



UNIVERSITI PUTRA MALAYSIA

***ADOPTION OF ICT AND ITS IMPACT ON CULTURAL IDENTITY
SUSTAINABILITY OF ETHNIC MINORITIES IN PENINSULAR MALAYSIA***

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**By
CHOO YEONG KHONG**

**Thesis Submitted to the Graduate Studies, Universiti Putra Malaysia, in
Fulfillment of the requirement of the degree of Master of Science**

June 2015

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Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfillment of the requirement for the degree of Master of Science

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June 2015

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Information and Communication Technology (ICT) plays a crucial role in the present knowledge based globalization era and it has become a necessity for all members of the society in daily lives. In recent years, the increase in the adoption of ICT has significantly changed the manner in which society communicate and interact. The revolutions in the adoption of ICT have profound implications on social development and have pervaded every aspect of human life. An abundance of studies regarding the adoption of ICT have been carried out, but most of them tend to concern on mainstream society issues, specifically in the context of economic, organization and education, but only limited studies focuses on the impacts of ICT adoption towards the cultural identity. In light of this, the study aimed to identify the level of adoption of ICT and its impacts on cultural identity sustainability among the ethnic minorities in Peninsular Malaysia. This study employed a quantitative research approach. The study involved 400 respondents consisted of six different ethnic minority groups that aged 13 to 74 years old, recruited by using purposive sampling technique. An initial investigation done in the selected ethnic minorities settlements provided clearer understanding regarding the adoption of ICT in preserving their cultural identity. A self-developed instrument was used in order to achieve the research objectives in this study. The instrument used was translated to Malay language by using back to back translation and obtained high reliability. Correlation analysis and multiple regression analysis were used to elaborate the data of the study. After finding all the independent variables are correlated to the dependent variable, multiple regression analysis was conducted. The findings of the multiple regression indicated that three variables are significant in predicting the cultural identity sustainability which are relative advantage, resources and ICT use in preserving culture. The findings of the study also supported the Theory of Diffusion of Innovation which indicated that individuals' experience with one innovation influences the individual decision to adopt the innovation, whereby they adopted ICT if they perceived the ICT is useful to preserve their cultural identity. The findings also emphasized the importance of adoption of ICT in order to cope with the challenges brought by the stream of globalization and assist in planning and implementing ICT development among the ethnic minorities in Malaysia.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan ijazah Master Sains

**PENERIMAANGUNAAN ICT DAN KESANNYA TERHADAP
KEMAMPANAN IDENTITI BUDAYA DALAM KALANGAN ETNIK
MINORITI DI SEMENANJUNG MALAYSIA**

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Teknologi Maklumat dan Komunikasi (ICT) memainkan peranan yang penting dalam era globalisasi masa kini yang berasaskan pengetahuan dan ia telah menjadi satu keperluan bagi semua anggota masyarakat dalam kehidupan seharian. Sejak kebelakangan ini, peningkatan dalam penerimgunaan ICT telah mengubah cara masyarakat berkomunikasi dan berinteraksi secara signifikan. Revolusi dalam penerimgunaan ICT mempunyai implikasi yang mendalam terhadap pembangunan sosial dan telah menerapi setiap aspek kehidupan manusia. Banyak kajian mengenai penerimgunaan ICT telah dijalankan, tetapi kebanyakan kajian tersebut cenderung memberi tumpuan terhadap isu-isu etnik majoriti, khususnya dalam konteks ekonomi, organisasi dan pendidikan, tetapi hanya terdapat kajian yang terhad fokus kepada kesan penerimgunaan ICT terhadap identiti budaya. Kajian ini bertujuan untuk mengenal pasti penerimgunaan Teknologi Maklumat dan Komunikasi (ICT) dan kesannya terhadap identiti budaya dalam kalangan etnik minoriti di Semenanjung Malaysia. Kajian ini menggunakan pendekatan penyelidikan kuantitatif. Kajian ini melibatkan 400 orang responden yang terdiri daripada enam kumpulan etnik minoriti yang berbeza yang berumur 13 hingga 74 tahun, dipilih dengan menggunakan teknik persampelan bertujuan. Satu siasatan awal telah dijalankan di penempatan etnik minoriti terpilih memberikan pemahaman yang lebih jelas mengenai penerimgunaan ICT dalam memelihara identiti budaya mereka. Satu instrumen binaan sendiri telah digunakan untuk mencapai objektif kajian dalam kajian ini. Instrumen yang digunakan dalam kajian ini diterjemahkan dalam bahasa Melayu dengan menggunakan *back to back translation* dan kebolehpercayaan yang tinggi diperolehi. Analisis korelasi dan analisis regresi pelbagai telah digunakan untuk menghuraikan data kajian. Selepas mendapati bahawa semua pembolehubah bebas yang dikaitkan dengan pembolehubah bersandar, analisis regresi pelbagai telah dijalankan. Hasil regresi pelbagai menunjukkan bahawa tiga pembolehubah adalah penting dalam meramalkan penerimgunaan ICT dalam memelihara identiti budaya iaitu kebaikan relatif, sumber, dan penggunaan ICT dalam memelihara budaya. Dapatan kajian ini juga menyokong Teori Resapan Inovasi yang menunjukkan bahawa pengalaman individu terhadap satu inovasi mempengaruhi keputusan individu untuk menerimgunaan inovasi tersebut, di mana mereka menerimgunaan ICT jika merasakan ICT adalah berguna dalam memelihara identiti

budaya mereka Hasil kajian juga menekankan kepentingan penerimgunaan ICT bagi menghadapi cabaran yang dibawa oleh arus globalisasi dan membantu dalam merancang dan melaksanakan pembangunan ICT dalam kalangan etnik minoriti di Malaysia.



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I certify that a Thesis Examination Committee has met on 24 June 2015 to conduct the final examination of Choo Yeong Khong on his thesis entitled “Adoption of ICT and its Impact on Cultural Identity Sustainability of Ethnic Minorities in Peninsular Malaysia” in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the student be awarded the Master of Science.

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LIST OF ABBREVIATIONS

ICT	Information and communication Technology
JHEOA	Jabatan Hal Ehwal Orang Asli (Department of Orang Asli Affairs)
JAKOA	Jabatan Kemajuan Orang Asli (Department of Orang Asli Development)
KeTTHA	Kementerian Tenaga, Teknologi Hijau dan Air (Ministry of Energy, Green Technology and Water)
MOSTI	Ministry of Science, Technology and Innovation
MSC	Multimedia Super Corridor
EPF	Employees Provident Fund
UNESCO	United Nations Organization for Education, Science and Culture

CHAPTER 1

INTRODUCTION

1.1 Ethnic Minorities in Malaysia

Ethnic minorities refer to ethnic groups which have smaller population compared to other ethnic population. When society treats a certain characteristic as a special feature, it creates the preconditions for a minority identity to emerge (Natalija, 2003). According to Feagin (1984), a minority has five features:

- 1) Physical and/or cultural traits that set them apart, and which are disapproved by the dominant group,
- 2) Suffering discrimination and subordination,
- 3) A shared sense of collective identity and common burdens,
- 4) Socially shared rules about who belongs and who does not determine minority status,
- 5) And tendency to marry within the group.

There are various ethnic minorities in Malaysia such as Orang Asli, Baba Nyonya, Sikh, Chitty, Siam, Portuguese and so forth. According to Department of Statistics Malaysia (2013), the total population of Malaysia is about 30 million. The ethnic minorities which is indicated as others in the statistic accounts for only a small part of the total population in Malaysia (Table 1.1). However, this does not mean that the ethnic minorities could be isolated or neglected. In contrast, they have the rights to be equally exposed and involved in the mainstream of national development.

Table 1.1. Population by ethnic groups in Malaysia (2013)

Ethnic group	Population ('000)
Malay	15,034.9
Chinese	6,555.2
India	1,965.0
Others Bumiputera	3,546.7
Others	258.5
Non-Malaysian Citizens	2,587.2
Total	29,947.6

Source: Department of Statistics Malaysia (2013)

The Siam Community

The Siam community in Malaysia commonly used to describe the Malaysians of Thai ethnicity. In general, the Siam community adhere to Buddhism. The predominant form of Buddhism is Theravada (Ismail, 2006). Besides that, there also exists a significant Muslim community among the Siam community. However, many Muslim Siamese have become assimilated into the Malay community, whereby most of them have a similar lifestyle as the Malays. This is obviously seen especially among the Siam community in Kelantan (Ismail, 2006). It is difficult to distinguish a Malay or a Siamese if they are not heard speaking their own language. The only distinctive mark among them is their religion and language. Otherwise Malaysian Siamese are like Malays as they also speak fluent local Malay dialects.

The Sikh Community

The Sikh community came to Malaya in the 19th century and they played an important role in military and security sectors (Sarjit, 2007). The colonial British was responsible for bringing them to Malaya. This can be seen in the first British colonial policy in Malaya in the military field, especially from 1896 to 1919. In this policy, many soldiers in Malaya consisted of Sikhs. The selection was based on their physical strength and their turban (Emerson, 1979). Apart from the military field, the Sikhs were also the first Indian race that was involved in the tin mining industry when the mining industry was monopolized by the Chinese in the 1930s (Arasaratnam, 1970). The majority of the community can be found in Perak and Selangor.

In general, the Sikh community are the followers of the Sikh religion, although there are minorities of the community adhere to Muslim and Hindu. Sikhism is a monotheistic religion that was founded in northern India during the 16th century. Sikhism stresses the importance of devotion, intense faith in the Guru, the repetition of their God's name as a means of salvation or moksha (release into God's love), opposition to the worship of idols, the brotherhood of all men, and rejection of caste system.

Although some Sikhs are still visible as security guards and police officers, subsequent generations of Sikhs in Malaysia realized the value of greater education and pursued occupations in professional fields such as doctors, lawyers, educators, and businessmen. As the Sikh become more educated and more integrated into modern Malaysia society, less emphasis is being place on the ability to read and write Punjabi.

Baba Nyonya Community

The Peranakan Chinese or commonly known as the Baba-Nyonya community referred to the descendants of the 15th century when the Chinese immigrants arrived in Melacca and intermarriage with local community took place.

The members of this community normally called themselves as "Baba Nyonya". Baba for the men and Nyonya is the term for the women. Historically, the evolution of the Baba Nyonya community started when the Chinese populations arrived in the Malay Peninsula during the Melacca Sultanate. They were usually traders, the middleman of the British and the Chinese, or the Chinese and Malays. They were then partially or fully adopted the local customs and somewhat assimilated into the local communities

(Tan, 1988). The community have lived for generations along the straits of Malacca and most have a lineage where intermarriage with the local Malays has taken place.

In later generations, some lost the ability to speak Chinese as they became assimilated to the Malay Peninsula's culture and started to speak Malay fluently as a first or second language (Tan, 1988). The Baba language or Baba Malays spoken by the community is unique as many words are from Hokkien, Portuguese, Dutch, Tamil and English. The younger generations nowadays have lost the ability to speak Baba language fluently as most of them communicate in English or Chinese. However, some members of the community still struggle to maintain their culture despite their native language gradually disappearing a few generations after settlement.

Orang Asli Community

Orang Asli is also known as “original people” refer to the indigenous people in Peninsular Malaysia (Gomes, 2004). There are 18 sub-ethnic groups, categorized under three main groups according to their different languages and customs which are Senoi, Proto-Malays and Negritos. Orang Asli were separated into three nationwide categories during the English colonization for the objective of assisting the management in those days (Juli Edo, 2006). Each group was separated and situated in several locations in the woodlands, the hills, the rural areas and near the coastline or stream estuary.

In terms of linguistic differences, they were generally divided into two groups. The first group speak Aslian languages while the second group speak Aboriginal Malay languages. Besides that, most of the Orang Asli are fluent in the Malay language, the official language of Malaysia. Orang Asli are traditionally animists, where they believe in the presence of spirits in various objects. However, in the 21st century, some of them have embraced monotheistic religions such as Islam and Christianity.

Chitty Community

The Chitty community commonly referred to a distinctive group of Tamil people found mainly in Malacca, who are also known as the Indian Peranakan (Dhoraisingam, 2006). Historical records stated that the Tamil traders from India settled down in Malacca during the sovereignty of the Sultanate of Malacca. Like the Peranakan, they later settled down and married with the local Malays and Chinese settlers. Similar to the Peranakan, the Chitty community speak a distinctive Malay language, which is mixed with many Tamil words. Although many of the Chitty are unable to communicate in Tamil fluently and have largely assimilated into the Malay culture with some Chinese, Dutch and Portuguese influences, however certain elements of Indian culture do remain in which they have held on to their Hindu names and consistently observe customary and religious practices (Ravichandran, 2009). However, the members of the community nowadays are assimilating into the mainstream Indian, Chinese, and Malay ethnic communities culturally, this small but distinct community that has survived for centuries is now on the brink of extinction.

Portuguese Community

The Portuguese community is commonly known as The Kristang in Malacca. It is referred to the Portuguese-Eurasians who are the descendant of the mixed Portuguese and Malaccan Malay based in Malaysia and Singapore (Sarkissian, 2005). The Portuguese community have strong heritage of Dutch, British as well as Chinese and

Indian due to intermarriage. Furthermore, due to the Portuguese inquisition in the region, a lot of the Jews of Malacca have assimilated into the Kristang community. The group arose in Malacca between the 16th and 17th centuries, when the city was a port and base of the Portuguese Empire.

The Portuguese community speak a very unique Kristang language, a creole based on Portuguese. Papia Kristang is the language of the descendents of the Portuguese and it has been spoken by the Kristang speech community for at least five centuries. It is made up of elements of each the Malay language, has changed to incorporate many Kristang words (Sarkissian, 2005). However, the younger Kristang who were born and bred in a Malaysian society that never immersed in a totally Portuguese language socialization input do not share a sense of identity with their ancestral past and hence endangered now (Lee, 2011).

1.2 Development of Ethnic Minorities

Development means improvement of the quality of life that is a better quality of life than the previous condition is achievable (Juli Edo, 2006). Government plays a significant role in improving the quality of life of the ethnic minorities. For instance, government intervention in the lives of Orang Asli began since Emergency by acting as agent of change (Juli Edo, 2006). Department of Orang Asli Affairs or *Jabatan Hal Ehwal Orang Asli* (JHEOA) and currently known as Department of Orang Asli Development or *Jabatan Kemajuan Orang Asli* (JAKOA) was established and plays a central role for developing Orang Asli communities. Development of Orang Asli can only going smooth if the community gets sincere attention from the government through the introduction of fair policies and consistent development efforts to the indigenous people. However, the Orang Asli community seem alienated from mainstream society socio-political structure in terms of the land development policy, political involvement and education participation (Juli Edo et al., 2013).

Undeniably, the government does give attention to ethnic minorities' development through some programmes. For instance, according to Siti Nor and Juli Edo (2003), indigenous people have been exposed to two types of development which are general development and special development. General development refers to development programmes are fully implemented irrespective of the community and are expected to beneficial to all members of the community as a result of implementation. Meanwhile, special development focused on two main aspects encompasses economic and social development, and spirituality development as an additional core development.

However, those programmes are ordinary development programmes and it seems does not give specific focus to develop the ethnic minorities. There is JAKOA which responsible for Orang Asli welfare and ICT development, but unfortunately there wasn't any specific authority responsible to resolve the problems encountered by other ethnic minorities, which might deteriorate the disparity among the ethnic minorities with the mainstream society. Despite the ethnic minorities were exposed and enjoyed the benefits under such development, however, government should intensify the participation of ethnic minorities in the mainstream of national development, especially with today's ICT strengths can improve the ethnic minorities interactions with other communities.

1.3 Digital Divide among Ethnic Minorities

The digital divide is a big issue facing the development and progress of ICT in the whole world. The question of the digital divide often leads to physical infrastructure issues in computer technology and the Internet (Ishak & Hassan, 2007). The digital divide means that there is a gap between one community to another community in access to ICT, access to information through ICT, understand and use information from ICT (Norizan, 2007). Additionally, she also suggested that there are four factors that causing the digital divide are economy, geography, computer skills and language proficiency and literacy due to the imbalance in society, especially in terms of the economy, income, education and infrastructure. Besides that, some scholars perceived that digital divide is also caused by the globalization process and this is supported by Ting Kung Shiung and Woo Yoke Ling (2005) who indicated modernization is also a factor that affects the digital divide.

According to Che Su and Norsiah (2008), the level of accessibility and low literacy still occur in rural areas, among individuals with low income, older persons, unemployed and low academic qualifications. From the point of access to ICT, mostly indigenous people in the digital divide because most native villages still do not have easy access to facilitate and encourage aboriginal people to use ICT. Even still many indigenous people who have yet to enjoy a proper foundation (Nor, 1998; Hunt, 1998). Thus, indigenous people can only use ICT as the village gets a touch of ICT development projects undertaken by various parties such as Ministry of Science, Technology and Innovation (MOSTI), Ministry of Energy, Green Technology and Water (KeTTHA) and Department of Orang Asli Development. KeTTHA has been given the responsibility to reduce the digital gap in the society.

Apart from the access gap, ethnic minorities also encountered economic problems, which become a causative factor for ethnic minorities are denied access to ICT. In reality, access to different ICT infrastructure were affected by income and wealth owned by individuals (Hassan, 2008). Poverty also causes individuals not to spend on ICT (Kenny, 2002) as ICT facilities require large expenses (Schiller, 2003). As a result, the poor will be left out of the current state of ICT development on account of their poverty. Therefore, income and socio-economic level becomes important indicator to have technology, particularly for low-income individuals (Ishak & Hassan, 2007).

According to JHEOA (2008), nearly 14,000 native-headed households are poor and almost 65 percent of them are hardcore poor. This problem has put aboriginal people in the digital divide. Poverty has made them not able to own and use ICT as well as other ethnic minority communities unless they participate in the national education system. Moreover, the education system is now much dependent on ICT in teaching as well as learning. On the aboriginal education, statistics JHEOA (2008) show 36.7 percent aboriginal dropped out of the national education system either from primary and secondary level. Percentage of high dropout causes aboriginal youth fail to participate with government policy which began to emphasize the importance of using ICT. This failure has created gaps in knowledge and the skills to use ICT. However, despite there is different in terms of ability and capacity in technology tools ownership in different regions caused by a discrepancy between the income levels, but one thing is becoming common is the desire, inclination and ability of young people to master the technology available today (Samsudin, 2007).

1.4 Statement of the Problem

In this modern era, ICT plays a significant role in human development. A great amount of researches have been conducted in investigating the factors that motivating the adoption of the ICT as well as the barriers of the ICT adoption (Bingimlas, 2009; Cassim & Obono, 2011; Irefin et al., 2012). However, most of the researches have been conducted in United States and only a limited number of studies have focused on the adoption of technology outside North America (McCoy & Everard, 2000). According to Ticehurst and Veal (2000), culture can also influence the outcomes of the research. There are great concerns needs to be taken outside the developed countries. Thus, this study is necessary in extending the researches regarding the adoption of ICT in developing country context with diverse cultures such as Malaysia.

Although a lot of efforts have been made to optimize the adoption of ICT, however, aggressive and unequal ICT development has leads to digital divide among the citizens concurrently. Ethnic minorities often suffer from social exclusion and marginalization in various aspects of life in terms of social, economic, education and so forth (Hunter, 2000; Juli Edo et al., 2013). Most of the previous studies inadvertently focus on mainstream society and parallel attention has not yet been devoted to the unique concerns of ethnic minorities (Ravichandran, 2009; Verkuyten, 2005). Hence, to what extent is ICT could be beneficial to the ethnic minorities, as other mainstream society in Malaysia, remain questionable. To bridge this knowledge gap, this study is important to investigate the level of ICT adoption among the ethnic minorities in Peninsular Malaysia.

The central of this study focuses on the ICT influences on the ethnic minorities' cultural identity sustainability. Aggressive ICT development is seen as an erosion agent on cultural identity. This is supported by Mustafa (2006) who argued that our world is facing identity crisis as we live in the globalization era in which the identity construction has become increasingly complicated due to rapid innovations in ICT. These worries came from the idea that ICT may embedded with the values of the society which produced them (Dyson, 2004). For indigenous peoples, as is the case for other ethnic minorities for the present study, technology has often have unforeseen consequences. ICT may be utilized as a tool to intensify and accelerate the dominance of Western-based modes of thought, culture, and learning strategies which have resulted in massive and continuous exposure of the indigenous community to non-indigenous cultural values and information with few opportunities for reinforcement of their own cultural heritage and language (Resta, 2011). Based on this view, ICT might have some huge impact on the ethnic minorities as they adopt the new technologies, loading unsuitable Western values onto them in a modern form of cultural imperialism.

Despite ICT always seen as the cultural erosion catalyst, however, some researchers argued that ICT can be very useful in maintaining ethnic identity and culture preservation (Lieberman, 2003; Michael & Dunn, 2006). This is particularly important as the ethnic minorities in Malaysia inevitably facing the challenges of losing their cultural identity through the assimilation process into the larger mainstream society (Choo, 2007; Ravichandran, 2009). Therefore, how the ethnic minorities could sustain their cultural identity under the challenges being assimilated into the larger society in the stream of globalization remain questionable. Some scholars hold a different and optimistic view regarding the role of ICT in enhancing the cultural identity sustainability. For instance, Lieberman (2003) argued that although ICT causes

inevitable clashes with local traditions, however, it can be used to preserve, promote, and strengthen the indigenous culture. This is supported by Michael and Dunn (2006) who indicated that the potential uses of ICT in key areas fundamental to the continuing presence of the culture. Similarly, Wamalwa and Oluoch (2013) highlighted the significant role of ICT in preservation of the endangered language. While this divergence among scholars persists, it is still crucial to research on the influence of ICT on culture from various perspectives; on diverse samples in different parts of the world. However, most of the past studies regarding ICT adoption tend to concern on economic, organization and education, but only limited study focus on the cultural identity. In light of this, this study is essential to fill in the gaps in past studies to investigate the adoption of ICT and its influences on cultural identity sustainability among the ethnic minorities in Peninsular Malaysia. Therefore, this research is guided by four research questions:

1.5 Research Questions

- 1.) What is the level of ICT adoption and cultural identity sustainability among the ethnic minorities?
- 2.) To what extent the ethnic minorities differences of their ICT use in preserving their culture?
- 3.) What is the relationship between relative advantage, complexity, compatibility, trialability, observability, resources, social influences, attitude, ICT use in preserving culture and cultural identity sustainability?
- 4.) What are the factors that influence the cultural identity sustainability among the ethnic minorities?

1.6 Research Objective

General Objective

This study aims to identify the adoption of ICT and its influences on cultural identity sustainability among the ethnic minorities in Peninsular Malaysia.

Specific Objectives

- 1.) To identify the level of ICT adoption and cultural identity sustainability among the ethnic minorities.
- 2.) To identify the extent to which the ethnic minorities differences of their ICT use in preserving their culture.
- 3.) To determine the relationship between relative advantage, complexity, compatibility, trialability, observability, resources, social influences, attitude and ICT use in preserving culture and cultural identity sustainability.
- 4.) To identify the factors that influences the cultural identity sustainability among the ethnic minorities.

1.7 Research Hypotheses

Research hypotheses were formulated based on the specific objectives 3 and 4.

H₀1: There is no significant relationship between relative advantage and cultural identity sustainability.

H₀2: There is no significant relationship between complexity and cultural identity sustainability.

H₀3: There is no significant relationship between compatibility and cultural identity sustainability.

H₀4: There is no significant relationship between trialability and cultural identity sustainability.

H₀5: There is no significant relationship between observability and cultural identity sustainability.

H₀6: There is no significant relationship between resources and cultural identity sustainability.

H₀7: There is no significant relationship between social influences and cultural identity sustainability.

H₀8: There is no significant relationship between attitude and cultural identity sustainability.

H₀9: There is no significant relationship between ICT use in preserving culture and cultural identity sustainability.

H₀10: The regression coefficient for all the selected variables equals zero when regressed against cultural identity sustainability.

1.8 Significance of Study

In this digital era, ICT has progressively become one of the crucial factors affecting every aspects of development all over the world. In fact, many developed countries realized the importance and values brought by the advanced ICT and thus adopting it effectively for developmental purposes, unlike developing countries where the adoption of ICT is still low. At present, the scope of ICT adoption in Malaysia especially ethnic minorities is still under-researched. Therefore, this research is particularly important in providing a better understanding to help practitioners in enhancing ICT development in Malaysia. The findings from this research will be beneficial not only to individual but to the minority communities as well. In other words, the present research will contribute significantly to the individual level, community level and the national level.

Individual Level

The use of technologies especially ICT enables tasks to be carried out more efficiently and effectively. If the individual utilized the findings from the present study by planning effective strategies to optimize ICT utilization, it is hoped that they will adopt ICT more in their daily life. Adopting the ICT is obviously useful in saving time and expense as it enables the adopter to access information and knowledge worldwide conveniently which is free of charge, whereby they can enhance their knowledge and work more efficiently, effectively and productively to improve their quality of life.

Community Level

Technologies will enable changes in learning process and daily life. Despite ICT is related to various negative impacts, ICT can improve quality of life by increase productivity is an undeniable fact. ICT has been blamed as a tool that leads to ethnic culture erosion in this globalization era, however, ICT can have several advantages over cultural preservation if being utilized wisely as the community are able to access high-quality learning and promoting their culture. For instance, well-designed multimedia or websites can be more effective in preserving their culture and introducing their culture to other communities as well through Internet. Also, ICT development enables the ethnic minorities to share their ideas, thoughts, opinions, knowledge, as well as the problems they meet in daily life through the existence of various social networking sites which indirectly form a close bonding and providing social support to the members in a particular community. Through the findings from this research, it should help to support and motivate the ethnic minorities to optimize the utilization of ICT in sustaining their cultural identity in order to adapt and cope with the changes in this globalization era.

National Level

As mentioned earlier, the critical issues of how to optimize the use of ICT in promoting national development to achieve Vision 2020 are of national concern. Malaysia National Plans have been issued to support and motivate ICT adoption include:

- 1) Eighth Malaysia Plan (2001-2005).
- 2) Ninth Malaysia Plan (2006-2010).

It is essential for all citizens to use ICT in order to cope with the challenges brought by the stream of globalization. The findings of the present research will provide important pieces of information in explaining what promotes ICT adoption and what hinders ICT adoption. Furthermore, the findings of the research will be beneficial to policy makers, corporate sectors, researchers and non-governmental organization in their attempts to implement and manage ICT initiatives among the ethnic minorities in Malaysia. Hence, it is anticipated that this research will be useful in supporting National Policies especially the policies to increase ICT adoption in preserving cultural identity among citizens, with no ethnic being marginalized and minimize the digital divide.

1.9 Conceptual Framework:

The understanding of the problem from the theoretical gaps and practical issues leads to the formation of the research objectives to be achieved. The conceptual framework of the present study was developed and constructed based on the elements discussed by Rogers' diffusion of innovation theory and research objectives addressed in the previous session.

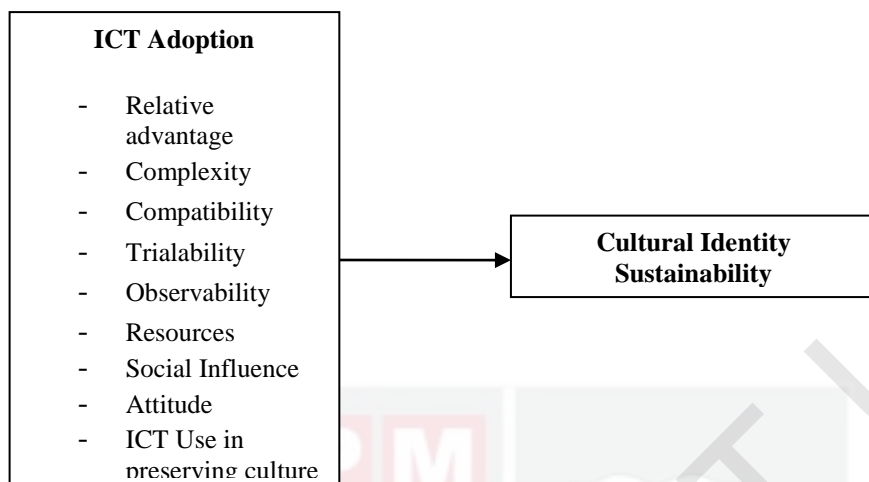


Figure 1.1. Conceptual framework of the adoption of ICT and its impacts on cultural identity sustainability among the ethnic minorities

The diffusion of innovations theory emphasizes the interaction between the environment factors and the adoption of innovation which lead to achieve a desired outcome. As drafted in Figure 1.1, this study consists of nine independent variables which included relative advantage, complexity, compatibility, trialability, observability, resources, social influences, attitude and ICT use in preserving culture. The outcome (cultural identity sustainability) is the dependent variable of the present study.

1.10 Definition of Concepts

After understanding the existing concepts from the past studies, several concepts relevant to this study need to be defined from the researcher own interpretation. These concepts are; Information and Communication Technology (ICT), adoption and cultural identity.

Information and Communication Technology (ICT): ICT refers to communication technology that comes from two concepts which are technology and communication. Information technology is a tool, equipment and software involved in the generation, management, dissemination, management and storage of information which is not restricted in writing or in text only. ICT encompasses hardware, software, content, applications, materials and products that have or carry messages, information or knowledge that can be accessed and used (Musa, 2008). Specifically, ICT in this study referred to selected ICT; namely, computer/laptop/tablet and mobile phone.

ICT Adoption: Adoption encompasses the practice, mental and human feeling which include aspects of the purchase, acquisition, and consumerism that involves complex relationships and involvement of various objects and experiences (Hassan, 2008). In defining ICT adoption, this study sought information in several areas: relative advantage, complexity, compatibility, trialability, observability, resources, social

influences, attitude and the use of ICT in preserving culture among the ethnic minorities.

Cultural identity sustainability: Culture consists of the values the members of a given group hold, the norms they follow, and the material goods they create (Giddens, 1994). Cultural identity is defined as one, shared culture, a sort of collective “one true self”, which people with a shared value, history, and ancestry hold in common (Hall, 1990). Cultural identity sustainability is described as the continuing presence of cultural identity which is passed from one generation to the next (Chiu, 2004; Schusky & Culbert, 1973). In this study, cultural identity sustainability sought information in terms of language, customs, arts and traditional knowledge sustainability.

1.11 Limitation of the Study

There can be no research without limitations. This research has several limitations that need to be addressed. This study sets a boundary towards certain aspect. First, the data collection depended mainly on the willingness of the respondents to participate in the present research. The accuracy of the data is depends solely on the honesty of the respondents. Thus, the respondents might conceal certain important information from the researcher, which could possibly improve the research outcome.

The research was limited to ethnic minorities of only two states of Malaysia, which are Selangor and Melaka, due to the cost and time constraint. Although the research was limited to two states of the Peninsular Malaysia, nevertheless, the research findings are probably to be about the same to those in other states of the Peninsular Malaysia. However, the generalization of the findings is limited only to the sample assessed without additional research. Despite the fact that issues concerning the ethnic minorities in Malaysia are homogenous, it is still difficult to generalize Malaysia’s result to other developing countries without conducting further research.

1.12 Summary

ICT is not something new in this globalization era. It has pervaded in every aspect and become a necessity for all members of the society in daily lives, regardless majority or minority communities. This research aims to investigate the circumstances regarding the adoption of ICT among the ethnic minorities in Peninsular Malaysia. Through the investigation on the ICT adoption among ethnic minorities, this research try to further explore how ICT adoption among the ethnic minorities affected their cultural identity.

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