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PROBLEMS IN THE USE OF INFORMATION COMMUNICATION TECHNOLOGY (ICT) FACED BY THE COMMUNITY IN SABAH

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ABSTRACT

The spread of the Covid-19 pandemic has significantly impacted human life worldwide. The entire global community demands lifestyle changes to adapt to new norms. In Malaysia, the increasing spread of the Covid-19 virus has led the government to implement the Movement Control Order (MCO). As a result, routine activities become limited and controlled. In contrast, applications based on technology, information and communication (ICT) have become the main communication platform, especially in using the internet and online transactions. This article identifies the community's problems in Sabah, specifically on the use of ICT in their daily routines. Using a quantitative approach, data was obtained through a Google form survey, with a sample size of 1,128 involving three main districts: Kota Kinabalu, Sandakan, and Tawau. This article found three main problems faced: infrastructure, costing, and security. These problems are interrelated; therefore, the government is advised to improve the existing and future infrastructure development policies to suit current needs.

Keywords: ICT, Covid-19, infrastructure, costing, security

ABSTRAK

Penularan wabak Covid-19 telah memberi impak besar kepada kehidupan manusia sejagat. Perubahan gaya hidup untuk mengadaptasi kehidupan norma baharu menjadi tuntutan kepada seluruh masyarakat global. Di Malaysia, penularan virus Covid-19 yang semakin meningkat telah menyebabkan kerajaan melaksanakan Perintah Kawalan Pergerakan (PKP). Akibatnya, aktiviti rutin masyarakat menjadi sangat terhad dan terkawal. Penggunaan aplikasi berteraskan teknologi, maklumat dan komunikasi atau TMK menjadi platform perhubungan khususnya menggunakan internet dan transaksi atas talian (online). Artikel ini mengenalpasti masalah-masalah yang dihadapi oleh masyarakat di Sabah khususnya penggunaan TMK dalam rutin harian mereka. Dengan pendekatan kuantitatif, data diperolehi melalui kaedah tinjauan google form dengan saiz sampel seramai 1,228 dan melibatkan tiga daerah utama iaitu Kota Kinabalu, Sandakan dan Tawau. Artikel ini mendapati bahawa terdapat tiga masalah utama yang dihadapi oleh masyarakat di Sabah iaitu infrastruktur, kos dan keselamatan. Ketiga-tiga masalah ini saling berkaitan, justeru pihak kerajaan disaran untuk memastikan dasar pembangunan infrastruktur yang sedia ada mahupun yang dalam perancangan dipertingkatkan bagi disesuaikan dengan keperluan semasa.

Kata Kunci: TMK, Covid-19, infrastruktur, kos, keselamatan

1. Introduction

The spread of the Covid-19 pandemic has had a wide range of impacts on the global community. It has pressured communities around the world to adapt to new norms of involving all aspects of daily activities. The government has taken drastic measures as part of the efforts to curb the spread of Covid-19 by controlling the movement of the people. In other words, citizens are

instructed to stay home and are prohibited from interacting physically between individuals. Just as a standard practice implemented abroad, it is also being executed in Malaysia through the Movement Control Order (MCO). The implementation of MCO in the country has gone through several phases due to the spread of the Covid-19 pandemic which is getting worse. The first phase of the MCO declaration began on March 18 2020, until March 31 2020. However, it has been extended from time to time according to the category and is subject to the recent decision of the National Security Council (NSC). As a result of the government's stand to enforce MCO, the community's movement is minimal. It makes it difficult to carry out daily activities or even deal with anyone face to face. This situation has forced the community to find new methods or approaches as an alternative to carrying out daily routines without face to face. According to a survey conducted by Ministry of Women and Family Development (KPWK), the usage of digital technology has increased significantly, especially for the purpose of working from home and online learning involving students (Bernama, 2021). On top of that, the increase in ICT usage is also found in online services provided by the government and the private sectors, which include various types of transactions such as e-payment, online banking, online shopping and entertainment (Mohd Husni Mohd Noor, 2021). Thus, applications based on technology, information and communication or ICT become a communication platform, especially using the internet services and online transactions. However, the use of ICT still faces various limitations and problems that cover multiple aspects such as infrastructure facilities, technological knowledge, geographical factors, costing, and aspects of security and confidentiality. While the needs and increasing demand for online transactions and services inevitably occurred due to MCO, this article attempts to answer the main problems encountered by the communities in Sabah.

2. Literature review

The use of ICT among Malaysians is becoming more widespread and causing the community's dependence on online services in various aspects. A study by Hong (1998) found that the use of ICT is becoming increasingly critical, especially to the cyber community. They use internet services to communicate with anyone in any corner of the world and create communication networks. This group is growing and triggering potential and vast market opportunities. In a digital report released by Hootsuite and We Are Social in 2019, consumers in Malaysia spend eight hours and five minutes per day on online activities, and Malaysia's Internet Penetration is now at 80 per cent (Bernama, 2019). A report from the Department of Statistics Malaysia (2019), recorded that in 2018, the percentage of individuals aged 15 years and above who use the internet was 81.2%, showing a rise of 1.1% compared to 80.1% in 2017. As for computer usage, there was an increase of 0.7% from 69.8% in 2017 to 70.5% in 2018. For individual mobile phone usage, the percentage point surged by 0.2, from 97.7% (2017) to 97.9% (2018). Clearly, this data shows that the use of ICT by individuals in the country became increasingly popular and widespread even before the Covid-19 pandemic. The latest study by the Department of Statistics Malaysia (2021) found that the trend of ICT use has always shown an increase. According to Dato 'Sri Dr Mohd Uzir Mahidin, Chief Statistician of Malaysia, "the percentage of household access to the internet increased to 91.7% in 2020, compared to 90.1% in 2019. Household access to mobile phones and computers had also risen to 98.6% and 77.6% in 2020, respectively". The impact of the pandemic has shown a significant increase compared to the previous year. The survey findings found that ordering goods or online services, obtaining health information, using internet banking, and taking informal and formal online courses are among the main activities used by most individual users (Mohd Husni Mohd Noor, 2021).

According to Dali et al. (2020), the spread of Covid-19 has changed human behavior, and understanding them helps to prepare for a future pandemic outbreak. In a study made by

Grashuis et al (2020) in the United States, Covid-19 has triggered a significant variation in shopping practices for groceries. As its wave began to rage, consumers took precautions by visiting or less visiting grocery stores. When the case started to subside, it was only then that consumers returned to grocery stores. Changes in shopping practices have traditionally shifted to online purchases. This can be seen from the increase in online sales such as Amazon and Lazada, and it clearly shows that consumers are turning to online purchases during a pandemic (Ahmad, 2020). In Greece, online activities exhibited significant changes that included telework, teleconferencing, e-learning and telehealth, which boosted the phenomenon of virtual mobility among its citizens (Mouratidis & Papagiannakis, 2021). Covid-19 educators have unravelled the importance of online activities that act as a substitute and facilitator to implement a variety of citizen activities. In a study on online banking services (e-banking) conducted in Indonesia, consumers are more likely to use online banking services during the Covid-19 pandemic, especially users of conventional banking services (Sudarsono et al., 2020). These findings are consistent with the Global Trade Daily report written by Chaitali Avadhani asserting that Covid-19 pandemics have catalyzed the process of banking digitization because of the benefits it offers. The use of smartphones has contributed to the increase in internet banking and is further supported by banking facilities that provide 24/7 operational services and smooth banking transactions. The effect is to enliven further the digital banking industry (Chaitali, 2020).

Apart from online purchasing activities, the use of ICT also has a very significant impact on learning and teaching in schools and institutions of higher learning. In Ziemba & Eisenbardt (2021) study, teaching became a major academic activity during the pandemic. This pandemic has accelerated the use of various ICT tools such as e-learning platforms, communication applications and social media to support the teaching and research activities. At the tertiary level, the use of ICT is not new and has been discussed since 2003. The effect of Covid-19 also has a significant impact on university management, academics, students and parents following the transition and adaptation of technology in various aspects of administration, learning and teaching at the university (Yahaya & Adnan, 2021). Although digital technology is beginning to become part of the new norms in the teaching and learning process in institutions of higher learning, there are still challenges such as lack of facilities, lack of knowledge and skills. Undoubtedly, the pandemic has led to a surge in access and use of digital technology due to movement control and social distance norms. Various benefits are gained, such as border-free online learning, but at the same time, it creates a digital divide among various groups (Nor & Amran, 2021). Despite the rapid digitalization process in Malaysia, the digital divide occurs in various aspects of the economy due to insufficient digital equipment, lack of skills, and low levels of education (Mohammad et al., 2021). According to Halina et al. (2021), although the government has built internet centres in rural areas, the centres are less prominent because many rural communities are still unaware of the existence and location of internet centres in their areas. The location factor and the limited number of internet centres and the distance from their village area make the services provided cannot be fully utilized by the rural folks.

3. Methodology

This is a quantitative study. Data were obtained through surveys using a questionnaire which was adapted from Lau & Yuen (2014). The questionnaire was administered from April 2021 up until October 2021. It also involved a survey, data entry into the SPSS software and data validity review. Due to the implementation of MCO in curbing the transmission of Covid-19 during the data collection period, this study chose to use the Google form survey method to get online feedback from respondents. The sample size in this study is a total of 1,228 respondents. They are residents from the districts of Kota Kinabalu, Sandakan and Tawau. Multi-state

sampling method was used for the selection of the study sample. The determination of the study area was selected according to population density based on the strata of the study area. All three districts have a dense population in Sabah; hence based on the recommendations of Krejcie & Morgan (1970), 384 is the minimum number of respondents that is needed from each district.

Table 1: Number of Respondent

District	Minimum Number	Total Chosen Sample
Kota Kinabalu	384	424
Sandakan	384	402
Tawau	384	402
TOTAL	**1152**	**1228**

4. Findings and discussion

Table 2: Demographic profile

		Strata					
		Urban		Rural		Overrall	
		N	%	N	%	N	%
District	Kota Kinabalu	349	38.5%	75	23.3%	424	34.5%
	Sandakan	310	34.2%	92	28.6%	402	32.7%
	Tawau	247	27.3%	155	48.1%	402	32.7%
	Total	906	100.0%	322	100.0%	1228	100.0%
Gender	Male	337	37.2%	144	44.7%	481	39.2%
	Female	569	62.8%	178	55.3%	747	60.8%
	Total	906	100.0%	322	100.0%	1228	100.0%
Age Category	20 years old and below	82	9.1%	43	13.4%	125	10.2%
	21-30 years old	425	46.9%	161	50.0%	586	47.7%
	31-40 years old	168	18.5%	40	12.4%	208	16.9%
	41-50 years old	157	17.3%	53	16.5%	210	17.1%
	Above 50 years old	74	8.2%	25	7.8%	99	8.1%
	Total	906	100.0%	322	100.0%	1228	100.0%
Education Level	Primary and below	28	3.1%	20	6.2%	48	3.9%
	LCE/ SRP/ PMR/ PT3	39	4.3%	12	3.7%	51	4.2%
	MCE/ SPM/ SPMV	264	29.1%	91	28.3%	355	28.9%
	Certificate / Matriculation	50	5.5%	15	4.7%	65	5.3%
	HSC/ STPM/ Diploma	246	27.2%	102	31.7%	348	28.3%
	Degree and above	279	30.8%	82	25.5%	361	29.4%
	Total	906	100.0%	322	100.0%	1228	100.0%
Marital Status	Single	498	55.0%	185	57.5%	683	55.6%
	Married	408	45.0%	137	42.5%	545	44.4%
	Total	906	100.0%	322	100.0%	1228	100.0%
Employment Category	Public employee	240	26.5%	56	17.4%	296	24.1%
	Private employee	380	41.9%	135	41.9%	515	41.9%
	Self-employed / business	133	14.7%	60	18.6%	193	15.7%
	Student	102	11.3%	51	15.8%	153	12.5%
	Others	51	5.6%	20	6.2%	71	5.8%
	Total	906	100.0%	322	100.0%	1228	100.0%
Income Category	RM1000 and below	165	18.2%	58	18.0%	223	18.2%
	RM1001-RM2000	300	33.1%	125	38.8%	425	34.6%
	RM2001-RM3000	121	13.4%	36	11.2%	157	12.8%
	More RM3000	198	21.9%	41	12.7%	239	19.5%
	No income	122	13.5%	62	19.3%	184	15.0%
	Total	906	100.0%	322	100.0%	1228	100.0%

The table 2 shows the demographic profile of the respondents in this study according to district, gender, age, educational level, marital status, employment category and income.

Table 3: Problems faced by the community related to the use of ICT (N=1228)

		Yes		*No*	
		N	%	N	%
1.	Poor internet connectivity	753	61.3%	475	38.7%
2.	Difficulty in paying/buying for internet facilities	381	31.0%	847	69.0%
3.	High and expensive cost for internet facilities	768	62.5%	460	37.5%
4.	I do not require internet services	60	4.9%	1168	95.1%
5.	Lack of knowledge or skills in using the internet	252	20.5%	976	79.5%
6.	Cost for equipment to use internet is high	631	51.4%	597	48.6%
7.	Concern on safety and individual rights	860	70.0%	368	30.0%
8.	Internet services are unavailable in my area	296	24.1%	932	75.9%
9.	Internet services are available in my area but insufficient for the household needs	567	46.2%	661	53.8%
10.	Lack of confidence in using ICT (information communication technology)	348	28.3%	880	71.7%

The findings revealed that respondents faced ten problems with ICT use during the pandemic. The users face infrastructure problems such as lack of facilities, poor internet connectivity, and no internet service in residential areas. Of the 1228 respondents surveyed, 61.3% stated that they had problems with poor internet connectivity, while 24.1% are faced with a lack of internet services in their area. However, 46.2% of the respondents stated that they have internet, but the service is quite limited and unable to meet the household need. The problem with infrastructure facilities is well known in Sabah. They are not only related to basic amenities such as roads, clean water and electricity supply but also include delivery services. A study made by Goliong et al. (2020) found that the issue of internet access is one of the challenges faced by teachers in conducting online teaching and learning. This is supported by Nor Musfirah (2021), who found that rural students face weak or unstable internet network problems, causing them not to follow the learning sessions fully and effectively. At the same time, communities living in rural areas face a digital divide with the urban communities, between the affluent and the disadvantaged as well as the generation gap between young and old (Halina et al., 2021; Nor & Amran, 2021). In the case of Veveonah Mosibin, a Universiti Malaysia Sabah (UMS) student, she had to stay overnight on a tree to get an internet connection for her online examination. She is living in Kampung Sabanalang, Pitas, a remote area which is located about 200 kilometres from Kota Kinabalu, Sabah (Lee, 2020). This case was just the tip of the iceberg as far as the internet connection is concerned. As a result, rural communities face drops in current information and disrupt the teaching and learning process, especially for students, due to the lack or absence of internet services in their areas.

The costing factor was also found to be one of the problems faced by most respondents. 62.5% of the respondents feel that the cost for internet usage is expensive and high. Specifically,

the user group aged 20 years and below are the most affected that 72% of them stated the cost is costly. In addition, the findings of this study found that another problem faced is the cost of equipment for using the internet, with a percentage score of 51.4%. The costing factor is majorly affecting the less affluent population. This is supported by a study of Yahaya & Adnan (2021) on online learning by students in public institutions of higher learning. Students have to spend on high internet costs in participating in online learning. This is burdening the students and their families, especially those who are less able.

In addition, users are also concerned about security aspects, especially related to the rights and confidentiality of their personal information, property etc., as one of the problems in using ICT. This study found that 70% of respondents expressed their concerns about the security or privacy of information being a problem. However, there are 30% who said it was not a problem. Undeniably, personal information security and confidentiality are worrying factors to the ICT-related community, and this matter deserves serious attention. According to Pranggono & Arabo (2021), cyber-criminal groups and Advanced Persistent Threat (APT) target vulnerable systems and groups. Their study found a correlation between the Covid-19 pandemic and increased cyber-attacks. These findings support a previous study conducted by Mandal & Khan (2020) on cyber-attacks during this pandemic, such as data breaches, phishing scams, email scams and ransomware. In a study done by Fox in 2000 (quoted from Farhan et al (2016)) about 86.0% of internet users were worried if an unknown individual or company would get their information through the internet; another 70.0% were worried about the security of credit card numbers, and another 60.0% were worried that some individuals would disclose their personal information as a result of conducting transactions over the internet.

5. Conclusion

The Covid-19 pandemic has had a diverse impact on the world. It has changed daily norms globally to adapting new norms despite little relief with the production of vaccines. Implementing the Movement Control Order (MCO) had also prompted the shift to perform daily routines virtually through information, communication and technology (ICT) applications. This article found three problems faced related to ICT use: infrastructure, costing, and information security. Consequently, these problems further exacerbated the difficulties among the communities in using and assessing online services and transactions. The findings also argue that the problems are not merely encountered by the communities residing in urban areas but also the rural communities which are severely affected. Therefore, the government needs to ensure that the existing infrastructure development policy or future development planning is implemented more efficiently and should be intensified from time to time under current needs, especially in Sabah.

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