Leadership and ICTs Implementation for Rural Development

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Abstract

This study aims to explore the implementation of ICTs in rural development and the role played by community leaders. The study was conducted on 10 selected rural communities in the state of Terengganu. This study adopts the qualitative method, specifically, the phenomenology approach. This study focuses on target groups to achieve the research objectives. The data were collected from interviews using Focus Group Discussion (FGD) and official printed document. The results of this study provide a clear picture of the potential of ICT use in terms of economic development, education and social development of rural communities. This study also examines the support of local leaders as the agents of change, especially in the field of Information communication technology (ICT) to accelerate the development process in rural areas. In conclusion, ICT can be potentially used by people in the rural area with the participation and collaboration of the members of the community, community leaders, government agencies, the private sector and ICT industry players.

Keywords: Rural development, information communication technology (ICT), leadership

1. Introduction

The use of Information Communication Technology (ICT) is no longer limited to urban population, it has also become increasingly relevant to the rural population. The use of ICT in Malaysia is evident through high availability of ICT services even in the rural areas. The use of the internet in particular is gaining much significance in the lives of the rural communities in many aspects such as socially, educationally or economically is moving towards digitisation. Advances in technology have changed people's way of life [1]. Lately, many researchers have begun to explore the potential of mobile technology and life support equipment [2]. The introduction of industrial revolution 4.0 (IR 4.0) has made it imperative to master technology. The introduction of new applications, the Internet of Things and big data has made the field technology an indispensable part of today's life. Subsequently, we cannot resist the advances in technology which have greatly aided human life. In this regard, previous studies have shown that mobile technology can have a significant impact on supporting human life [3].

The Malaysian government has been working towards improving access to information technology and telecommunications as well as encouraging and exposing the people to keep up with this new development [4]. These efforts include prioritising computer use and integrating ICT skills primary to higher education. In addition, to expand ICT knowledge among the community, several programmes have been introduced to help increase ICT awareness among the rural communities. These programmes linclude wifi villages, village internet centers, and public internet access points which proof the government's commitment to keep the rural community up to date with the latest technology. This will help reduce the digital divide between urban and rural areas. One of the initiatives taken by the Government of Malaysia to bridge the digital divide is the implementation of telecenter (TC) in 1998. In total, there are 2,500 TCs located in rural and sub-urban towns nationwide. Moreover, the National Broadband (JLK) initiative was launched by the 6th Prime Minister of Malaysia in 2010 aims to drastically increase household broadband penetration rate by 50% by the end of 2010 [5]. In 2013, the government set up a rural internet center in every village across Malaysia while the state government of Terengganu, introduced the People's Internet Access (PINTAR) center in 2019 to help outsiders

gain access to information faster. In line with the latest developments, information and communication technology (ICT) plays an important and significant role in the development of rural life. Thus, this study will provide a clear picture on the potential of rural participation in ICT for economic, educational and social development and the role of local leaders, specifically the Village Community Management Council (MPKK), in increasing the usage of ICT in the community.

2. Literature Review
2.1. The Knowledge of ICTs for Rural Development

Various studies have argued that advancement of ICT has succeeded to evolve our civilization into more competitive [6]. ICT has enabled people to achieve great development in knowledge and information. According to a study by [7], from a socio-economic perspective, the availability of ICT has led to a more effective and efficient business transactions as these transactions can be done quickly. These developments have directly affected the rural community as global changes are imminent in the rural community. The significance of knowledge for development has been well recognised [8]. In this regard, Knowledge is an essential foundation of social and economic development. Technological revolution in ICT has led to the emergence of new knowledge, however, some developing countries have struggled to maximise the benefits of this revolution [5]. This creates a significant barrier to the participation of these countries in this knowledge economy. Knowledge through training and education for example has been a fundamental concern of rural development initiatives over the years. Recent developments in ICT offer great potential to support and enhance education and training for development [7].

On the other hand, based on the particular constraints to education and training in rural areas, ICT has a great prospect in bringing knowledge and development The use of information and communication technology has a become a fundamental element in rural development [9]. In this regard, while education and training help develop cognitive skills, information and content will help build knowledge. Thus, undoubtedly, information is an important aspect for knowledge building. However, it is important to identify whose reality the information reflects, who is able to make use of that information and for what purpose. Conventional information systems have traditionally focused on supplying information to the rural and supplying information about rural areas to policy makers [10], however, it is now recognised that the traditional systems have been largely ineffective in addressing the needs of the rural poor. The decimation of information in particular, is evolving beyond merely transmitting messages (although this is still important). It is becoming more open, more participatory and more demand driven. It is also becoming more interactive as it involves negotiation and two-way information exchanges. There is a new emphasis on the acquisition of information and enabling the rural poor to obtain information specific to their particular livelihood needs. In this regard, communication specialists increasingly recognise the enormous potential of ICT in supporting these changes.

2.2. ICTs and Local Leadership

Local leaders, are people who care deeply about community issues. They are the ones responsible in implementing the initiatives and who shape local development and they could become a possible agent of global social change [11]. Due to their direct contact with communities, local leaders are uniquely positioned to push forward ideas, galvanise others and create immediate social impact. Meanwhile, even though ICT has been recognised as an effective tool for rural development, there is still a huge gap between rural and urban communities in Malaysia [5]. In this regard, leaders play important roles in initiating changes. According to [12], the leadership influences the development of ICT in the rural area. Studies by [13] have shown that the influence of local leadership is a key driver of rural participation in ICT as a catalyst of the social, economic, and education development in the area [5]. Community leaders are deemed as a catalyst in accelerating the process of dissemination and spread of information through ICT. Thus, local leaders play a very important in the development of ICT. This is because the leaders

are the foremost people in conveying information accurately and quickly. This is especially true for the Rural demographic which requires speedy actions by local leaders in any situations.

3. Methodology

The study was conducted in the East Coast Malaysia, Terengganu, Malaysia. Terengganu is a state with highest number of rural area in Malaysia. This study employed qualitative research approach to address the issues raised in the study and the data were collected from the informants. Qualitative methods can help researchers to obtain more accurate data, and help researchers to understand phenomena that occur in the real context [14]. 10 communities in the state of Terengganu were chosen as the study area, and interviews and observations were used to collect the data for research. Consequently, the study involved a total of 60 informants including community leaders (MPKK), members of local communities, officials in the relevant government agencies and local residents. In addition, to obtain further data for analysis, the researcher had analysed the relevant documents that were considered as appropriate and may be used as evidence. The use of different data source is advantageous for this study as the varied data source allow more precise data triangulation. The ATLAS.ti software was used to analyse the collected data. The use of this software had allowed the researcher to compile, analyse and make the connection between the themes.

4. Results and Discussion
4.1. Community Participation in the Field of ICT

ICT can become an important medium to improve socio-economic growth [7]. ICT has played a significant role in promoting gender equality, enhancing people's skills through the knowledge it disseminates and providing job opportunities to qualified community members. The interviews conducted with members of the rural community showed that they are exposed to ICT. In fact, some of the interviewees have enrolled in ICT courses in their area. However, they do not agree that they need to attend certain courses, such as ICT literacy courses to improve their skills and feel that there is no need for them to attend such courses. Meanwhile, local leaders such as village leaders and youth leaders agreed that they need special courses to enhanced their ICT knowledge and provide more effective services to the local community.

4.2. Factors Affecting the Level of Participation of People in the Field of ICT

ICT can improve the productivity of rural entrepreneurs. In [5] mentioned that the use of ICT could help farmers to keep track of their harvest and estimate the revenue they could earn. Further, ICT provides a platform for efficient administration and reduces cost in fertilisers. Apart from farming, ICT has the potential for many applications in the rural area, including allowing farmers and fisherman to access information that could uplift their quality of life and provide better access to government services. The results of the interview found that community members' use of ICT were applications is influenced by factors such as usability, cost and accessibility. Many of the interviewers agreed that they use ICT for buying and selling products, and most own a social media account; 76 out of 95 interviewees agreed that they have at least social media accounts like Facebook, 92 out of 95 informants use apps like WhatsApp to connect with each other and almost 70% use social media apps to gain access to information and get the newest news.

4.3. The Role of Local Leaders

Local leaders play an important role in decimating information to the local people. The interviews showed that local leaders, specifically the MPKK chairman and secretariats, agreed that the implementation of ICT could help them strengthen their role as local leaders. Further interviews have shown that only 4 out of 10 MPKK chairmen use ICT in their daily work. Meanwhile, some chairmen of the MPKK shared that they seek assistance from others to manage

tasks such as receiving letters and memos from government agencies. These findings clearly indicate that the village leaders still have low interest and minimally use ICT.

5. Suggestions

To ensure the potential use of ICT in rural areas is optimised, this study puts forward several suggestions as follow.

5.1. Increasing Access for the Youths

One of the village with the most active use of ICT is Kampung Kepong, Kuala Terengganu. There are various recreational facilities available for youths and people from different age groups in the village. The government should provide adequate ICT infrastructure in the rural area for the benefit of all members of the society, especially the youths, for instance, increasing the number of computers with access to the internet. In this regard, school computer labs can serve as an ICT training centre and access point on weekends or school holidays.

5.2. Use of ICT for Employment

The villagers are less aware off the importance of ICT as they are focused on their jobs as farmers, and fishermen. However, it is important to note these daily activities can also be supported with the use of ICT. For example, in agriculture, the agricultural department and the farmers' association could be made online so that transactions and immediate approval could be obtained. The integration of ICT into traditional occupation could increase the villagers' awareness on the importance of ICT in today's world.

5.3. Creating a Conducive Environment for ICT Use

Most villagers feel that their village is not equipped for the use of advanced technology. They agreed that such restriction has hindered their motivation to improve their knowledge on ICT. Thus, local community leaders should create an ICT-focused environment to address the interest of local people in the field of ICT. For example, Kampung Kepong has created an ICT access point known as 'PINTAR'. Creating an ICT friendly environment will inspire both young and old people to try and use IT. This is evident in the urban areas where many older people are beginning to use technology facilities in their daily lives.

5.4. ICT Training for Community Leaders

The program aims to provide ICT awareness among all community leaders of each village in Terengganu. The Community Leader in question include the Village Head, the Chairman of the community association, head of Secretariats under the MPKK as well as other local community leaders such as youth leaders. In this workshop, the participants are taught how to use computers and other devices, such as tablets, notebooks and smartphones. They are also trained to use Microsoft Office software, especially Microsoft Word. This programme is important as most leaders are faced with tasks like sending information, preparing minutes of meetings and documentation, however, not at all skilled leaders can use computers effectively, so such workshop will be very beneficial to them.

6. Conclusion

The results show that the respondents have reached various conclusions regarding the level of ICT participation among the members of their communities, based on their use of ICT for educational, economic and social purposes. This study has provided an overview on the level of community participation in the ICT from the economic, educational and social perspectives. Furthermore, this study has identified the level of community participation in ICT, the factors that influence the level of participation in the rural area and put forward some suggestions for

increasing the level of ICT knowledge among the rural population, how to solve real human problems through the development and the use of tools, materials, machinery, information, and processing. This indicates that technology focuses on the application of knowledge and the use of tools and human skills. Therefore, it is the role and responsibility of all parties to overcome these issues and to promote sustainable use of ICT facilities in rural areas and to ensure long term well-being of the community.

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