Impact of Internet Access and Accessibility Initiatives in Facilitating Students’ M40 and B40 Groups’ Needs during COVID-19 Prevention Measure Period

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Abstract: Malaysia was badly hit by the COVID-19 pandemic starting in February 2020 and the first Movement Control Order (MCO) was announced a month later. Since then, almost all social and economic sectors have been affected including the education sector. Universities and schools have been closed and the process of teaching and learning has been conducted via online platforms. The problem emerged when not all students could afford to buy the equipment and subscription to the Internet, especially those who come from B40 and M40 groups. Realizing the urgent need to address the problem, the government agencies and a few corporate bodies including the Selangor State Government, TM, and Digi have come out with immediate solutions by providing special packages for the Internet data plans to B40, and M40 groups and students to ease their financial burden and more importantly to ensure that they are not left behind with regards to education. Nevertheless, the effectiveness of the initiatives has never been assessed. The purpose of this proposal is to review the impact of Internet Access and Accessibility Initiatives in Facilitating Students’ M40 and B40 groups’ needs during the COVID-19 Prevention Measure Period. By exploring the existing scholars from UTAUT model components and the effect of demographic profile towards behavioral intention, this research pursues to fill up the gap in the literature to review the impact of internet access among M40 and B40 groups of students. The proposed research design for this study is a quantitative approach, whereby this research will be conducted by distributing a survey questionnaire to those who have received the special packages for the Internet data plans. It is expected that the input from the respondents can be used to improve the effectiveness of these initiatives and to heighten the awareness among students on the importance of education for their future success.

Keywords: B40 group, M40 group, students, online learning, Internet mobile data.

1. Introduction and Background

Since the first Movement Control Order (MCO) was announced by the government on 16 March 2020, a lot of drastic changes have taken place in various social, economic, and political activities. Some businesses were permanently closed, some other businesses can operate within certain hours, most offices must reduce their manpower and run at half capacity, and universities and schools have to conduct teaching and learning activities via online means. All these have affected the lives of all Malaysians especially those in the category of B40 and M40. They are in the lower income groups who have less savings and rely heavily on their monthly salary to survive.

The Department of Statistics Malaysia (DOSM, 2016) defines an M40 household as one that has a median monthly household income of RM6,275, while the Bottom 40% (B40) households have a low monthly household income of RM3,000 and the Top 20% (T20) households have a median monthly household income of RM13,148. Surely, the impact of the COVID-19 pandemic has immensely been felt by certain groups of the community, which are B40 and M40 groups. Realizing the need to help these groups, the government has provided Bantuan Sara Hidup (BSH), which is a cash aid for households with a monthly income of RM4,000 or less.
Malaysian banks have also come out with special packages to support the government’s initiative to further ease the burden of those who have been adversely affected by the Covid-19 pandemic, by giving Targeted Repayment Assistance (TRA) to borrowers under the B40, M40 income group and micro enterprises. Under the Budget 2021, the B40 individuals who are the recipients of Bantuan Sara Hidup (BSH) can obtain a three-month deferment of monthly payments or a 50 percent reduction in monthly payments for six months. In the meantime, the M40 individuals who are registered under Bantuan Prihatin Nasional (BPN) can opt for a 50 percent reduction in monthly repayments for six months upon approval (Budget, 2021).

In the Industrial Revolution 4.0 (IR4.0), the Internet is a must. Known as the Internet of Things (IOT) phenomenon, all information, transactions, meetings and discussion, seminars and conferences and other activities can be done using the Internet. Without an Internet connection, all activities will be halted. Realizing the importance of the Internet, the Selangor state government has come out with the initiatives by offering two Internet subsidy schemes as part of its Kita Selangor 2.0 stimulus package, targeting to help the B40 and M40 income groups. Dubbed Data Internet Selangor and Skim Internet Selangor Kategori M40 (SISM40) initiative, on the other hand, will target the M40 group, offering eight internet packages. The packages will allow eligible households to enjoy monthly subsidies of between RM10 to RM30 for a year, starting from 1 July 2021. The SISM40 initiative is offered as a collaborative initiative with Telekom Malaysia ™ (ringgitplus.com, 2021).

Specifically, Data Internet Selangor is expected to benefit 70,000 people from the B40 income group, together with other entities in need, comprising senior citizens, single mothers, students, gig workers, taxi drivers, and small businesses (The Rakyat Post, 2021). The scheme provides an RM20 monthly subsidy for a SIM pack that comes with an unlimited data quota, worth RM35 per month. With the scheme, eligible subscribers will only need to pay RM15 per month to enjoy the perks provided by the mobile internet plan available. The Skim Internet Selangor Kategori M40 (SISM40) initiative, on the other hand, will target the M40 group, offering eight internet packages. These qualified students were chosen by their respective schools with other entities in need, comprising senior citizens, single mothers, students, gig workers, taxi drivers, and small businesses (The Rakyat Post, 2021). Similar initiatives have also been reported to take place in other states in Malaysia including Sabah and Sarawak.

Alongside the state government’s initiatives, giant telecommunication corporations such as Telekom Malaysia Berhad (TM) through its foundation, Yayasan TM (YTM) recently offered free internet access to school students from B40 families nationwide to facilitate their home-based teaching and learning (PdPR) during this Movement Control Order (MCO) period. The unifi Mobile #BEBAS 15 GB LTE SIM cards which come with 1-year FREE internet access worth RM250 were distributed to a total of 2,000 students, bringing the total contribution value to RM500,000. These qualified students were chosen by their respective schools with priorities given to B40 students who will sit for main examinations in 2021. Students from 11 schools nationwide will benefit from the initiatives (tm.com.my, 2021).

Additionally, YTM also contributed another 800 SIM cards worth RM200,000 to low-income groups through TM’s Corporate Social Responsibility (CSR) programs in support of Government initiatives such as Tabung CERDIK and #MYBAIKHATI. Tabung CERDIK is an initiative among the Government-Linked Companies (GLC) and the Government-Linked Investment Companies (GLIC) to assist B40 students with PdPR during the pandemic. On the other hand, #MYBAIKHATI is an initiative under the People and Economic Strategic Empowerment Programme (PEMERKASA) with a similar objective that reaches out to students from underprivileged families through PINTAR Foundation and Pusat Internet Komuniti (PIK) (tm.com.my, 2021).

Digi Telecommunications Sdn Bhd (Digi) is not left behind in helping those affected by the pandemic. Digi introduced a special internet pass, Paket Data Khas SPM dan STPM 2021 specifically meant for students who are sitting for their Sijil Pelajaran Malaysia (SPM) and Sijil Tinggi Pelajaran Malaysia (STPM) this year. This internet pass enables these students to have the best connectivity experience as they prepare for the
upcoming examinations. The Pakej Data Khas SPM dan STPM 2021 offers 15GB high-speed internet with a 30-day validity period, affordably priced at RM20. The pass also allows the students to keep their prepaid lines active for 30 days, without the need to make any additional reloads (trendgrnd.com, 2021).

Besides offering special affordable data plans, Digi is also offering other initiatives including providing free online learning via Jom Tuisyen, free WiFi service at selected Public Housing Projects (PPR), as well as extending operation hours at Pusat Internet nationwide. Digi has powered up free 4G WiFi at 12 People's Housing Programme (PPR) in Perlis, Perak, Terengganu, Melaka, and Johor in its effort to help facilitate online learning for students among the B40 communities. Digi has had wireless routers installed at common facilities within the PPR vicinity, such as in the community library, office rooms, and even prayer rooms, ensuring the B40 students have access to quality high-speed internet on Digi's 4G network for uninterrupted online classroom sessions (digi.com.my, 2021).

Additionally, 11 Community Internet Centres (PIK) managed by Digi in Selangor, Terengganu, Negeri Sembilan and Johor have also prolonged their operating hours from 9 am to 9 pm daily, allowing students to utilize the facilities and devices available in the PIK to facilitate their online learning requirements, of course, with stringent compliance to the safety standard operating procedures (SOP). The PIK also offers students access to additional learning resources such as Jom Tuisyen, the leading e-learning platform in Malaysia that contains learning materials covering almost all subjects approved by the Ministry of Education (MOE). Since earlier this year, over 150 Jom Tuisyen sessions have been conducted at the PIK, benefiting close to 3,000 students preparing for SPM exams (digi.com.my, 2021).

With all the initiatives, offers and assistance provided by various parties including the State Governments, banks, giant telecommunication corporations and others, it is expected that the recipients of these Internet packages will benefit the most. However, the effectiveness of these packages to meet their objectives has never been formally assessed. Therefore, this study is proposed to evaluate the impact of Internet Access and Accessibility Initiatives in Facilitating Students' M40 and B40 groups' Needs during the COVID-19 Prevention Measure Period.

Research Objectives

- To review the previous studies on UTAUT model components and the effect of demographic profile on behavioral intention.
- To profile the recipients of the Internet Access and Accessibility Initiatives - based on respondents’ age, family background (number of siblings), number of siblings attending using the Internet for education purposes, parent’s age, household income and their behavioral patterns – frequency using the internet, average time spent using the internet, etc.

2. Literature Review

The impact of Internet access and accessibility initiatives offered by various agencies and corporations is the main concern of this study. The initiatives have never been appropriately assessed by any parties so far and it is timely to evaluate the effectiveness of these initiatives so that improvement actions can be taken, if there is any, based on the hard evidence from the proposed study. The section is meant to suggest the best model to be used in the study and to highlight the variables that should be considered.

Based on the review of the existing literature, the Unified Technology Acceptance and Use of Technology (UTAUT) model is the most appropriate model that can be used as the underlying model for the study. The UTAUT model is proposed by Venkatesh, Morris, Davis and Davis (2003) based on the systematic review of existing work on the Theory of Reasoned Action (Davis, 1989), Technology Acceptance Model (Davis, 1989), Theory of Planned Behavior (Ajzen, 1991), Diffusion of Innovation (Rogers, 2003), and Social Cognitive Theory (Bandura, 1986). The proposed model comprises six main constructs, namely performance expectancy, effort expectancy, social influence, facilitating conditions, behavioral intention to use the system, and usage behavior.

Usage behavior reflects the actual use of the technology by students (Venkatesh, et al., 2003). It serves as the
dependent variable of the outcome variable in the study. In the present study, the dependent variable is the Internet usage/subscription. Behavioral intention, on the other hand, has been defined as the degree to which a person has formulated conscious plans regarding whether to perform a specified future behavior (Venkatesh, et al., 2003). It serves as the mediating variable that strengthens the relationship between the independent variables (i.e., performance expectancy, effort expectancy, social influence and facilitating conditions) and the dependent variable (usage behavior). The mediating variable used in the proposed study is students’ intention to subscribe to the Internet package.

One of the independent variables in the study is performance expectancy which denotes students’ beliefs regarding whether the use of the technology will enhance their learning performance (Venkatesh, et al., 2003). Park, Nam and Cha (2012) found that performance expectancy together with other variables is significant to describe Korean students’ behavioral intention to engage in mobile learning. Hassan, Rashid, and Li (2015) in studying online shopping behavior among Malaysian polytechnic students discovered that performance expectancy is one of the determinants of students’ behavior intention in participating in online shopping.

Altalhi (2021) in identifying the major factors determining learners’ acceptance of MOOCs in higher education in Saudi Arabia found that performance expectancy via attitude is one of the factors that affect students’ behavioral intention to use MOOCs. Nur, Faslih and Nur (2017) using UTAUT to explain e-learning among students of vocational education at the University of Halu Oleo found that e-learning is affected by performance expectancy and other predictors used in their studies. In the proposed study, it is expected that if students expect that their academic performance will improve using the Internet package, they will have higher behavioral intention to subscribe to the Internet package.

The second independent variable is effort expectancy which refers to the degree of ease associated with the use of the technology (Venkatesh, et al., 2003). Hassan et al. (2015) found that effort expectancy is one of the significant factors that lead to students’ behavioral intention, particularly in engaging in online shopping. Park et al. (2012) also established the same findings where effort expectancy is one of the significant variables that describe Korean students’ behavioral intention in engaging in mobile learning. Similarly, Nur et al. (2017) also discovered that effort expectancy influences students to engage in e-learning at an Indonesian University. Regarding the present study, effort expectancy is expected to influence students’ behavioral intention to subscribe to the Internet package since subscribing to the Internet does not require much effort from them.

Social influence reflects the students’ perception that important others believe that they should use the technology (Venkatesh, et al., 2003). Altalhi (2021) found that social influence as one of the attitude determinants significantly affects students’ behavioral intention to use MOOCs in Saudi Arabia. Hassan et al. (2015) also found that social influence is one of the significant factors that lead to students’ online shopping intentions. In Indonesia, Nur et al. (2017) provided supporting evidence that social influence is among the significant predictors of e-learning as students depend on their significant others’ views and opinions to engage in certain behavioral intentions. Therefore, in the proposed study, social influence is expected to influence students’ behavioral intention to use the Internet package offered by telecommunication service providers in Malaysia.

Facilitating conditions concern the students’ beliefs that the organizational and technical infrastructure exists to support the use of the technology (Venkatesh, et al., 2003). Sobti (2019) in studying the antecedents of the behavioral intention and adoption of mobile payment services like m-wallets and m-banking by users in India found that facilitating conditions play a significant role in affecting the behavioral intention of users. Altalhi (2021) discovered that students’ actual usage of MOOCs in Saudi Arabia is directly influenced by facilitating conditions. Nur et al. (2017) provided additional support that e-learning is influenced by facilitating conditions; among others. About the proposed study, facilitating conditions that relate to the telecommunication infrastructure provided at students’ specific locations will influence their behavioral intention in subscribing to the Internet package.

Essentially, this study consists of four (4) independent variables which are performance expectance, effort
expectancy, social influence, and facilitating conditions. Based on the previous scholars, these four variables are expected to be a determinant factor of student behavioral intention on internet access. This study also utilized four (4) demographic profiles such as gender, age, experience and voluntariness of use as a moderating variable towards the relationship of performance expectancy, effort expectancy, social influence, and facilitating conditions on behavioral intention. Drawing upon the theory of acceptance and use of technology (UTAUT) model, the dependent variable of this study is using behavior, where behavioral intention has a direct effect on use behavior. The novelty of this study is it examines the direct effect of facilitating conditions toward use behavior, something that has been unnoticed by previous scholars (Altalhi, 2021). Hence, Figure 1 illustrates the conceptual framework of the study.

Figure 1: Conceptual Framework of the Study

3. Proposed Research Methodology

The proposed research will utilize a correlational research design, using a quantitative research approach. Correlational research design is meant to test the relationship between the variables using the data that are collected from the respondents at the same period. This design is the middle approach standing in between descriptive design and cause and effect arrangement. Using a quantitative research approach via the distribution of the survey instrument (questionnaire) to the targeted respondents, it is expected that the research will reap the utmost benefits from the project.

The population of the study comprises students and their parents from the B40 and M40 household income groups and has received the benefits from the varying initiatives offered by various parties. Since the population for the study is difficult to determine, the information about the amount of SIM cards offered under various initiatives is found to be useful for this purpose. Approximately 30,000 students have benefited from the initiatives. The sampling technique proposed for this study is purposive sampling. Those students who have experienced the subscription of the Internet data package will be considered as the potential respondents for this study.

To achieve a high confidence level; the 99% level (p < .01) with a 5% margin of error, the sample size for the study should be big enough to represent the population. Based on the recommendation given by calculator.net (https://www.calculator.net), with an estimated population of 30,000, 99% confidence level and 5% margin of error, the suggested sample size is 652 students. This number is higher than the suggested
sample size by Salkind (2010) and the sample should be between 1 and 500 for better representativeness.

The research instrument that will be used is a survey questionnaire. This instrument will be properly developed following these five steps: a focus group study comprising 10 students and their parents who have subscribed to the Internet packages will be identified and interviewed. The questions about the advantages and disadvantages (including the features), the issues and concerns, and the outcomes of using the Internet data packages will be asked. The feedback from these students will be used to develop the questionnaire. The questionnaire will be validated by the experts and tested via a pilot run to identify its limitations. Once validated, the questionnaire is ready to be used in the data collection process.

The data collection process is critical where the right respondents will be selected. A filtered question will be asked to the respondents before they can continue answering the questionnaire. The question requires the respondents to choose from the list of the special Internet data packages offered by various telecommunication service providers. The data collection process will be done using an online method for safety and coverage reasons. It is meant to reduce the risks of getting infected by the COVID-19 pandemic and also to increase the geographical coverage of questionnaire distribution and data collection.

When enough data have been collected, data analysis techniques involved include descriptive and inferential statistics. Under the descriptive statistics, means and standard deviations of the variables, factor analysis, reliability analysis and other assumptions will be performed to ensure the reliability and validity of the data collected. For inferential statistics, correlation analysis and multiple regression analysis will be performed to determine the associations between the variables involved in the study. By using these analyses, it is expected that the research objectives of the study can be met and appropriate suggestions and recommendations for improvement regarding the initiatives can be made.

4. Discussion

Valuing the study by Rahi et al. (2019) on performance expectancy in the context of Internet banking found a positive influence on user intention to adopt Internet banking. Performance expectancy within the context of Internet services pertains to the extent to which an individual holds the belief that utilizing Internet services will be advantageous in accomplishing various banking tasks. Correspondingly, Alalwan et al. (2014) proposed services. Numerous researchers have presented corroborating evidence demonstrating the notable impact of performance expectancy on the user’s inclination to adopt Internet services. Hence, based on the previous scholars, the performance expectancy will significantly affect behavioral intention on internet access among students’ B40 and M40 groups.

Regarding effort expectancy, it pertains to the user’s anticipation of convenience. As exemplified by Zhou et al. (2010), individuals are more likely to embrace Internet services when they perceive them as user-friendly and requiring minimal exertion. Rahi et al. (2019) emphasized that the perception of online banking’s simplicity enhances the likelihood of adoption. Prior investigations have consistently affirmed a substantial correlation between effort expectancy and the user’s intention to adopt Internet services. Therefore, previous scholars show that effort expectancy will have a significant effect on behavioral intention on internet access among students’ B40 and M40 groups.

Furthermore, social influence is one of the determinant factors affecting student’s behavioral intention. The relationship between social influence and behavioral intention has sparked extensive discussions. Social influence is characterized as the degree of societal pressure placed upon an individual to embrace novel technology (Chaouali et al., 2016). A study by Rahi et al. (2019) contends that social influence holds a favorable impact on the user’s intent to use internet services. Previous investigations have consistently demonstrated the noteworthy role of social influence in shaping the decisions of internet users. Due to that, social influence expectancy will significantly affect behavioral intention on internet access among students’ B40 and M40 groups.

The concept of a facilitating condition is derived from perceived behavioral control. This concept highlights the necessity for users to have access to the system while at their workplaces, such as in banks and markets.
The argument put forth is that the lack of proper technological infrastructure might discourage users from embracing new technologies. Rahi et al. (2019) further elaborate those individuals lacking the required operational skills are more likely to have a reduced intention to adopt information technology. Previous studies show that facilitating conditions will significantly affect towards use of behavior on internet access among students’ B40 and M40 groups.

On the other hand, the other factors proposed by Venkatesh et al. (2003) are gender, age, experience and voluntariness of use. These factors serve as the moderating variables that further clarify the relationship between the independent variables and the behavioral intention of students in using the Internet packages. These factors will be included in the study's framework to examine their moderating roles in affecting the main relationships between the independent variables (i.e., performance expectancy, effort expectancy, social influence and facilitating conditions) and the mediating variable (behavioral intention).

5. Conclusion

In conclusion, this study focuses on evaluating the impact of Internet access and accessibility initiatives, which have yet to be adequately assessed, thereby providing a timely opportunity to gauge their effectiveness and potentially enhance them based on empirical evidence. The chosen model for the study, the Unified Technology Acceptance and Use of Technology (UTAUT) model, offers a comprehensive framework. Proposed by Venkatesh, Morris, Davis, and Davis (2003), the UTAUT model integrates elements from various established theories, including the Theory of Reasoned Action, the Technology Acceptance Model, the Theory of Planned Behavior, the Diffusion of Innovation, and Social Cognitive Theory. The model encompasses six essential constructs: performance expectancy, effort expectancy, social influence, facilitating conditions, behavioral intention to use the system, and usage behavior. Usage behavior is the actual utilization of technology, while behavioral intention mediates the relationship between the independent variables (performance expectancy, effort expectancy, social influence, and facilitating conditions) and the dependent variable (usage behavior). In this context, students' intention to subscribe to Internet packages serves as the mediating variable. The study's proposed model takes into account demographic factors such as gender, age, experience, and voluntariness of use as moderating variables. The analysis will shed light on the direct effect of facilitating conditions on usage behavior, a novel aspect in the research landscape. Overall, this study aims to establish a comprehensive understanding of the factors influencing students' behavioral intention and use behavior regarding Internet access, contributing valuable insights to the existing body of knowledge.

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