money constraints relatively affect the usual way for researchers to conduct research studies. Therefore, the researcher has chosen to use an

online survey to distribute questionnaires to target respondents. In addition, it is difficult for the researcher to get feedback from the target respondents to fill out the questionnaire because the e-mail sent may often be ignored by them.

Apart from that, the second limitation of this study is the researcher assumes that all respondents have adequate knowledge for understanding the topic of online restaurant menu, thereby answering on this questionnaire. This is because the researcher did not know whether the respondents are clearly understanding on the questions and make responses in an honest way. Some of the respondents might simply fill up the questionnaire in rush time or some might answer without fully understanding the questions. Thus, this will affect the accuracy and reliability of data obtained from those respondents, thereby influence the whole data results of the study where it might not be comprehensive to represent the overall gen x use intention to use towards self-service kiosk at McDonald's during COVID-19 endemic.

5.4 Recommendation for the Future Research

The recommendations for the future study of research are based on the limitation of study on the previous section. Firstly, this study applies the dimensions from Brewer and Sebby's, Collier & Barnes and Junsawang conceptual model which are Menu Visual Appeal (MVS), Menu Informativeness (MIF), Design (DGN), and Perceived Control (PC). Each of the dimensions only consists of three to seven items. Hence, more items (questions) should be added into each of the dimensions as to strengthen the reliability and validity of the questionnaire. Next, the researcher wishes to extend the study of current research to examine the consumer intention to use during crisis of COVID-19 pandemic in a larger sample size. Such study is necessary as to explore more deeper onto the purchase intention of Malaysia's consumer on the X-generation. Besides, the researcher would like to extend the study of current research in the form of pre-pandemic and post-pandemic in the future. More study should be done in order to assess the significant factor that influence consumer intention to use in the context of online restaurant menu by comparison between pre, during, and post-

pandemic. Moreover, the researcher recommends extending the research by applying qualitative method where it can assist future researcher to obtain deeper and valuable findings according to the points of those target respondents. Lastly, the current research was limited to customer evaluations on online restaurant menu during the crisis of epidemic.

5.5 Conclusion

As conclude, this study of research has discussed the outcomes related to the relations between menu features and customer intention to use self-service kiosk at McDonald's during COVID-19 endemic by using the constructs from Brewer and Sebby's, Collier & Barnes and Junsawang conceptual model. The findings concluded that the constructs used as independent variables such as Menu Visual Appeal (MVS), Menu Informativeness (MIF), Design (DGN), and Perceived Control (PC) supported both correlation value and have a significant relationship toward dependent variable which is consumer intention to use during pandemic. The methods used in this study are for the aim to answer the research questions and achieve research objectives through conducting data analysis such as descriptive analysis, Pearson correlation analysis, reliability analysis, multiple regression analysis and hypothesis testing.

The discussion in this chapter reveals that the Menu Visual Appeal (MVS), Design (DGN), and Perceived Control (CP) constructs have a positive yet significant relationship, meanwhile Menu Informativeness have a negative relationship toward intention to use SSK of gen X during COVID-19 endemic. Besides, this discussion also stated that the Perceived Control dimension has a highly significant relationship towards gen x intention to use SSK during endemic. Most of the respondents agree that the menu offers a good description of the provided food. However, Menu Visual Appeal are the most significant factors that affecting gen X intention to use SSK during COVID-19 endemic. Therefore, it was demonstrated that educating target consumers on menu items using distinct menu descriptions increased the likelihood of purchase. In a nutshell, SSK McDonald's should always keep updated with the simply used

features into the SSK system as to increase the gen X intentions to use during the endemic.



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APPENDICES

APPENDIX 1: GANTT CHART FOR FINAL YEAR PROJECT 1

Week \ Activities	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PSM 1 briefing																
Supervisor distribution																
Topic selection																
Completed Chapter 1																
Completed Chapter 2																
Completed Chapter 3																
Proposal submission																
Slide Preparation																
Presentation																
Correction of PSM 1																
Submission Final Report																

APPENDIX 2: GANTT CHART FOR FINAL YEAR PROJECT 2

Week \ Activities	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PSM Talk																
Questionnaire Development																
Pilot Test																
Collect Data																
Analyze Data in SPSS																
Complete Chapter 4																
Complete Chapter 5																
Revise Report before Presentation																
PSM 2 Presentation																
PSM 2 Submission																

APPENDIX 2: QUESTIONNAIRE



THE EFFECT OF ONLINE RESTAURANT MENUS ON CONSUMERS' INTENTION TO USE AMONG UTeM STUDENTS DURING COVID-19 ENDEMIC

INSTRUCTIONS:

Purpose of Survey:

The main purpose of this study is to analyzing the relation between menu features and customer intention to use for self-service kiosk at McDonald's during Covid-29 endemic. Result from this study will be used to build and improve the innovation menu of self-service kiosk.

Notes:

You had been carefully considered and selected to represent on behalf of respondent for this study. Your response is vital as it will contribute towards the innovation of menu for self-service kiosk.

For further clarification and/ or instruction, please contact:

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STATEMENT OF CONFIDENTIALITY

The information you provide will be held as strictly confidential. We will neither publish, release, nor disclosure any information on or identifiable with, individual persons, organization or companies.

ANALYZING THE RELATIONS BETWEEN MENU FEATURES AND CUSTOMER INTENTION TO USE FOR SELF-SERVICE KIOSK AT MCDONALD'S DURING COVID-19 ENDEMIC

SECTION A: DEMOGRAPHIC PROFILE

* During this outbreak of COVID-19, all the physical stores are unable to operate their business as normal due to the lockdown announcement by government. So that the restaurant needs to move digital where to survive in this crisis. Hence, this survey will examine the consumers intention to use in the context of self-service kiosk (SSK).

This section lists some questions about your personal information. Please tick (/) on the space given.

1. Gender:

<input type="checkbox"/>	Male
<input type="checkbox"/>	Female

2. Race

<input type="checkbox"/>	Malay
<input type="checkbox"/>	Chinese
<input type="checkbox"/>	Indian
<input type="checkbox"/>	Ethnic Sabah
<input type="checkbox"/>	Ethnic Sarawak

3. Education Level

<input type="checkbox"/>	SPM
<input type="checkbox"/>	STPM
<input type="checkbox"/>	Diploma
<input type="checkbox"/>	Degree
<input type="checkbox"/>	Other : _____

4. Occupation

<input type="checkbox"/>	Self-employed
<input type="checkbox"/>	Work at private sector
<input type="checkbox"/>	Work at public sector

5. On average, how often did you use self-service kiosk at McDonald's during this endemic?

<input type="checkbox"/>	Several times a week
<input type="checkbox"/>	Once a week
<input type="checkbox"/>	Once every 2 weeks
<input type="checkbox"/>	Once a month

SECTION B: FACTORS OF SELF-SERVICE KIOSK THAT EFFECT ONTO CUSTOMER'S USE INTENTION DURING COVID-19 ENDEMIC

Here are the statements that reflect your experience when ordering food using self-service kiosk during this endemic. Please rank your statement by using the appropriate scale. Please tick (/) on your answer.

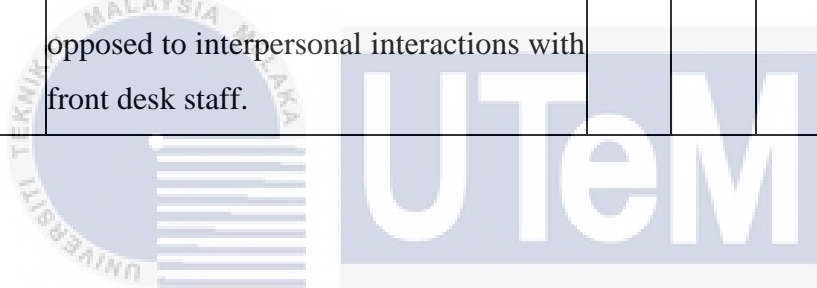
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

	Menu Visual Appeal	1	2	3	4	5
Label	I use self-service kiosk at McDonald's because:					
MVS 1	The way the restaurant displays its online menu is attractive.					
MVS 2	The online menu is visually appealing.					
MVS 3	I like the look and feel of this online menu.					
MVS 4	I like the layout of this online menu.					
MVS 5	I like the graphics of this online menu.					

	Menu Informativeness	1	2	3	4	5
Label	I choose to utilize self-service kiosk at McDonald's because:					
MIF 1	The way the restaurant displays its online menu is informative.					
MIF 2	The menu provides a good description of the food being offered.					
MIF 3	The menu provides clear details about ingredients and food preparation methods.					
MIF 4	The menu provides potential diners with a comprehensive picture of the food being offered.					
MIF 5	The menu provides enough details for me to decide whether the food being offered would be a good fit for my appetite.					

	Design	1	2	3	4	5
Label	I use self-service kiosk (SSK) at McDonald's because:					
DGN 1	The operation of the firm's SSKs is interesting.					
DGN 2	The firm's SSKs have interesting additional functions.					
DGN 3	The firm's SSKs provide me with all relevant information.					
DGN 4	The layout of the firm's SSK is aesthetically appealing.					
DGN 5	The firm's SSK appears to use up-to-date technology.					

	Perceived Control	1	2	3	4	5
Label	I prefer to adopt self-service kiosk at McDonald's because:					
PC 1	I felt in control with the self-service option					
PC 2	The self-service option lets me be in charge					
PC 3	The self-service aspect of getting my (product) lets me be decisive.					
PC 4	The self-service aspect of getting my (product) gives me more control over the process.					
PC 5	Self-service kiosks are less intrusive as opposed to interpersonal interactions with front desk staff.					



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**SECTION C: CUSTOMER INTENTION TO USE SELF-SERVICE KIOSK
DURING THE ENDEMIC OF COVID-19**

This section provides statements that reflect your intention to self-service kiosk at McDonald's. Please rank your statement by using the appropriate scale. Please tick (✓) on your answer.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

	Purchase Intention	1	2	3	4	5
Label	For me, self-service kiosk at McDonald's:					
PCI 1	After seeing the menu, I intend to order food from the McDonald's.					
PCI 2	After seeing the menu, the probability of me ordering food from the McDonald's is high.					
PCI 3	I rate my chance of ordering food from the McDonald's as high.					
PCI 4	I am very likely to make order again from the McDonald's in the future.					
PCI 5	I would recommend others to order food from the McDonald's.					

**We sincerely thank you for your precious time and participation on this survey.
We can assure you that your information will be kept strictly confidential.**

- END OF QUESTION -