AN ANALYSIS OF THEORY OF PLANNED BEHAVIOUR - UNDERSTANDING SENIOR CITIZEN BEHAVIOURAL INTENTION (BI) TO USE RAPIDKL *TOUCH N GO* AT KLANG VALLEY, MALAYSIA

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Abstract: The evolution of new technology in Malaysia has promoted the transformation of Malaysian lifestyle. The presence of this environment has serious implication for Malaysians and should be adopted as soon as possible since it is progressively growing. As for Generation X and Y, the acceptance and usage of new technology may not have any aggravation. However, Senior Citizens may experience complications in the acceptance and usage of new technology. The purpose of this research is to understand the reasons of behavioral intention to use RapidKL Touch N Go for bus services among the Senior Citizens. Qualitative research had been applied and mainly engaged with two approaches; 1) in-depth interviews and 2) observations. A total of seven informants were involved in this research.

Keywords: Behavioural Intention, Theory of Planned Behaviour (TPB), RapidKL Touch n Go, Senior Citizens

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Introduction

RapidKL is a public transportation system formed by Prasarana Malaysia and ran by its subsidiaries, covering the Kuala Lumpur and Klang Valley areas. The acronym stands for *Rangkaian Pengangkutan Intergrasi Deras* Kuala Lumpur. The growth of technology in Malaysia had encouraged Prasarana Malaysia to introduce new payment system for busses known as RapidKL *Touch N Go*. However, the old payment system via coins and banknotes still remained. Since the launched of RapidKL *Touch N Go*, most of the users were among young and adults mainly working executives. They had embraced technology very well. The RapidKL *Touch N Go* bus services seems to be easy to use among these generations, while on the contrary, for Senior Citizens, they might be facing difficulties because their lack of technology understanding and experiences. In Malaysia, back then in the 80s and 90s as well as early 2000, bus services were completed with bus conductor, whom requested the passengers to prepare small coins to pay for bus ticket. As the years goes by, and new technology had evolved, Prasarana Malaysia decided to grab the opportunity to implement

RapidKL *Touch N Go* for all bus services. The main purpose of this study is to understand the reasons of the behavioural intentions (BI) to use RapidKL *Touch N Go* bus services in Klang Valley, Malaysia among the Senior Citizens.

Literature Review

Ageing Population

Ageing is not a pleasant subject. In many cases it can turn out to be the most challenging period of our lives as we struggle with loss of independence, health problems and often, loneliness and isolation too. The growth of the older population, aged 65 years and over is one of the most significant demographic trends all over the world. Baby boomers refer to those born between 1946 and 1964, have grown up and now are on the way to becoming ageing boomers. The number of people aged 65 years and over in Malaysia has increased progressively since the 1970s, and it is expected that the number will triple from 2.0 million today to more than 6.0 million by 2040. Although much smaller in total size, the number of people age 80 years and over is projected to grow more than four folds from 0.3 million today to nearly 1.4 million by 2040. While the youngest member of the baby Boomer's generation has not yet entered the ageing boomers, the recent decline in fertility has accelerated the growth in terms of the share of the older population.

Citizen's Well-Being and Technology

Technology has been defined as an application of practical knowledge resulting in artefacts that support hands-on of human life. With the rapid growth of technology, the traditional way of communication - face to face contact is slowly fading away to a more interactive and sophisticated, such as smartphones, tablets, WhatsApp, Skype, Facebook and more which make communication easier and simple. The Senior Citizens are required to adapt or embrace technology, whether they like it or not. By adopting and using technology, it will help them to develop skills and gather experience. Plus, it also can improve their confidence level, ability to access other services using technology, can live independently and more meaningful in a way that they can manage their own life. Senior Citizens are given freedom to handle their lives according to what they plan and which they require less help of other people or family members. Technology has created a sense of autonomy in Senior Citizens, which bring them happiness, healthy and participative living. This ends the perception of Senior Citizens as dependent, and ensures that longer life is healthy and fulfilling, and that Senior Citizens are full participants in society.

Research Theory

Theory of Planned Behaviour (TPB) had been applied as guidelines to help to collect information. This theory was proposed by Ajzen who suggested that behaviour is determined by intentions, attitudes (beliefs about a behaviour) and subjective norms (belief about others' attitudes towards a behaviour).
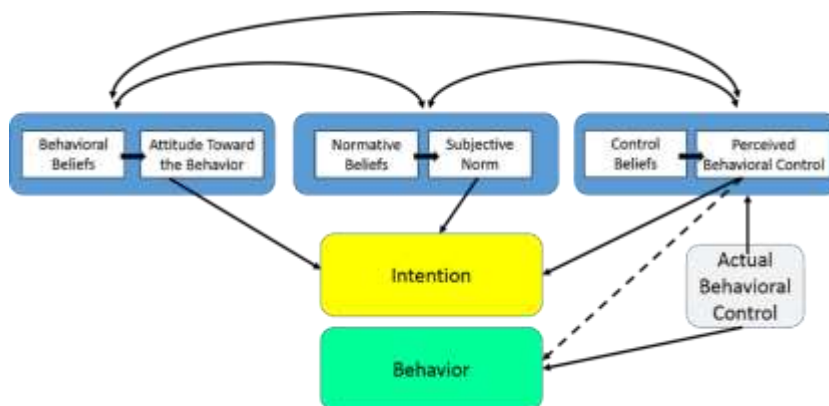
Figure 1.1 Theory of Planned Behaviour

Source: Wayne W. LaMorte (2016)

TPB states that behavioural achievement depends on both motivation (intention) and ability (behavioural control). It distinguishes between three types of beliefs - behavioural, normative, and control. The TPB is comprised of six (6) constructs that collectively represent a person's actual control over the behaviour.

1. Attitudes – Defined as the degree to which a person has a favourable or unfavourable evaluation of the behaviour of interest. It entails a concern of the consequences of performing the behaviour.
2. Behavioural intention – Defined the motivational factors that stimulate a given behaviour where the stronger the intention to perform the behaviour, the more likely the behaviour will be performed.
3. Subjective norms – Defined as the belief about whether most people like or dislike the behaviour. It connects to a person's beliefs about whether peers and people of importance to the person think he or she should engage in the behaviour.
4. Social norms – Defined as the customary codes of behaviour in a group or people or larger cultural context. Social norms are considered normative, or standard, in a group of people.
5. Perceived power – Defined as the perceived presence of factors that may facilitate performance of a behaviour. Perceived power contributes to a person's perceived behavioural control over each of those factors.
6. Perceived behavioural control – Defined as a person's perception of the ease or difficulty of performing the behaviour of interest. Perceived behavioural control varies across situations and actions, which resulted in a person having varying perceptions of behavioural control depending on the situation.

However, for this study, the purpose is mainly to understand the reasons of BI to use RapidKL *Touch N Go* bus service among Senior Citizens.

Methodology

Qualitative research had been applied and the non-participant observations had been conducted first to understand the phenomenon. After two-years of non-participant observations, the next step was to conduct in-depth interviews to elaborate further on the reasons of BI to use RapidKL *Touch and Go* bus services. Purposive sampling was used in this study because based on the observations, not all Senior Citizens were engaged to the system.

Non-participant Observations

The fact that Senior Citizens might be facing difficulties due to lacking technology knowledge and skills, the researcher decided to conduct non-participant observations. The non-participant observations were conducted for two years to seek out the consistency of lacking using technology, especially RapidKL Touch N Go bus services among the Senior Citizens. Overall, the Senior Citizens were having difficulties to use RapidKL *Touch N Go* bus services. Before they were about to use the service, normally, they will ask the bus driver on how to use RapidKL *Touch N Go*. Although the bus driver had explained in detailed on how to use RapidKL *Touch N Go*, the Senior Citizens were having problems to understand the instructions given. Based on the observation again, three out of seven Senior Citizens were able to use RapidKL *Touch N Go* after they have listened to the explanations and used it with minimum support. Two out of four were able to understand after the bus driver showed them how to use the service (based on demonstrations), as for the remaining two, they decided to ask other people to help them to use the RapidKL *Touch N Go* without having any intention to learn about using it. The researcher also conducted the same practice in Japan mainly Hokkaido - Sapporo, Asahikawa, Osaka, Kobe, Namba, Nara and Kyoto for two years to compare technology knowledge and experiences among the Japanese Senior Citizens.

Sample

A total of seven informants were involved and their age range were between 65 to 75 years old (Table 1.1). The interview questions were divided into two parts: Part 1: Informant demographic information: age and gender and Part 11: Interview questions focused on the three TPB key constructs; 1) Attitude 2) Subjective Norms, and 3) Perceived behavioural control that contributed to the reasons of BI to use RapidKL *Touch N Go* bus service among the Senior Citizens.

Table 1.1 Summary of Informants

No.	Names	Age	Gender	Job	Interview Location
1.	Mr. Tan	65	M	Private Sector	Bukit Indah
2.	En. Mokh	67	M	Government Servant	Titiwangsa
3.	Mr. Siva	66	M	Government Servant	Kelana Jaya
4.	Madam Jee	70	F	Private Sector	Pudu Sentral
5.	Madam Yah	69	F	Private Sector	Sri Rampai
6.	Madam Mary	75	F	Government Servant	Subang Jaya
7.	En. Sam	72	M	Private Sector	Gombak

Results

The researcher needs to take data from the spoken text (structured, unstructured, or narrative interviews) to written form for analysis. After the interview sessions is completed, the researcher examines its content to determine what has been learned and what still needs to be discovered or needs elaboration. Moving from raw interviews to evidence-based interpretations require preparing transcripts so they will be ready to code. Before moving, directing to analysis or coding, the researcher need recognizes the task of handling the qualitative research data during and after the interview.

Table 1.2 Themes Generated Based on Coding Method (Manually)

No.	Key constructs	Descriptions	Themes
1.	Attitude	Degree to which a person has a favourable or unfavourable evaluation of the behaviour of interest. It entails a concern of the consequences of performing the behaviour.	1. Positive 2. Engaging
2.	Subjective norms	Defined as belief about whether most people like or dislike the behaviour. It connects to a person's beliefs about whether peers and people of importance to the person think he or she should engage in the behaviour.	1. Like 2. Encouraging
3.	Perceived behavioural control	Defined as a person's perception of the ease or difficulty of performing the behaviour of interest. Perceived behavioural control varies across situations and actions, which results in a person having varying perceptions of behavioural control depending on the situation.	1. Facing Difficulties 2. Afraid 3. Not confident

Discussion

The interview's results were verbatim transcript manually and several themes had been identified based on manual coding (Table 1.2).

TPB 1st. key construct: Attitude

1ˢᵗ Research Theme: positive

In-depth Interview

(Mmm..) I always have problems with technology. My son is the one who helped me with all technology activities. When my son told me that I have to take a bus to LRT station, I'm so worried. To be honest, I do not know how to use RapidKL Touch n Go. I knew about it because I saw it once, while waiting for my son to fetch me home. I was waiting for him at the bus station. I saw a few people who entered the bus, took out some sort of card and simply put it on a top of a small black box and the driver say ok. (...laugh) I was like so surprised with the situation, funny right. I remember last time, all bus services provided a driver and a bus conductor. All we need to do was to provide small change or coins. That's all. This experience taught me a lot about technology. Although it is just a simple technology involvement, to those who are lacking understanding and experience of technology, definitely will have difficulties. This experience provided me positive attitude because sooner or later we have to accept it. In Malaysia, I think, the involvement of technology almost covers all services. So, I have to develop positive attitude in order for me to accept, adapt and use technology in the future (En. Mokh, 67). ...(Smiling) I taught I can cope with the technology, but such a simple task like RapidKL Touch N Go, I've failed to do so (...laugh). I think the need of explanation and support from people to educate us, Senior Citizen, on how to use this service is needed. Otherwise, we will end up not to choose and learn technology. Many seniors who are older, less affluent or with lower levels of educational attainment continue to have a distant relationship with digital technology [5]. *From my perspective, technology is good because it helps to enhance our life, but it is so frustrated if you cannot cope with the technology, though. This is just a simple one. What about other services that offers complicated technology*

practices? I think that I have to be optimistic about it. Put a bit of confident and just say I can do this (...smiling with thumb up) (Mr. Tan, 65).

Observations
The Senior Citizens were having difficulties to conduct RapidKL *Touch n Go* at the beginning.   After the driver consulted them, they were kind of enthusiastic about it. Although RapidKL *Touch N Go* is considered to be such a simple exercise, to those Senior Citizens who are lacking in technology experience and exposure admitted that they are having difficulties not only to understand the technology, but also to use technology. Although the seniors consistently have lower rates of technology adoption than the younger generations, this group is more affluent, highly educated and more digitally connected than ever.   It is widely accepted that Senior Citizens show low adjustment to the advent of new technologies compared to younger generations, either because they do not have the technological experience or because of their current health status.

TPB 1st. key construct: Attitude
2ⁿᵈ Research Theme: Engaging
In-depth Interview
> *...(Smiling) To be frank with you, I hate technology. Seriously. ..(Disgust facial expression). I found it really annoying. My son encouraged me to use it, which I decided not to pay attention to his lecture. I believe that technology makes society becoming anti-social just like my son and daughter in-law. They are always engaged with their devices 24-7. Ridiculous ...(Angry facial expression). I've discouraged my grandson and granddaughter to use technology. But, there was one incident, where I have no other choice but to take a bus to fetch my grandson.. I was too afraid to use LRT, because to me it is full of technology and I do not trust taxi, because their taxi fare charges was way too expensive. So, I decided to take a bus. At that moment, the bus driver told me that I have to buy Touch N go card in order to enter the bus. Gosshhh…. I was so panicked and angry. Then, this Malay boy help me to do all the processes. He told me that he will help me. I was so surprised. He taught me about Touch N Go. He bought the Touch N Go card and taught me how to use it. ...(Laugh) It is so awkward, seriously. You have to touch the black box when you enter and when you're touch again when you are about to off the bus. All these steps for me is so easy. I found it so easy to use and I can easily engaged to it. New knowledge makes me feel excited.   Therefore, I decided to volunteer to fetch both of my grandson and granddaughter because of Touch N Go. I found it very interesting. I've changed my mind set. Technology is helpful and full of surprises. I believe that things happened for a reason (Madam Jee, 70). ...Mmmm (Smiling) Touch N Go, to me, easy to use and managed. Thank God, that I've used and exposed to the technology since 2008. I think that time Touch N Go service already been launched. If I am not mistaken, Touch N Go launched between 1997 to 1998. For bus services, I think early 2000. This service was way too easy for me to use. Easy for me to engage with technology. So far so good. Hassle free (En. Sam, 72). ...Well (Thinking) Touch n Go, mmm hi this service is so easy to manage though. I think I prefer Touch N Go rather than you have to pay for a ticket. Touch N Go so helpful in terms of no need to queue to buy ticket via machine. As for Touch N Go bus services is considered good and so effective. Simply enter the bus, place your Touch N Go card on the black board that have card picture on it and enter. It is so easy. Anyone can do it (Madam Yah, 69).*

Observations

Based on observations, Senior Citizens whom had been exposed earlier to technology may not have any difficulties to use RapidKL *Touch N Go*. It only applies to those who are lacking experience with technology may face some problem to handle a simple technology event and this may demotivate them to use technology. At their effort to use new technologies, they usually face many difficulties deriving from demographic characteristics such as income, education, geographical location, possible disabilities, as well as difficulties related to the complexity of new technology. Other contributing factors for this low adjustment to new technologies are the lack of incentives, economical obstacles, digital skills and appropriate training.

TPB 2nd. key construct: Subjective Norms
1ˢᵗ Research Theme: Like
In-depth Interview

> *...(Smiling) For this bus service Touch N Go, I like the concept of touch and go. It is so easy. No need to queue. Convenient and easy process (Mr. Siva, 66). ...(Surprise) Honestly, I am comfortable with the system (Madam Yah, 69). ...(Smiling) Yeah! I love it, touch and go. Less hassle and easy to follow (Madam Mary, 75). ...(Serious) Ok, I do not like technology, but this Touch and go is considered good laa. I think I kinda like the concept (En. Mokh, 67) ...(Serious) Touch and go to me is ok. I like it so much (Mr. Tan, 65). ...(Smiling) Hi! This service is so easy and I like it (En. Sam, 72). ...(Serious) To me this service is okay I guess (Madam Jee, 70).*

Observations

Based on the observations, the informants like the RapidKL *Touch N Go* concept. Although some of them were experiencing uncomfortable moments, they agreed that this concept was considered less hassle plus there is no queuing involved. Technology holds great potential to make life better for the Senior Citizens, allowing them to preserve their independence and live their lives to the fullest. What is equally important is that it can provide a helping hand to those who care for them and provide peace of mind. Much of the technology helped to improve the last stage of their life.

TPB 2nd. key construct: Subjective Norms
2ⁿᵈ Research Theme: Encouraging
In-depth Interview

> *...(Serious) I think this concept is so motivating, especially to those who are lacking in technological experiences, Touch N Go is considered a nurturing platform for us to experience technology (Mr. Siva, 66). ...(Mmm) Although I dislike new technology, yeah ok I admit it, I think this concept is good and it is a head start for us seniors though, and it should be offered to all public transportations. I mean it is so encouraging (Madam Jee, 70)....(Smiling) Well, RapidKL Touch N Go is considered easy and less hassle therefore, it encourage people definitely the seniors like us, to use it (Mr. Tan, 65).*

Observations

Based on observations, the senior citizens agreed that RapidKL *Touch N Go* is considered encouraging. It not only motivates them to use technology but also gives them the experience to use technology. Many seniors are overcoming obstacles and adjusting to new technologies such as computers, tablets, smartphones, and other new technology. These seniors are

learning that technology can open new possibilities for them and can make them feel more independent.

TPB 3rd. key construct: Perceived behavioural control
1st Research Theme: Facing Difficulties
In-depth Interview

> *...(Serious) To be honest with you, I am facing problem using Touch N Go and I hate it. But after I was taught by the young boy, I was surprised that it is so easy (Madam Jee, 70). ...(Serious) I never like technology, to be honest with you. Always having difficulties to use technology. After a few consequences, I begin to have positive attitude to the technology (Madam Mary, 75). ...(Serious) I'm facing problem with technology. I cannot operate a simple task using my mobile phone, seriously. Certain situations invited me to experience technology like thoroughly experiencing it and I was so frustrated because I cannot do it. Same goes with this Touch N Go thingy, I was so not good about it. Thanks to the people around me at that time. They helped me a lot to overcome my conditions (Mr. Tan, 65).*

Observations
Based on observations, the informants agreed that they struggled and had a lot of problems to handle such simple task like RapidKL *Touch N Go*. However, after they experienced and taught by people on how to use it, they immediately embraced technology very well. With this lack of confidence in their own ability to use digital technology, seniors are also more likely than those in other age groups to say they need others to show them how to use new devices.

TPB 3rd. key construct: Perceived behavioural control
2nd Research Theme: Afraid
In-depth Interview

> *...(Serious) The fact that I don't like technology, I was so afraid that I have to deal with it in the future. Touch N Go is one of the technology though. To you, Touch N Go is nothing, but to me it is something. I am totally way too old for this (En. Mokh, 67). ...(Serious) I always ignore or should I say never like to attend anything that involved technology, seriously. I am too old for this though. But certain circumstance had happened to me lately that involved with technology and I learn not to ignore technology anymore. I found out that in this current era we have to be very fast and we have to accept and adapt technology ASAP, gosh... I think Touch N Go is enough for me. I may not want to go further (Madam, Yah, 69). ...(Serious) I was always afraid of technology and I do not know why. Even after my sons and my daughters educated me and said that learning technology is good, I am still not buying it. Looking at my sons and their family that no longer having a proper conversation while eating and watching television, I really hate technology. It had changed everything (Madam Jee, 70).*

Observations
Based on observations, the informants looked so worried, maybe because the fact that technology had changed the way they were last time, such as having conversation while watching television or having dinner. They were afraid that there might be no family bonding or connection in the future. Even though this research is only focus on *Touch N Go,* they rather talked about what technology as a whole could harmed the family relationship in the

future. One of the main issues facing seniors and technology is that there are quite a few obstacles and hurdles for them. Sometimes the problems can be physical. Other times, seniors may be worried about using new technologies or be nervous about trying it. In many cases, it's also tough for seniors to absorb and familiarize with new gadgets or technologies which were presented to them. Sometime though they do become frustrated because they cannot enjoy the pleasures of everything which their children and grandchildren can with the technology. Often, they can have encounters in which they cannot fully explain what the technology is or how to operate it. These senior citizens need not worry about the technology but nonetheless they are still coming across it.

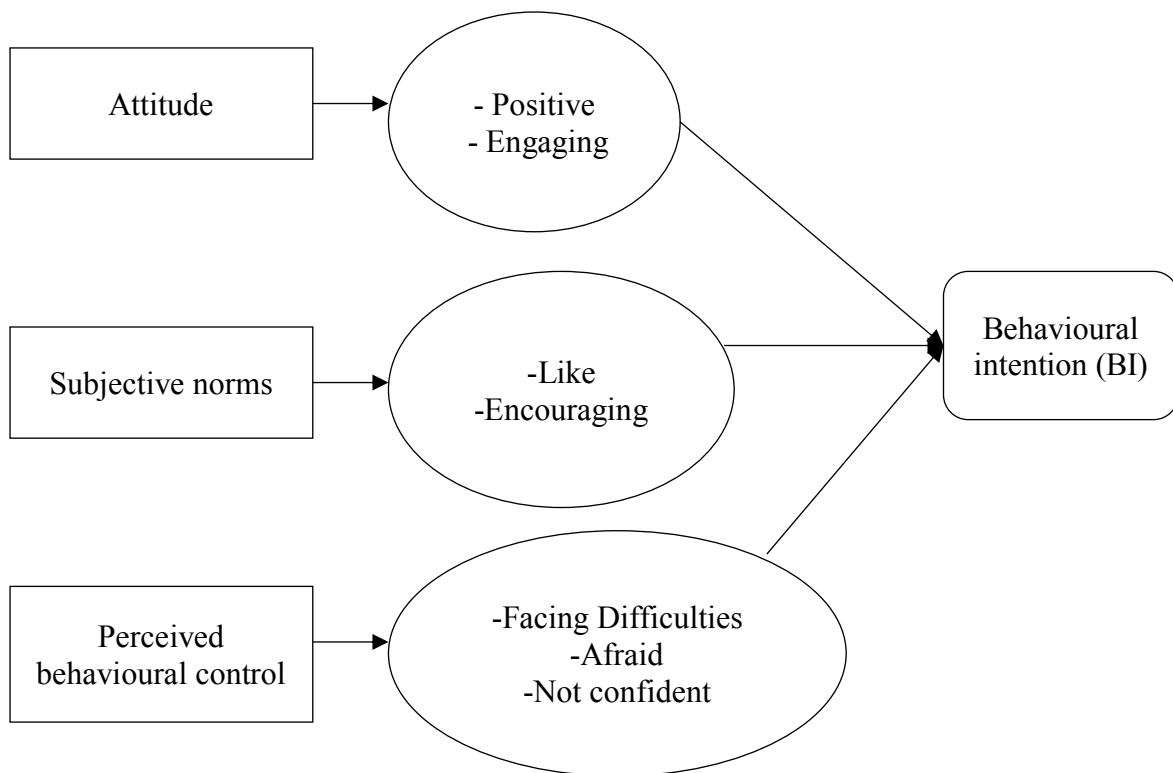TPB 3rd. key construct: Perceived behavioural control
3rd Research Theme: Not confident
In-depth Interview

> *...(Serious) Honestly, I am not confident about using technology. Past experience, I always failed to perform any technology task (En. Mokh, 67). ...(Serious) I always have this uneasy feeling with technology. Not really much interested to learn more about it though due to not feeling any bonding with technology (Madam Mary, 75)....(Serious) To be honest with you, to perform any task via technology, is really not comforting. Always having this negative thought about people laughing at you because you cannot perform such a simple task in this situation, Touch N Go. Therefore, totally not confident with technology, to be honest with you tho (Mr. Tan, 65).*

Observations

Based on observations, the informants looked so frustrated and demotivated. They were not only not confident about technology; they were also not happy about technology. One of the challenges facing older adults with respect to technology is the fact that many of them are simply not confident in their own ability to learn and properly use electronic devices. At the current time there is a still many Senior Citizens who do not interact at all with technology. According to Alvseike and Brønnick (2012) reported that cognitive deficits and low self-efficacy associated with older age significantly reduced participants' ability to use technology. Generally, the current literature suggests that although older adults are open to using technology there may be age-related (e.g., cognitive decline) as well as technology-related (e.g., interface usability) barriers.

Figure 1.2: The Results from In-Depth Interviews and Observations

Table 1.3 Finding Explanations

Attitude	▪ Positive – based on demonstration by bus driver and people who was willing to help them. ▪ Engaging – they tried to manage on their own and felt happy engaged with technology.
Subjective Norm	▪ Like – Apparently, they like it so much because it was easy. ▪ Encouraging – they agreed the use of RapidKL *Touch n Go* motivates them to use technology in the future.
Perceived behavioural control	▪ Facing difficulties – they agreed that earlier they are facing difficulties to understand how to use RapidKL *Touch n Go*. ▪ Afraid – they afraid not to have connection with family. They are also nervous to try new technology. ▪ Not confident – they agreed that they were simply not confident in their own ability to learn and properly use electronic devices.

Conclusion

Based on findings through interview sessions and non-participant observations, the behavioural intention to use RapidKL *Touch N Go* among the Senior Citizens mainly because they agreed that technology is considered easy to operate, user friendly and less hassle. They also agreed that they must embrace it soon or later because in the future all services in Malaysia will be converted into a digital system. Technology and the seniors no longer need to be a taboo subject here among the Malaysian society. Along with all the technology innovations, some came with user-friendly and simpler devices that are easy to use and

operate. Using technology can offer the seniors with several benefits and many seniors embraced them tremendously. Instead of looking at senior citizens as a declining demographic in our society, we must recognize the possibility of senior citizen reintegration into the workforce having all things considered, an encouraging effect in Malaysia.

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