CHALLENGES IN IMPLEMENTATION OF DIGITAL CULTURE ENVIRONMENT AMONG RURAL COMMUNITY IN MALAYSIA: AN OVERVIEW

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Nurul Syfa' Mohd Tokiran[1]
Norhayati Hussin[2+]
Mohd Sazili Shahibi[3]

[1,2,3]Faculty of Information Management, Universiti Teknologi MARA (UiTM) Cawangan Selangor, Puncak Perdana Campus, Shah Alam, Malaysia.
[2]Email: yatiphd@gmail.com

(+ Corresponding author)

ABSTRACT

The purpose of the article is to assess the current challenges in the implementation of the Digital Culture Environment among the rural community in Malaysia. The Covid-19 pandemic has changed the online environment where a drastic usage of digital tools has been observed among Malaysian. The digital culture is defined as the culture shaped by the emergence of digital technologies and their usage in the community. The literature survey approach has been applied as the methodology of study to explore the current challenges in the implementation of the Digital Culture Environment among the rural community in Malaysia. Several challenges have been identified, including the rural sustainable issues, digital divides, demographic factors, Information, Communication and Technology (ICT) factor, individual, as well as behavior factor. According to the literature review conducted, these challenges have been revealed to significantly hurdle the government's movement in implementing the digital culture within the rural community. To overcome these challenges, a strong and effective supporting model should be formulated to assist the government in building and establish a digital culture environment in Malaysia, particularly among the rural community. Hence, a further in-depth study is required to acquire comprehensive literature information to address this issue.

Contribution/ Originality: This study contributes to the existing literature on the challenges in implementing a digital culture environment within rural communities, particularly in Malaysia. It is essential to understand the challenges of digital culture to plan the appropriate strategy towards embracing digital culture among the Malaysian rural community.

1. INTRODUCTION

Digital technology has been proven to be a useful and essential tool to help people manage their life more systematically and efficiently by facilitating their daily life activities. The digital technology that comes with diverse features can significantly help to improve and enhance communication and collaboration among users. The usage of digital technology tools has spiked up since the arising of the Covid-19 pandemic. This is because Covid-19 disease can easily spread via direct contact with other people, thus an appropriate social distance should be kept during communication. Hence, people started to rely more on digital tools to interact with each other. In Malaysia, business entities and organizations, particularly from the essential sectors also have started to incorporate digital

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technologies in their operation more intensely to deliver effective and efficient business activities. The utilization of technologies has significantly facilitated human daily tasks.

The creation and the development of digital technology and the internet will only achieve their aims if these tools are well utilized by humans. In today's era, people depend more on digital technology to embrace the digital culture environment in the community. According to Albert [1] in the study of the history of the information society, computers, software, and the internet indicates the ubiquity of digital culture. D'Arnault [2] explained the concept of digital culture and stated that technology, electronic system, software, hardware, and the internet had shaped the ways people interact, behave, think, and communicate. The tools that facilitate human daily activities have evolved and become smarter, faster, more connected, and more digital [3]. The changes and advancement of technology make life easier, including in the sense of communication and how an organization operates. Nowadays, human life revolves closely in the digital environment.

The advancement of digital technology has changed daily life practices from physical to digital. For example, people are reading e-book instead of physical books. Shahibi and Rusli [4] stated that technology makes human tasks easier. Information is more assessable and can be acquired in a shorter period with higher accuracy. According to Mahmood and Hussin [5] technology enables humans to interconnect without limitations and boundaries. Digital technology is an essential platform to embrace the digital culture within a community. According to Rais-Hussin [6] the digital transformation agenda requires the right attitudes, values, and behaviors to build a successful digital culture.

The rural community is one of the groups in the social hierarchy and is referring to the people living in the rural or remote areas. Several issues and challenges to embrace the digital culture environment among the rural community have been identified and reported. The rural community is still struggling in adapting to the development of digital connectivity [7]. Digital connectivity is crucial in remote areas; however, this community is falling behind due to the lack of infrastructure and accessibility to the services [8]. Hence, the digital infrastructures must be improved and enhanced to make sure everyone in the community stay connected to digital technology.

The internet has a great influence over people's life including in the rural community. It brings changes in many aspects including social, education, and economy, as we are moving towards digitalization [9]. Internet is one of the powerful technologies that can assist people in carrying out their tasks, making decisions, and finding information. This article will explore the challenges in implementing and embracing the digital culture environment among the rural community in Malaysia. The utilization of digital technology among the rural community will be further discussed in the next sections of this article. The challenges have been highlighted to identify the root problems in implementing the digital culture in the rural community in Malaysia.

1.1. What is Digital Culture?

Digital culture has been defined critically by previous scholars. According to Deuze [10] digital culture represents a set of values, practices, and evaluations that related to the ways people act and interact within a contemporary network society. On the other hand, Uzelac [11] stated that digital culture represents the participatory culture where people do not only use the information, but they also contribute the information in various ways. Digital culture is shaped by the appearance and the usage of digital technologies [12]. According to Carlton [13] digital culture represents the integration and adoption of comprehensive technology towards building a practical, creative, and connected platform and practices. The concept of digital culture describes the idea that technology and the internet will shape the way people interact, behave, think, and communicate with each other [2]. The recent definition published by Guy [14] is more comprehensive where it is reported that digital culture is related to the digital transformation in the society as well as the epistemological obstacle based on the sociological analysis that has been performed. In general conclusion, the term digital culture refers to the culture shaped from

the emergence and the use of digital technology. Without the existence of technology, the culture of digitalization will never occur and be experienced by the community. By assessing the challenges faced to implement the digital culture in the community in Malaysia, a deeper understanding of the digital environment will be gained.

1.2. Internet Usage and Accessibility within Malaysia Rural Community

The internet application, especially the broadband devices in the rural area was found to be lower compared to the urban area [15]. This is due to various factors including the availability of this technology, economic reason as well as the social influence that resulted in a more frequent usage of low-speed direct dial-up compared to the broadband devices. A broadband device is a device that allows a high-speed internet connection to your computer, smartphone, and other digital devices. If we compare the level of internet penetration between Malaysia and Singapore, Malaysia is left behind despite the fact that the internet has been introduced to these countries at similar time period [16].

However, the recent outbreak of the Covid-19 pandemic causing the elevation of internet usage among Malaysian since most of the essential daily activities are conducted online including education, working, and information searching. According to e-Conomy SEA 2020 report, eight out of 10 users viewed technology as very helpful during the pandemic and it has become an indispensable part of their daily lives [17]. Even though people have started to embrace the technology, however, 35% population of the Malaysian population does not have a secured access to the internet, particularly those who live in the rural community. The rural community is either experiencing poor internet coverage or the people just could not effort to have access to the internet [18]. The community has started to use the technology, however, several challenges need to be tackled by the Malaysian government to ensure that the rural community can embrace the digital culture environment and incorporate digital technology into their daily life without limitations.

2. CHALLENGES IN IMPLEMENTING THE DIGITAL CULTURE ENVIRONMENT IN THE RURAL COMMUNITY IN MALAYSIA

To implement a successful digital culture environment, the challenges that could arise must be identified and overcome. The next section will discuss the challenges that have been discovered from the previous studies.

2.1. Digital Divides

The digital divide is one of the most significant challenges pertaining the technology adoption among rural communities in Malaysia. The digital divide represents the gap between people who do and do not have access to the form of information and communication technology [19]. The component of the digital divide consists of geographic and socio-economic status. The geographic factor is referring to the location where the community access to the internet and uses digital technology. The rural area usually has poor internet infrastructure, thus causing the community to have limited access to the internet as well as another wireless platform such as television and radio broadcasting, satellite communication, mobile telephone system and bluetooth. Meanwhile, socio-economic status is associate with education, income, as well as profession. Based on the profession of the people from the rural community, they are generally having a low socio-economic status. Some of them tend to work as farmers due to the lack of education. This situation creates a gap between the rural community and the urban community in terms of technology usage.

The Malaysian Minister of the Communications and Multimedia, Gobind Singh Deo [20] stated that Malaysia government are hoping to close the gap between the urban and rural area in Malaysia. The gap in the adoption and the usage of ICT is particularly wide between the rural community of Sarawak and peninsula states [21]. Moreover, the young generations are convinced that job opportunity is lower in their hometown and hence, they have lower chance to succeed in their career. This kind of perception should be changed. The young generations

should maximize the application of technology in their life so that they can improve the living condition in their living area and strive for a better quality of life. Figure 1 shows the distribution of internet users between the urban and rural areas from the year 2014 until 2018. A huge gap was observed between these two living areas for the studied periods.
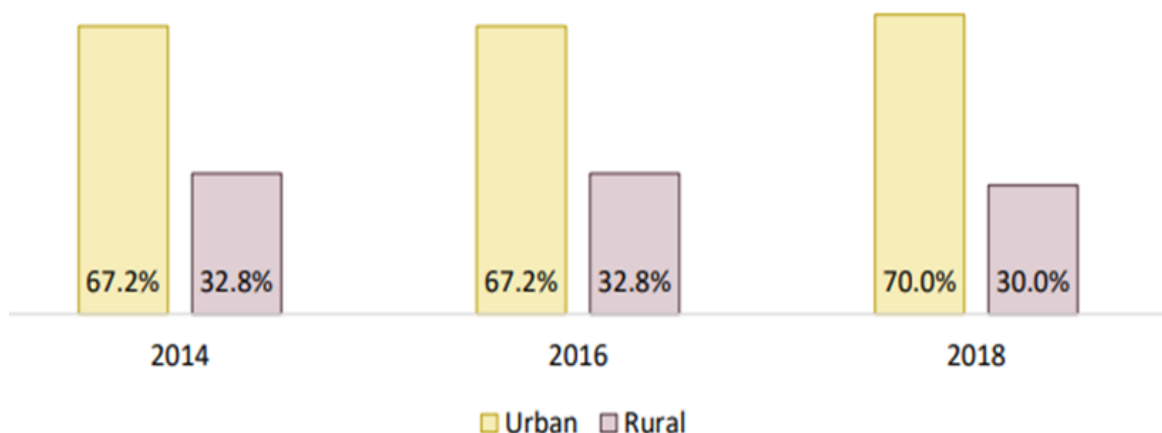

Figure-1. The distribution of internet users between the urban and rural areas for the year 2014, 2016, and 2018.
Source: MCMC [22].

Next, geographical factors created the between the main ethnic communities in Malaysia. There are three main ethnic communities which are Malay, Chinese, and India. There are three main ethnic communities which are Malay, Chinese, and Indian. The difference in the ethnic population has been debated since the establishment of Malaysia decades ago. The population size of the Malay, Chinese, and Indian people is varying between each state in this country. Based on the current statistic available by the Department of Statistics Malaysia [23] the total population in Malaysia is 32.68 million of which 91.8 % is Malaysian and 8.2% is non-Malaysian. Among Malaysian citizens, 67.4% are Malay, 24.6% are Chinese, 7.3% are Indians, and the rest, 0.7% are other minority ethnicities. The rural community mainly consists of Malay and Indian people. Meanwhile, the Chinese usually populated the urban areas. Several studies have revealed that most Chinese dominated the country's economy and resides in the urban area [24, 25]. The level of internet usage among the three dominant ethnicities is different due to the geographical gaps. This issue should be highlighted in order to improve the technology infrastructure so that the digital gap between the urban and rural communities as well as among the ethnicities in Malaysia can be reduced and eliminated.

2.2. Demographic Factor

The demographic factor is another element that hindering the process of digital culture implementation in Malaysia. The demographic factor such as age and gender determine the level of internet access as well as the internet. Age factor found to be influenced the usage of digital technology among the rural communities in Malaysia. Older generations in the rural community having the most difficulty utilizing digital technology compared to the younger people. The various functions and features of digital devices make them harder to understand and to use.

According to Tan [26] the elders with age above 60 years old in Malaysia are not getting enough assistance to help them keep up with digital technology. It was reported that the elders are having difficulties understanding how the technology works, thus they are having trouble using it correctly and effectively. This finding is supported by a previous study that reported that age influenced the technology usage [27]. The usage of digital technology is lower among the older generation compared to the younger generation. This gap should be reduced and further eliminated because technology brings benefits to all generations. Thus, the study of digital culture should be

assessed by exploring the behavior of rural communities towards the usage of digital technology. This is to make sure that the digital culture can be established successfully in Malaysia, particularly among the rural communities.

2.3. ICT Factor

ICT factor has been identified as one of the issues faced in building a digital culture environment in rural areas in Malaysia Samsuddin, et al. [28]. Correa and Pavez [29] stated the terms computer, mobile broadband, or internet interface are the "new language" and "new culture" that required effort and time to be understand and mastered. The older generation has limited access to digital technology and the necessary skills to fully utilize the technology [30]. The utilization of technology in our daily activities brings immense advantages, particularly during the Covid-19 pandemic because people cannot go out to meet each other like usual. The community that does not fully utilize the digital tools most likely to experience less engagement with other people and daily activities. For example, slow internet connection or limited access to the internet causing the students in rural areas to fall behind in academic performance [31].

Basically, the Malaysian government provides the internet infrastructure, however, the accessibility is limited in the rural areas. This situation causing the problem for people that need to work from home during the pandemic and students that need to undergo online learning. Limited accessibility to the internet is reported to be the major issue faced by students in rural areas [32]. In contrary, the urban areas have high-speed internet access and good internet infrastructure that offers multiple options of internet providers. This huge gap in digital technology usage causing the rural communities to develop a lower ICT capability compared to the urban communities. The ICT capability is the capability to use the technology and adapt it into their daily life practices. Hence, the adoption of digital lifestyle is also lower in rural areas compared to urban areas.

2.4. Individual Factor

The study on how the individual factor can influence the digital technology usage is still lacking until now [28]. The individual factors are related to the ownership, awareness, and experience towards the usage of digital technology. People who have a good sense of ownership, awareness, and experience towards digital technology will be able to develop a high ICT capability. Unfortunately, some parts of Malaysian society do not fully grasp the importance of digital technology. According to Pigg [33] the Malaysian society does not fully utilize the provided technology to the maximum capacity to help improve the socio-economic and economic growth in the rural community.

Department of Statistic Malaysia [34] has conducted an assessment regarding the ICT usage and accessibility for individual and household user category. Based on the survey conducted, technology penetration particularly internet risen among Malaysian citizens and mobile usage and accessibility increased to 97.9% since 2017. Internet and computer usage also increased to 81.2% and 70.5%, respectively. The assessment also revealed that a high number of internet users in Malaysia used the internet to participate in social networking (96.5%), finding information (83.1%), and downloading images, movies, videos, or music, playing or downloading games (81.7%). Even though most Malaysian use the internet on daily basis, however, several groups of society such as the older generation or the low-income individuals do not have appropriate access to the technology, particularly the internet.

2.5. Behavior Factor

The issues caused by the demographic factor have shaped the user's personality and attitudes towards the new experience of digital technology [29]. The attitude of an individual is referring to the behavior based on specific circumstances. The demographic factor is also related to the positive or negative responds towards technology usage. Correa and Pavez [29] added that the historical isolation in the community already pervaded someone's

personality and attitudes towards the new digital experiences. Someone who stays too long in the rural community tends to feel reluctant to start using the technology. Hence, the outcome is considered a negative attitude and not open to changes or technology. This study was conducted in 2016, targeting people living in the isolated community of Chile, South America [29]. Based on the finding from the interview conducted, a single mother with a 14 years old daughter stated that she feels reluctant to use technology due to her lack of experience. She told that she knows how to turn on and off the music and listen to it, however, she is not familiar with the technology features and will ask her daughter to help if something appears on the screen. This information is important to assess the challenges to implement the digital culture in the rural community, particularly in Malaysia. People with low levels of openness prefer the traditional and established patterns [35] and this will result in a low acceptance level towards new technology. This finding is supported by another study conducted by Noh, et al. [36] that stated that having a high level of openness to accept the technology and a high level of enthusiasm to try the technology will overcome the typical perception and skeptical thinking towards accepting the new technology.

Another component that reflects on people's behavior towards the usage of technology is the trust factor. According to Wu, et al. [37] trust is considered to be a powerful factor that influences user's online behavior. The low level of trust among the community will influence the usage of technology. Tsai [38] found out that social capital factors such as trust exert a significantly positive effect such as ease of use and usefulness. The ease of use and usefulness is highly contributing to the level of digital technology usage. The rural community will only use something that they find useful to them and easy to use, otherwise, they will feel reluctant Tsai [38]. Besides, the confidence and capability level also influence the behavior of technology usage which directly reflecting the self-efficacy of the people in a community towards technology. The problems that have been discussed so far that consist of usefulness, ease of use, trust, and self-efficacy are widely studied in previous researches regarding technology acceptance and usage. These crucial problems must be highlighted and addressed in order to solve the issue of technology acceptance and usage in the Malaysian community.

By addressing and focusing on these issues, the government of Malaysia should be able to identify the appropriate and possible action to improve and increase the quality of digital technology implementation in this country. Besides, it will also be useful in planning for the initiatives regarding Information, Communication, and Technology (ICT). The digital culture environment should be established properly before implementing the ICT initiatives because it will be difficult to change people's behavior, belief, and attitudes towards digital technology. According to Hamizah, et al. [39] the development of good digital knowledge among the society of Malaysia is depends on the level of openness and acceptance towards the adoption and adaptation of digital technology to enhance their daily life efficiency.

3. RESEARCH METHODOLOGY

This study has performed a literature survey to discover the challenges in the implementation of the digital culture environment among the rural community in Malaysia. A literature survey is the documentation of a comprehensive review of published and unpublished works from secondary data sources [40]. Secondary data is the data that was collected by any party other than the researcher that conducts the current study, for example, the data that was administrated from previous project or study, geo-data, census data, as well as population data from governments [41]. In this study, various data resources have been explored including the research articles, books, websites, and government reports to explore the current scenario and challenges of the digital culture environment in the rural community. Some government reports from the Department of Statistic of Malaysia and Malaysia Communication and Multimedia Commission (MCMC) regarding the number of internet users have been used to support this study. Other than that, the authors also referred to the academic journals to gain more insight into the current internet usage performance in the rural community of Malaysia. All the information extracted from various

data sources was analyzed for a more comprehensive understanding of the current situation and challenges to implement the digital culture environment in the rural community.

4. CONCLUSION AND RECOMMENDATION

In a nutshell, the challenges in implementing the digital culture should be overcome by the government as well as the people in the rural community to ensure a successful implementation in Malaysia, particularly in the rural community. The changes should be done from the individual level because this factor exerts a great influence on the utilization performance of digital technology in the community. All generations should be open and willing to learn how to appropriately utilize the technology and maximize its usage. They should realize that technology is an important tool to help them facilitate their daily tasks, overcome problems, and enhance their living conditions. environment

Based on the finding from this current study, we can see the importance of a comprehensive model of the digital culture environment towards establishing a sustainable rural community in Malaysia. The digital culture environment model should include external and internal factors that influence the successful implementation of the digital culture environment in the rural community. This model should be able to reduce the gap and digital divide between different communities in this country. This model is also essential to assess the behavior, culture, and ethnic factors and to understand how these factors affecting the implementation process. The right behavior should be nurtured so that successful implementation can be achieved. The digital culture environment model will be a guidance for the Malaysia Government in utilizing digital technology, particularly to manage the interaction and communication with the other agencies, domestically and internationally.

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