The Influence of Malaysian Telecenters on Community Building

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Abstract: The main aim of this paper is to examine the impact of the establishment of telecentres, particularly KedaiKom on community building in Malaysia. KedaiKom is one of the projects undertaken by the Malaysian government to reduce the digital divide among the population. The impact of KedaiKom on community building was viewed from two perspectives: capacity of getting ahead and social and digital inclusion. The research was conducted using the survey method whereby questionnaires were distributed to six hundred KedaiKom users, however, only 326 returned the form. In general, the users agreed that KedaiKom has improved their ICT skills and knowledge as well as their social network. Many of them felt that KedaiKom has helped improve their community well being. In conclusion, the study showed that KedaiKom does impact community building, i.e., capacity of getting ahead and social and digital inclusion.

Keywords: Malaysia, Telecentres, community building, KedaiKom, capacity of getting ahead, social and digital inclusion

1. Introduction

The introduction of a telecentre into a typical rural community in a developing country represents a substantial innovation for that community (Harris, 2001). A community telecentre will be the rural population's first encounter with ICT. Moreover, telecentres that seek to bridge the digital divide in rural areas in developing countries are mostly experimental. Telecentres strive to deliver the simple interface between ICTs and the Internet, and offer basic communication services including telephone, fax, typing, photocopying, printing, and training in the use of various ICTs, e-mail, and electronic networking (Whyte, 2000; Russell, 2000; Graham, 2002). It is an accessible facility that provides computer access for people who are unable to meet the expense of a computer, in addition to technical instruction (Beamish, 1999). Telecentres become centres for the delivery of rural development support services for their community catchment areas (Gurstein, 2000), where some are moving into e-commerce and telemedicine services (Graham, 2002), and some provide access to social and economic development (Cisler, 1998 cited in Owen and Darkwa, 1999).

The aim of this paper is to examine the usage and impact of a telecentre on community building. The telecentre studied is KedaiKom, a collaborative programme between the Malaysian Communications and Multimedia Commission (MCMC), Internet Service Providers (ISP) and State Economic Planning Units. The objectives of KedaiKom are to build capacity; to introduce and to encourage the usage of ICT; and to create community communication equipped with a range of ICT services to facilitate Internet access, e-commerce, and e-learning. The focus is on areas with an active community base but with limited or no ICT access, together with existing economic activities that can benefit from this access.

The role of KedaiKom is to deliver ICT services to underserved communities. The hardware is provided by the MCMC as a one-off allocation with a minimum of five computers, a printer, and its relevant peripherals. The facilities include satellite access solutions that provide two payphone services and Broadband Internet Access with a dedicated 128kbps for downloading and 64kbps for uploading. Internet connection will be supplied by an ISP and the monthly access fee of RM400 per site is paid by MCMC. The operation hours are from 8.00am to 6.00pm weekdays and are extended to 10.00pm on weekends and public holidays. The operators will manage KedaiKom as commercial enterprises, charging users reasonable rates in order to encourage the adoption of technology by the local communities. Thus, this programme will also support the creation of local entrepreneurs by encouraging the operators to manage KedaiKom as their own business opportunity. The management team consists of a minimum of two personnel; a manager and an assistant. In an effort to ensure the targeted communities benefit from the KedaiKom services, training and courses are provided in the areas of usage of the Internet as a medium of communication for the target groups including KedaiKom operators, local leaders, teachers, students, youth and women. Among the courses offered are basic competency in personal computer maintenance and Internet awareness programmes.

The first phase of the KedaiKom project was launched in December 2002 targeting 173 sites with an allocation of five sites per district in the states of Kedah, Melaka, Pahang, Perak, and Perlis. The project will be extended to the remaining states in the second phase. A total sum of RM30 million and RM60 million was allocated in 2002 and 2003, respectively. Throughout June 2005, about 58 KedaiKom projects were implemented in the states of Perak (55 sites), Kedah (2 sites) and Perlis (1 site). Of the 55 sites in Perak, 10

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of them are located in underserved areas per se, while the remaining sites were implemented in underserved communities located within the well-served areas. The well served community, according to MCMC, is a group of people linked by similar socio-cultural or socio-economic characteristics within a telecommunication served area that has collective, and or, individual access to basic communication services.

This study focussed on the KedaiKoms in the state of Perak because it contains more than 94.8% of the KedaiKom distribution. In addition, Perak is the only state that has a well-balanced distribution of any multipurpose telecentre (MCT) project in Malaysia. Every district in Perak has more than five KedaiKoms each. Moreover, Perak is one of the states where political leaders and industry experts have been most vocally championing ICT development (MDV, 2005). Thus, the underserved communities in the state of Perak, at the forefront of the ICT development revolution, are the main source of this present study.

2. Literature review

The telecentre is an attractive model because it is cost-effective; with external agents maintaining resources and knowledgeable staff members providing technical support and training; has a pleasant social atmosphere; and provides free or subsidised and flexible access (Beamish, 1999; Selwyn, 2003). The basic standard features of a telecentre consists of premises stocked with several computer terminals and simple furnishings with access to the Internet (i.e. chatting, e-mail and browsing) as the main service offered together with elementary software (i.e. word processing, spreadsheet) (Proenza et al., 2001). Administrative and support staff oversee the use of the machines, collect payment for the services, and provide basic technical support to the users. Connection to the Internet for a standard telecentre is through a dedicated 64kbps transmission line, but for a small telecentre in a rural area the only option may be a dial-up service via lowband connection (e.g. 28kbps).

Proenza et al. (2001) distinguishes telecentres into six main types; commercial, franchise, Non-Government Organisation (NGO), educational related, municipal, and multipurpose. These telecentre types differ in two main respects: one is the way in which their management is organised (i.e. private, NGO, school or university, municipality, and administrative board); and the other one is the services offered in addition to a computer connected to the Internet. The classification used by Proenza et al. (2001) is based on the first of these two features due to its critical significance and sustainability. The potential impact of telecentres according to Proenza et al. (2001) are on the desirable features that include target groups, replicability and self-sustainability which is influenced by cost and market forces.

The Multipurpose telecentre (MCT) is a shared information and communications facility for people in the rural, isolated and underserved areas (Ernberg, 1996, cited in Owen and Darkwa, 1999) that provides facilities and support for a wide range of services and applications in response to the needs of the community (Ernberg, 1998). By sharing the cost of the telecommunication infrastructure, IT facilities and support, the MCTs are expected to provide both public and private ICT-based services at a more affordable cost and still be commercially viable. Ernberg (1998, cited in Proentza et al, 2001) mentions that MCT provides public services (i.e. telecommunication, distance learning, telemedicine etc.), and private services (i.e. postal and banking services, and functions as an outlet for other communal services such as water and electricity). The offer of private information and communication services will improve the sustainability and increase the effectiveness of the MCT. User support and training given to users are features that distinguish MCTs from other typical telecentres. The main aim of the MCT is to develop the rural community's capacity, provide a means for them to participate in democratic processes, and to produce information and knowledge, which is relevant to their needs.

Recent studies showed that space no longer appeared as a static platform of social networks, but rather as one of their constitutive dimensions. As defined by Brenner (1999), space is a realm of stasis a pregiven, unchanging territorial platform upon which social action occurs. Two of the static forms of territorial organisations are *gemeinschaft* and *gessellschaft*. In this sense, community is a space by itself, territorial space where community members' social networks occur and are sustained. Glover (2004) observes that the creation of community centres, including telecentres, were commonly established to create public spaces to shape the idea and action of the community members that will enable the development of the community by providing its members with the technical assistance and resources essential to meet the required needs of the community.

Pigg (1999) mentions that community telecentres are thought to represent the capacity for creating public space in which democratic processes of information dissemination and access, combined with reasoned

dialogue, strengthened a sense of community and improved the general community well-being. Kean (2000, cited in Mason and Hacker, 2003) postulates that new public spaces of communication are being created by telecentres existing among small groups at a local level, which can provide much stimulation of change at the global level. Alkalimat and Williams (2001) have critically evaluated that the telecentres' public spaces are significant enough to create social capital and raise the issue of democracy and social inclusion of people who are living in isolation. Democracy requires informed citizens who are socialised and living in overlapping social networks where each network is an interest group and multiple memberships mean multiple interests, sometimes harmonious and sometimes in conflict. Thus, this complexity is the basis for democratic discussion and compromise in a public sphere through telecentres' public spaces.

Moreover, Polletta (1999) mentions that telecentres may build on associational ties in different contexts, shaping the emergence of mobilising identities by demonstrating the co-presence of others as well as strengthening collective identity by providing tangible evidence of an existence of a group or community. One such dynamic is the network intersections that provide underserved communities new access not only to the physical, financial, and communicative resources, but also to people whose weak ties (bridging ties) and consequent social distance and status enable them to challenge existing relations of deference. Furthermore, Davies et al. (2003) argue that in some respects, community telecentres could be considered as models for the future community informatics approach where they serve as new public spaces that engage diverse groups of people and contribute to build a local community. Among the benefits of community telecentres functioning as good public spaces, creating and sustaining social capital, is offering a common ground for different groups within the community to socialise comfortably. To accommodate their views, Davies et al. (2003) have developed a model for evaluating the attributes of liveable community telecentres in public places that fall into three categories: key attributes of places which are essential ingredients of a place; intangible qualities of communities that relate to specific types of attributes; and measurements that help establish a quantitative base for evaluating the qualitative issues. The model constitutes four dimensions: uses and activities; comfort and image; access and linkage; and sociability. Sociability is a quality for a place to achieve, where community members can interact with each other and feel comfortable interacting with strangers. They tend to feel a stronger sense of community and attachment to the place that fosters these types of social activities.

Public space analysis has provided a useful lens to view community telecentres and their community-building activities. So far, research in this area, for example, by Pigg (1999) found that there is little evidence that the nature and extent of information access and communication created a typical telecentre that is capable of producing social capital or building a community. Thus, there is a need to explore how community telecentres build a community by facilitating the creation of social capital as well as how community telecentres provide a public space where a civil information society can flourish and social order can be maintained. The answers of this exploration lie in the nature of the information and forms of communication provided in community telecentres by their stakeholders.

Moreover, according to Harris (2001), the areas where the theories of information centre success (IC) and end user computing adapting success (EUC) might be relevant to the theory of telecentre success, as portrayed by five outcomes that community informatics projects have envisioned; enhancing strong democracy, increasing social capital, empowering individuals, revitalising a sense of community, and providing economic development opportunities. Harris (2001) mentions the following observations and implications; first, the scope of a new theory of telecentre success needs to be extended beyond the organisation to that of the community; second, the focus of the existing IC and EUC theories corresponds closely to that of telecentres representing innovation and diffusion of ICT with the intention of promoting the positive usage of technology; third, the outcome variable for a telecentre is also the fullest use of its technology and users' satisfaction, towards community development; and, fourth, the unit of analysis is the telecentre, which is the IT application.

3. Methodology

To achieve the objective defined earlier, this study collected data through self administered questionnaires. The questionnaire is divided into three main sections. Section 1: Kedaikom Usage, consists of 16 items and is based on Porenza et. al's (2001) work. Section 2: Impact on Community Building was developed based on the framework proposed by Ferlander (2003). The respondents were asked to state their level of agreement or disagreement pertaining to all items based on a 7 point Likert scale, ranging from extremely disagree, strongly disagree, disagree, neutral, agree, strongly agree and extremely agree. Section 3: Demographic Profile requires the respondents to include their profiles. The questions were translated from the English

language to Bahasa Malaysia, Malaysia's official language which is used extensively in the selected communities.

The questionnaire was distributed to the telecentres established by MCMC i.e. KedaiKom in the state of Perak (Malaysia consists of 13 states) that comprises of 55 communities from the total of 58 participating communities nationwide. A total of 600 questionnaires (10 to 20 questionnaires in each Kedaikom depending on the number of users) were distributed to 27 KedaiKom. Although there are 55 KedaiKoms in the state of Perak, the questionnaires were only distributed to 27 of the 39 (70.91%) visited. However, only users from 25 of the participating KedaiKoms returned the distributed questionnaires. The other two KedaiKoms did not return the questionnaires even though they had been approached twice and the operators provided money to return the questionnaires through a courier service. Although the other 12 KedaiKoms were visited a few times, the questionnaire could not be distributed as they were either closed at the time of visit or they did not operate regularly. The remaining 16 KedaiKoms were omitted from the sample because they were not operating anymore. As mentioned by the other operators, this may be because the centres were poorly managed or obtained little support from the local leadership and members of the community. Finally, a total of 360 questionnaires were returned with 326 (90.6%) useable for analysis.

4. Findings

The respondents profile is summarized in Appendix 1. From the Appendix, it can be seen that the gender proportion seemed to be balanced, where female beneficiaries or users outnumbered the male by only 2.5%, and accounted for 52.5% of the total. Single users comprised 88.7% of total users, outnumbering the married and divorced users which consisted of 10.4% and 0.9%, respectively. The marital status proportion dominance by the single seemed to match the percentage of an age group of less than 25 years (83.1%). The results suggest that most of the users are single and students, either in secondary schools, colleges or universities. The pattern was revealed by the users' education level where 67.8% of the users have secondary school level education compared to tertiary education 25.1% (Polytechnics, colleges and universities).

The socio-economic pattern of the users illustrates that most of them belong to poor and low-income groups, were either unemployed or self employed, and the majority of the users were Malays. The study results disclose that 91.4% of the users have a family monthly income of less than RM2,000, where 66% of them have a family monthly income of less than RM1,000; lived in their family home (78.5%); and 99.1% were of Malay ethnicity (as measured by the mother tongue). In terms of occupation, the majority were students (56.1%), while the others were self employed (12.9%), unemployed (12.3%), government employees (4.3%) and private sector employees (9.8%). Hence, the dependence group that includes students and unemployed comprised 68.4% of the total KedaiKom users.

5. Objectives of using Telecentre

Based on actual responses, more than 70% of users agreed that improving work related skills; improving skills to attain better jobs; and finding employment are important to them (Table 1). About 70% of users agreed that keeping them better informed with relevant information; finding mates or friends, making new or keeping existing friendships; encouraging information sharing among users; involvement in entertainment; and increasing interaction among community members are relevant for them.

Table 1: Level of agreement: The KedaiKom usage objective

No.	Variable	% Level of Agreement of the Objective		
		Agree*	Neutral	Disagree**
1.	To improved work related skills	88.3	15.0	8.9
2.	To improve skills to get better job	78.3	11.3	10.4
3.	To find employment	72.7	12.9	14.4
4.	To connect to colleges/universities	65.9	15.6	18.4
5.	To increase earnings from farms or businesses	59.5	21.2	19.3
6.	To connect with employer's office	55.9	21.8	22.4
7.	To save time in personal transaction	55.2	19.0	25.8
8.	To make personal purchases online	48.2	19.3	32.5
9.	To keep better informed	84.7	10.4	4.9
10.	To find a mate, make new or keep existing friendship	83.5	10.1	6.4
11.	To encourage information sharing	83.5	11.0	5.5
12.	To be involved in entertainment	82.5	7.4	10.1
n = 326 (based on actual responses) * Agree includes scales of agree, strongly agree and extremely agree ** Disagree includes scales of disagree, strongly disagree, and extremely disagree				

The findings revealed that most of the effective and positive usage objectives are related to improving skills and knowledge including improvement of working skills, increase in earnings; involvement in teleworks, e-commerce and e-learning; and to save personal transaction time. In addition, other effective and positive usage objectives are related to improving social networks that includes finding new friends or keeping existing friendships; involvement in entertainment; encouraging information sharing; and to be better informed with local information. Thus, the effective and positive usage of KedaiKom will further include the community members in the adaptation of ICT in their everyday life.

6. Impact of Telecentre on community building

Based on actual responses, about 79.7% of the users indicated that the implementation of KedaiKom has enhanced the community's general well-being (Figure 1). The level of agreement, based on actual responses (Table 2) for all 14 items, indicate that more than 80% of the users expected that, generally, the implementation of KedaiKom is likely to improve their everyday life. Therefore, the implementation of KedaiKom has likely achieved its objective to enhance the community's general well-being. It is also noted that for two items, 'decrease in gap between different groups' and 'increased trust amongst community members', more than ten percent of the respondents were neutral in their responses. These responses may result from the users not being sure whether changes have occurred. It is interesting to note that more than 86 percent agreed and only 2 percent disagreed that the telecentre has led to the development of a stronger sense of local identity i.e. they feel closer to each other.

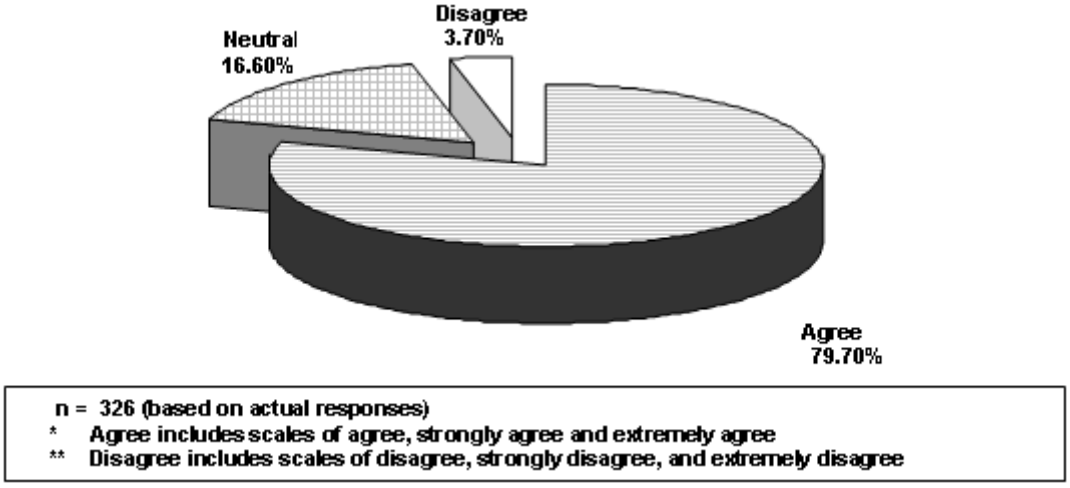

Figure 1: Implementation of KedaiKom enhanced community general well-being

Table 2: Impacts of KedaiKom on community building

No	Item	Response		
		Agree*	Neutral	Disagree**
1.	Lead to bridging the digital divide	84.7	9.8	5.5
2.	Lead to decrease in gap between different groups	80.4	13.2	6.4
3.	Lead to stronger social cohesion and inclusion	84.9	11.1	4.0
4.	Lead to a more attractive community area	83.1	12.0	4.9
5.	Lead to more participation in the community	86.2	8.9	4.9
6.	Lead to more interest in the knowledge of ICT	86.2	9.5	4.3
7.	Lead to development of a stronger sense of local identity	86.8	10.4	2.8
8.	Lead to decrease in isolation of community members	83.5	10.7	5.8
9.	Lead to increased trust amongst community members	81.9	13.5	4.6
10.	Lead to diversified communication channels	85.6	8.6	5.8
11.	Lead to increased community support	85.9	10.4	3.7
12.	Lead to increased cooperation	86.8	8.3	4.9
13.	Lead to increased usage of telecentres as public space	86.5	10.1	3.4
14.	Lead to increased information sharing	83.8	11.0	5.2
n = 326 (based on actual responses) * Agree includes scales of agree, strongly agree and extremely agree ** Disagree includes scales of disagree, strongly disagree, and extremely disagree				

In measuring the KedaiKom impact on community building, Exploratory Factor Analysis (EFA) has been applied to identify the underlying dimension as well as to reduce and summarise variables that measure the telecentre impact on community building. Using PCA extraction and orthogonal, varimax rotation, 14 variables were loaded and were factored into 2 components, which is subsequently labelled as "*Capacity of Getting Ahead*" (Eigenvalue 7.64 accounted for 31.74% of the total variance), and "*Social and Digital Inclusion*" (Eigenvalue 1.03 accounted with 30.20% of the total variance). Thus, the total variances explained by both factors accumulated to 61.94%. The correlation among items is within the permissible range, where the KMO value is meritorious (0.94) and the Bartlett's test of sphericity is significant too (see Table 3).

Table 3: Telecentre impact on community building KMO and Bartlett's Sphericity Test

Kaiser-Meyer-Olin Measure of Sampling Adequacy		0.939
Bartlett's Test of Sphericity	Approximate Chi-Square	2740.358
	Df	91
	Significance Level	0.000

All of the 14 variables were retained and are loaded with loadings ranging from 0.53 to 0.83, thus, both are solid and clean factors. Then, the variables of each factor were tested for internal consistency reliability using Cronbach's Coefficient Alpha and the result of the item-to-item correlation exceeded 0.5, which is significantly reliable (Table 4).

Table 4: Factor Loading: Telecentre impacts on community building items

Variable	Factor 1	Factor 2
Expectation to increase support	0.83	0.83
Expectation to increase cooperation	0.75	0.75
Expectation to promote as a public space	0.73	0.73
Expectation to diversify communication channels	0.72	0.72
Expectation to increase trust	0.68	0.68
Expectation of information sharing	0.68	0.68
Expectation of stronger sense of local identity	0.53	0.53
Expectation of stronger cohesion		0.78
Expectation of more participation		0.75
Expectation to decrease gap		0.73
Expectation of attractive community		0.73
Expectation to bridge digital divide		0.68
Expectation to decrease isolation		0.59
Expectation of more interest in ICT		0.53
Cronbach's Coefficient Alpha	0.90	0.89

Factor 1, "*Capacity of Getting Ahead*" explains how interaction leads to trust, reciprocity, and a sense of community, and eventually to effective collective action, and gain opportunities for community change. Thus, community support, cooperation among community members, effective use of public spaces, diversity of communication channels, bonding and bridging trust, willingness to share information among members, and sense of local identity were the main variables measuring capacity of getting ahead. Factor 2, "*Social and Digital Inclusion*" portrays how interaction leads to trust, reciprocity, and a sense of community, and, eventually, to the inclusion of the marginalised groups into the mainstream of ICT development. Therefore, social cohesion, active participation, closeness and togetherness, attractive local community, bridging digital divide, and interest in ICT were the main variables measuring social and digital inclusion.

7. Discussion and conclusion

This study selected a community technology project, in particular, the "*Multipurpose Community Telecentre*" (MCT) project in Malaysia. The MCT project is a model to facilitate the underserved communities' use of ICT to enhance their general well-being. One of the multipurpose community telecentre programmes that are able to do this is the KedaiKom. The role of KedaiKom is to deliver ICT services to underserved communities with the main objectives to build capacity; to introduce and encourage the usage of ICT; and to create community communication equipped with a range of ICT services to facilitate Internet access, e-commerce, and e-learning. Thus, to institutionalise the foundation of a sustainable model, the study examined the usage and impact of KedaiKom on community building. It must be noted here that this paper presents part of the findings of a larger research in this area.

The positive and effective KedaiKom usage is significantly influencing the community building of the underserved community. The finding is in agreement with Van Dijk and Hacker (2003); Warchauer (2002); and Romm and Taylor's (2001) arguments that positive and effective usage of the Internet, particularly in telecentres, will avoid users from acquiring digital skills that are limited to operation, managing hardware and software, instead of encouraging them to acquire digital skills on how to search, use and share information. The gap in usage of the telecentre will further divide users systematically using and benefiting from telecentres for work and education and users that use telecentres for simple application with a relatively large part being entertainment. In addition, the finding is in agreement with Van Dijk (1999, cited in Mason and Hacker, 2003); and De Haan's (2003) arguments that users with limited skills and knowledge will be outpaced. Thus, there is a need for those users to increase the usage of ICT applications contributing to increased skills and knowledge that might in turn lead to more frequent and more diverse uses of telecentres. The finding also suggests that most of the KedaiKom users are core users that use telecentres positively and affectively with continuous and comprehensive usage, especially for information seeking, communication and origination or production of digital content, which is in accordance with Murdock's (2002, cited in Selwyn, 2003) argument. Furthermore, the finding is in agreement with Warchauer (2002); Pinkett (2002); and Besser's (2003) contention that most of the telecentre projects run into unanticipated complications because these projects persistently neglected positive and effective usage and users are passive and non-producers of local content, which is the stumbling block for realising the expected results.

The implementation of KedaiKom in underserved community generally builds community. KedaiKom brought a positive change in people's everyday lives by creating a combination of a new form of online communication, enhancing the existing offline relationships, and creating a new medium of acquiring information among local community members. This new form of multichannels of communication and distribution of information does create and sustain community social capital, particularly social cohesion or solidarity. The social cohesion may likely be derived from an active and effective usage and skill access, adequate support access, active social participation, vibrant reciprocal treatment, a high level of trust, and a strong sense of community, thus increasing community well-being. In creating and sustaining community well-being, factors including a sense of community, social participation, reciprocity and trust should be nurtured and invested in heavily by the local community. The purpose of the investment is to support and complement the community access provided by KedaiKom in order that the underserved community become capable of building their own community.

The present research finding is in accordance with Wellman et al. (2001) and Prell's (2003) arguments that the implementation of telecentres builds community, if the high use of telecentres increases social capital. In this sense, the high use of KedaiKom increases social participation, reciprocity, and sense of community; and maintained and strengthened bonding and bridging ties that already exist because of the multichannelled communication provided by KedaiKom and offline interpersonal contact where community members can meet, interact, communicate, and exchange information and resources through the KedaiKom

public space. Thus, the finding is also in agreement with Gordo (2003) who argues that the ability to manipulate technology is the capacity of community members to participate in the net process. Cecchni and Scott (2003) also believe that the successful ICT projects are characterised by local ownership and the active participation of the community.

The finding also supports Donnemeyer and Hollifield (2003) who argued that the rural population live in communities of place that frequently lag behind national trends, and lag behind possession of the social capital necessary to utilise ICT (i.e. awareness, knowledge, and participation). In terms of community technology, these underserved communities have been given the opportunity to use advanced technology with broadband access that is non-existent even in more developed areas. Moreover, the rural and underserved areas are still subsisting on adequate social resources, particularly social networks, reciprocity, and sense of community, which is needed to support community technology programmes.

The main limitation of this research is that the researchers were not able to obtain responses from all 55 KedaiKoms for various reasons. However, it must be noted here that the unit of analysis is not the KedaiKom itself but rather the actual users of the centres. Hence, the findings of this research can be used as a basis for relevant authorities to review the existing policies on Information communication and technology, particularly those relating to the digital divide. This study has shown that KedaiKom users have benefitted from the establishment of the centre and that it has brought about a positive impact to the community, particularly in terms of community building. They have more opportunity to improve their economic status (capacity of getting ahead) and be included in social and digital activities.

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Appendix 1: KedaiKom users attributes

Attribute	Item	Frequency (n= 326)	%
Gender	Female	171	52.5
	Male	155	47.5
Marital Status	Single	289	88.7
	Married	34	10.4
	Divorcee	3	0.9
Gender	Female	171	52.5
	Male	155	47.5
Marital Status	Single	289	88.7
	Married	34	10.4
	Divorcee	3	0.9
Age	15 – 19 years	178	54.6
	20 – 24 years	93	28.5
	25 – 29 years	19	5.8
	30 – 34 years	9	2.8
	35 – 39 years	8	2.5
	Above 40 years	19	5.8
Level of Education	Primary School	4	1.2
	Secondary School	221	67.8
	Skilled Institution	13	4.0
	Polytechnic/College	46	14.1
	University	36	11.0
	No Formal Education	6	1.8
Occupation	Government Employee	14	4.3
	Private Sector	32	9.8
	Self Employee	42	12.9
	Housewife	8	2.5
	Unemployed	40	12.3
	Retiree	5	1.5
	Students	183	56.1
	Others	2	0.6
Family Monthly Income	<RM 1,000	215	66.0
	RM 1,001 – RM 2,000	83	25.5
	RM 2,001 – RM 3,000	14	4.3
	RM 3,001 – RM 4,000	5	1.5
	RM 4,001 – RM 5,000	4	1.2
	> RM 5,000	5	1.5
Mother Tongue	Malay Language	323	99.1
	Chinese Language	2	0.6
	Tamil Language	1	0.3

