AWERProcedia Information Technology & Computer Science

Vol 03 (2013) 1666-1671

3rd World Conference on Information Technology (WCIT-2012)

Community Characteristics for Self-Funding and Self-Sustainable Telecenter

Mohamad Amir Abu Seman *, College of Arts and Sciences, Universiti Utara Malaysia, UUM Sintok, 06010, Malaysia.

Huda Haji Ibrahim, College of Arts and Sciences, Universiti Utara Malaysia, UUM Sintok, 06010, Malaysia.

Mohd Khairudin Kasiran, College of Arts and Sciences, Universiti Utara Malaysia, UUM Sintok, 06010, Malaysia.

Nor Iadah Yusop, College of Arts and Sciences, Universiti Utara Malaysia, UUM Sintok, 06010, Malaysia.

Zahurin Mat Aji, College of Arts and Sciences, Universiti Utara Malaysia, UUM Sintok, 06010, Malaysia.

Zulkhairi Md. Dahalin, College of Arts and Sciences, Universiti Utara Malaysia, UUM Sintok, 06010, Malaysia.

Azman Yasin, College of Arts and Sciences, Universiti Utara Malaysia, UUM Sintok, 06010, Malaysia.

Suggested Citation:

Seman, A., A., M., Ibrahim, H., H., Kasiran, K., M., Yusop, I., N., Aji, M., Z., Dahalin, M., Z. & Yasin, A. Community Characteristics for Self-Funding and Self-Sustainable Telecenter, *AWERProcedia Information Technology & Computer Science*. [Online]. 2013, 3, pp 1666-1671. Available from: http://www.world-education-center.org/index.php/P-ITCS *Proceedings of 3rd World Conference on Information Technology* (WCIT-2012), 14-16 November 2012, University of Barcelon, Barcelona, Spain.

Received 19 January, 2013; revised 18 May, 2013; accepted 09 September, 2013.

Selection and peer review under responsibility of Prof. Dr. Hafize Keser.

Abstract

The issue of telecenter sustainability has been actively researched. The search for the best formula for telecenter sustainability is important since the establishment of telecenters is usually within the community affair. This study looks into community characteristics of a self-sustainability telecenter. A single-case research design approach with guided questionnaires and informal interview was adopted. The unit of analysis is the community surrounding Masjid As-Syakirin in Kampung Oran. In addition, an informal interview session was held with the management committee of the mosque to gather more in-depth information about the telecenter operation. The results show that governance, philanthropy, and socio-economic values are among the characteristics of a

* ADDRESS FOR CORRESPONDENCE: **Mohamad Amir Abu Seman,** College of Arts and Sciences, Universiti Utara Malaysia, UUM Sintok, 06010, Malaysia, *E-mail address*: mohdamir@uum.edu.my / Tel.: +6-012-556-0044

self-sustainability telecenter. Therefore, this study contributes strongly in term of the community characteristics for a self-sustainable telecenter.

Keywords: Rural ICT development, ICT and socio-economic development, bridging digital divide, Malaysia;

1. Introduction

Telecenter in general is a public place where people can access computers, the Internet and other digital technologies that enable them to gather information, create, learn and communicate with others. A common definition of telecenter is 'a physical space that provides public access to ICTs for educational, personal, social and economic development' (Gomez, Hunt, & Lamoureaux, 1999). There are some guidelines for developing and implementing telecenters, but much more work is required to develop a systematic understanding of the potential and limitations of telecenters as a mechanism for social and economic development (Colle, 2005; Colle & Roman, 2002; McConnell, 2001; Oestmann & Dymond, 2001; Fuchs, 1998). Some researchers argue that telecenters in development contexts must continually evolve if they are to provide appropriate support for social and economic development and to meet the changing needs of citizens (Van Belle & Trusler, 2005; Benjamin, 2001; Gurstein, 2001).

Today, the number of telecenters in Malaysia is more than 2000 and it is expected to grow year by year. This phenomenal growth of telecenters might contribute to the issue of sustainability, particularly when the government have ceased funding starting year 2010. A study on telecenter sustainability by Huda et al. (2009) indicated that financial sustainability is one of the major issues in sustaining telecenter's operation. The study highlights that only 22.0% of the telecenters managed to generate sufficient income to continue their operations. Besides finance, community also plays important roles to ensure continuous operation of a telecenter. This is in accordance with Nor Iadah et al. (2010) who indicate that belonging to a group and having networks contribute to the success of a telecenter. In supporting these and the findings by Rao (2008) that stressed on the importance of community participation for telecenter sustainability, this paper presents other dimensions of community characteristics that are significant for a sustainable telecenter.

2. Literature Review

In managing a country's economic and social resources for development, the World Bank (1991) defined governance as the manner in which power is exercised to meet the purpose. Such exercise is regarded as "the process of decision-making and the process by which decisions are implemented (or not implemented)" (UNESCAP, 2012). In line with this, the World Governance Indicators (WGI) outlines three broad categories of governance. This includes i) the process of selecting, monitoring, and replacing of those in authority; ii) the process of effectively managing resources and formulating and implementing policies; and iii) the degree of respect of citizens towards the governing institutions (Nadgrodkiewicz, 2008). Within the context of telecenter governance, the authorized parties may include telecenter management committee and the agencies responsible for telecenters (Bailur, 2006). In some telecenters' establishments, the management of resources is performed by the management committee, and relevant policies are formulated by the respective responsible agencies. The interaction between these authorized parties and the community members determine the long-term survival of the telecenter (Madon, 2005). Whilst the community members select the management committee, the potential that they can influence the members of the community is high, thereby create higher degree of respect among the members as well as towards the institution (Nor Iadah et al., 2010). This can be enhanced further if the management has a set of core competencies that enable them to achieve its objectives (Bailey, 2009). This has proven that a strong bond between stakeholders is critical in ensuring telecenter sustainability (Bailur, 2006). The bonding is not only

critical between the internal stakeholders such as the management committee and community members, but it also involved external stakeholders such as philanthropist.

Philanthropy refers to an action or practice in performing charitable activities (Collins, 2000) either by individuals or organizations. The act of philanthropy has a significance impact in developing a society in term of social and economic development. The philanthropist can come from within the society as well as outside society. However it is believed that the philanthropist that come from within society can do greater impact to the society since he/she understand the basic nature of the society.

In the context of telecenter self-sustainability and socio-economic status, the continuous operation and management of the telecenter could be largely determined by the socio-economic pattern of the communities around telecenter. According to Mukerji (2009), the pattern of access and use of telecenter services varies across different socio-economic groups (class, occupation, caste, religion, education, age, gender, political and institutional affiliation). In a different perspective, telecenters play some roles in creating values to improve the socio-economic status of rural communities. As presented by Azizah (2008), one of the thrusts in National Strategic Framework for Bridging Digital Divide (NSF-BDD) is to create value in BDD programmes. Among the strategies outlined to achieve it are to implement e-inclusion programmes, infuse ICT further in existing development programmes for underserved groups, and utilise telecenter to increase socio-economic value of the community.

3. Methodology

A single-case research design was adopted in order to examine the community characteristics for a selfsustainable telecenter. The unit of analysis is the individual members of the Masjid As Syakirin community. A purposive sampling technique was deployed by organizing IT related event at the centre of community, Masjid As Syakirin in Mata Ayer, Perlis (located at the north part of Malaysia). A structured interview was performed and data was gathered from the community members who participated in the event. Questions in the interview include profile of the community, current knowledge and skills in ICT among the community, community's needs for a telecenter, and requirements needed to set up a telecenter. A descriptive analysis was employed to present the demographic part of the questionnaire. In addition, informal interviews also have been conducted with the management committee to obtain information on management and operation aspect of the mosque in greater depth.

4. Findings

The governance of the mosque is under the auspices of the Perlis State Islamic Department that plays a role in monitoring the management and activities of the mosque. The management committee of the mosque is elected in an annual general meeting held every two years, is comprised of a Chairman, Vice Chairman, Secretary, Vice Secretary, Treasurer, and seven mosque officers. Six bureaus are formed under this committee to look into specific agendas and issues for the benefits of the served community. Some of the committee members are professional in their own area. For example, the Chairman is a former university lecturer and the Assistant Chairman is now still an Associate Professor in a public university. A few other committee members are either former government officers or those who are still serving the government as an officers or a teacher. A small proportion of the committee comprised of housewives and self-employed.

One of the bureaus under the mosque committee, the Information and Communication Technology (ICT) bureau, is responsible for planning and executing ICT related activities. Among the activities organized by the bureau include basic ICT trainings such as computer usage and Microsoft Office workshops. The most recent activity organized was the training on Prezi, cloud-based presentation software and storytelling tool, with a collaboration of International Telecommunication Union – Universiti Utara Malaysia, Center of Excellence on Rural ICT Development (ITU-UUM CoE). Such

workshops and trainings have directly improved the community's knowledge on ICT, especially for the youth. On top of that, the mosque committee has occasionally conducted religious talks by utilizing new technology such as Youtube to the elderly.

Strong support from the community members is also recognized as a factor that can contribute to the sustainability of a telecenter. This support can be seen from the philanthropic values showed by the community members. For example, a well-off local community member has funded the development of the annex building within the vicinity of the mosque. The building has not only been used as a tuition centre for the primary school children but also as an ICT community access center. This centre or could be termed as telecenter, which operates during the weekend, originally was an initiative from the mosque committee. The centre is equipped with thirteen PCs; five were purchased using the mosque's fund, while the rests are sponsored by ITU-UUM. The internet access is provided by TM Bhd. and sponsored by the Malaysia Department of Islamic Development (JAKIM) at the bandwidth of 1 Mbps. The contribution of the PCs from ITU-UUM resulted from the strategic investment of university with the community.

In supporting the operation of the telecenter, each user is charged based on hourly basis, RM1.00 for adult and 50 cents for children. At the moment, a continuous funding between RM500-RM600, generated from donation by the local community to the mosque fund, and the collection fee enable the committee to sustain the center's operation. The financial support contributed to the mosque seen to be more attractive to the donors as the contribution goes to the whole community instead to a single individual of the community members. These philanthropic values are in line with the Islamic values where it is believed that their contribution is not only meant for social activities but also for religious activities that can benefit the whole local community. The center is manned by a voluntary part-time operator appointed by the mosque ICT bureau.

Current analysis of the utilization of the centre is very encouraging. It is found that the communities are using the PCs until late in the evening. However, the users are mainly primary school children. They usually come to the centre to use Internet applications such as Facebook, online games, and YouTube. With the increase of the internet penetration among the community, it is hoped that community will benefit more and the socio economic level of the community will be improved.

Masjid As-Syakirin in Mata Ayer is surrounded by nine villages while the mosque acts as the centre to the whole community. These villages are surrounded with paddy fields, making Internet penetration a daunting task within the community. Approximately, 1,975 people reside in this community; with 75% of the population aged above 15 years old. Among them, 212 aged between 15 to 20 years, 270 between 21 and 30 years, 193 between 31 and 40 years and 215 of 41 to 50 years old. The most active group among the community are those aged between 15 to 50 years old. The less active group consists of those 168 people aged between 51 and 60 and 123 people between 61 and 70 years old. The remaining of 6.3% was categorized as non-active.

The study also found that a few of the community members are from the well-educated and well-off categories with high monthly income. They are professional workers in government and private sectors. The study shows that the average monthly income of the community members is RM1073, which are well above the poverty line of RM800. This is important since it shows that the community has extra income to spend after meeting all their basic necessary needs. They can allocate a small number of their income for other spending such as ICT equipment. If they are unable to buy the ICT equipment, they can spend their extra money to pay for using the ICT facilities and services in the telecenter. Out of the total number of 203 responses, 137 respondents stated that they have computer at home while the rest do not have it. About half of the 203 respondents reported that they have the Internet connection at home. Meanwhile, those who do not have the Internet connection at home mentioned their reasons are due to the high initial cost (13.3%) and fact that such facilities are not required.

5. Discussion and Conclusion

Telecenter's ownership plays an important role in attracting community participation. As the studied telecenter is owned by a mosque, the findings reveal that a higher number of users from the surrounding villages are drawn as compared to if the telecenter is located in a single village. The reason is the mosque serves not only a single village, but also a number of villages surrounding it and it becomes the focal point of gathering for the local community for various activities. Having a well-defined organizational structure, every member of the mosque committee is aware of has his/her own roles and responsibilities, which include organizing community development activities. In addition, the professional background of the members has been proven to be an advantage to the community as they provide support and encouragement towards the planned activities. This is in-line with the study by Mukerji (2009) that says access and use of telecenter is related to the socio-economic status of the community. The philanthropic value showed by the locals is another important factor that contributes to the sustainability of the telecentre. Receiving donation by philanthropists for the telecenter's development and management, the community could better benefit from the telecenter establishment. Moreover, strategic collaboration with IHLs could assist the committee in organizing and conducting various programs for the community.

References

Azizah, H. (2008). *Convergence of Broadband Conference*. Alson Klana Seremban organized by SKMM Malaysia.

Bailey, A. (2009). Issues affecting the social sustainability of telecenters in developing contexts: A field study of sixteen telecenters in Jamaica. *The Electronic Journal on Information Systems in Developing Countries (EJISDC), 36*(4), 1-18.

Bailur, S. (2006). Using stakeholder theory to analyze telecenter projects. *Journal of Information Technologies and International Development, 3*(3), 61–80.

Benjamin, P. (2001). The Gaseleka Telecenter, Northern Province, South Africa. In C. Latchem, & D. Walker (Eds.), *Telecenters: Case Studies and Key Issues* (pp. 75-84). Vancouver: The Commonwealth of Learning.

Colle, R. (2005). Memo to telecenter planners. *The Electronic Journal of Information Systems in Developing Countries, 21*(1), 1-13.

Colle, R., & Roman, R. (2002) *Handbook for telecenter staff*. Cornell University, New York.

Collins. (2000). Philanthropy. *Collins English Dictionary*.

Fuchs, R. (1998). *Little engines that did – Case histories from the Global Telecenter Movement*, IDRC, 1998.

Gomez, R., Hunt, P., & Lamoureux, E. (1999). *Telecenter evaluation and research: a global perspective*. Ottawa, Canada: International Development Research Centre.

Gurstein, M. (2001). Rural development and food security. A "community informatics" based conceptual framework. *Proceedings of the 34th Hawaii International Conference on System Sciences,* Hawaii.

Huda Ibrahim, Azman Yasin, & Zulkhairi Md Dahalin (2009). *Financial sustainability in telecenters in Malaysia*. *Proceedings of International Joint Conferences on e-CASE and e-Technology,* Singapore. [ISBN: 978-986-83038-3-6].

Madon, S. (2005). Governance lessons from the experience of telecenters in Kerala. *European Journal of Information Systems - Special section: PACIS 2004, 14*(4), 401 – 416.

McConnell, S. (2001). *Telecenters around the world: Issues to be considered and lessons learned.* ICT Development Group, Richmond.

Mukerji, M. (2009). ICTs and development: A study of telecenters in rural India. Doctorial Colloqium. *10th International Conference on Social Implications of Computers in Developing Countries,* Dubai, United Arab Emirates.

Nadgrodkiewicz, A. (2008). *The importance of governance for development.* Center for International Private Enterprise (CIPE). Retrieved August 30, 2012 from http://www.cipe.org/blog/2008/02/01/the-importance-of-governance-for-development/#.UDxT0kRs7xA

Nor Iadah Yusop, Shafiz Affendi Mohd Yusof, Zahurin Mat Aji, Huda Hj. Ibrahim, Mohd. Khairudin Kasiran, Zulkhairi Md. Dahalin, ... Abdul Razak Rahmat (2010). The Influence of community characteristics towards telecenter success. *Journal Computer and Information & Science, 3*(2), 116 – 120. [ISSN: 1913-8989 (Print)/1913-8997(Online)]

Oestmann, S., & Dymond, A. C. (2001). Telecenters - experiences, lessons and trends. In C. Latchem, & D. Walker (Eds), *Telecenters: Case studies and key issues.* The commonwealth of learning.

Rao, S. S. (2008). Social development in Indian rural communities: Adoption of telecenters. *International Journal of Information Management*, *28,* 474–482.

UNESCAP (2012). What is good governance? Retrieved August 30, 2012 from http://www.unescap.org/pdd/prs/ProjectActivities/Ongoing/gg/governance.asp.

Van Belle, J.-P., & Trusler, J. (2005). An interpretivist case study of a South African rural multi-purpose community centre. *The Journal of Community Informatics, 1*(2), 140 – 157.

World Bank. (1991). *Managing development - The Governance dimension* (p. 1). Washington.