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EMPOWERING THE RURAL COMMUNITIES VIA THE TELECENTRES

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Abstract
With the increasing use of technology and ICT in daily life there is a great tendency for those at the marginalized areas in Malaysia and those who are in the marginalized groups to be left out in the online activities due to the geographical limitation and the limited ICT literacy level. Thus, in the effort to empower the rural communities firstly, there is a need to ensure e-inclusion activities reached the targeted communities. The users must have the access to Internet and the appropriate skills and ICT competencies to use the online services and information. The rural communities also need to understand the language of Internet which is English and to search and use the information effectively so that the process of assisting them to become knowledge society can be accomplished. The paper will discuss in order to empower the rural communities via ICT, the best agents will be the existing 1945 telecentres and the factors that have been identified to assist sustainability of the telecentres and also to ensure value add programmes can be planned and carried out at the telecentres all over Malaysia. The discussion is based on data and observation collected from 10 best telecentres in Malaysia conducted in the year 2007-2008.

Keywords: Digital Divide, Telecentre, ICT Literacy, Rural Communities, Empowerment

Introduction
With the increasing use of technology and ICT in daily life there is a great tendency for those at the marginalized areas in Malaysia and those who are in the marginalized groups to be left out in the online activities due to the geographical limitation and the limited ICT literacy level. The Internet is not just the window to the vast knowledge but now it is becoming the medium for business transactions and social communication (Abdul Rahim & Zulikha Jamaludin, 2007). Thus, these applications create global concern for digital poverty and create a gap between the digital haves and the digital have-nots for the Malaysian communities. The digital gap at present seems to be widening between the information haves and information have-nots, rich and poor people, and those at the urban and rural areas, gender and age levels. (Norizan Abdul Razak et. al, 2007). In order to bridge digital divide (BDD), Malaysia via several ministries and also private initiatives has put aside a big amount of investment to connect every Malaysian citizen to the Internet superhighway via the setting up of 1945 telecentres in all the states in Malaysia including Sabah and Sarawak (Norizan Abdul Razak & Mohamad Zaki, 2008). The objectives of the telecentre projects in Malaysia among others are to upgrade the community ICT literacy level, and to provide access to Internet. The projects also aim to increase e-participation of the community in the e-government, e-commerce and online activities and finally to empower the rural communities socially and economically via the use of ICT. At present, there are many remarkable efforts underway to bridge the divide among those at the marginalized communities. Observations and studies were carried out to ensure the telecentre projects in Malaysia will be able to sustain and at the same time increase the e-participation from the communities. In the effort to ensure e-inclusion activities can be carried out, other
important elements for the rural communities to have are the skills and ICT competencies to access and use the online services and information. The rural communities of course need to understand the language of Internet which is majority in English and to search and use the information effectively so that the process of assisting them to become knowledge society can be accomplished. The next part of the paper will discuss some of the identified factors that contribute towards the sustainability of the telecentres in Malaysia. The discussion is based on data and observation collected from 10 best telecentres in Malaysia (Norizan Abdul Razak, 2008) and 557 users at 20 telecentres.

**Identified Factors of Success for the Telecentre**

In order to empower the rural communities the most important issue is access. As propagated in the Malaysian national framework on bridging digital divide, the issue of access is one of the crucial factors for the rural community to get to the ICT tools for advancing the social and economic development of a community as these technologies can create new types of economic activities, employment opportunities and enhance social interaction and networking among people. As presented by Azizah (2008) the thrusts of the National Strategic Framework on bridging digital divide in Malaysia is divided into 5 areas as illustrated in Figure 1. These areas are:

- To increase access and adoption of ICT by the underserved groups which are labelled as children, youths, women, senior citizens, handicapped people, indigenous people, and small micro and medium entrepreneurs. This objective will be achieved via the development of one telecentre per district to ensure equitable access to affordable PCs and online services for all.
- To institutionalize evidence and informed policy and practice via adopting improved methodologies for monitoring and evaluating of e-inclusion programmes.

Figure 1: Thrust and Strategies of NSF-BDD (Azizah Hamzah, 2008)
Norizan (2008) analyzed and identified 6 factors namely community involvement, the local champions, the leadership of the telecentres' operators, management of telecentres, adequate infrastructure and local content which are equally important as access. These factors will assist in the effort of ensuring that telecentres as powerful agents in empowering the rural communities with ICT and lead to a more balanced development. The telecentres can assist the distributions of information related to government efforts and other value added initiatives to the far reaching communities. Empowering also means to enable the information and benefits ICTs can bring to the doorsteps of the rural communities. The telecentres now must function not just as access points but also as social and economic agents for the rural communities.

### Needs Analysis on the use of ICT for Community Empowerment

Needs analysis study was conducted in the year 2008 on the information needs of the marginalized communities namely, children, youth, women, indigenous groups, senior citizens, handicapped groups and the small micro and medium entrepreneurs. The needs analysis was done via the use of questionnaire with 557 users of 20 telecentres from 9 states in Malaysia. The findings show that the majority of the users of telecentres are youth in the age range of 13-39. There seems to be a big age gap among the users who are 40 and above as compared to those younger. The telecentres seem to be able to attract youth and not the elderly, girls and not the housewives and women age more than 40. As for the school going children age 13-18 they used telecentres to complete their school assignments and folios and also to play online games and used highly the social network tools and facilities such as friendster, chat and e-mails. This culture is not really apparent in the older group age range. As for those who are in the 19-39 age groups, telecentres are used as the access points for them to register online for higher learning, seek relevant information for jobs and read news online. Again for this group, the uses of e-mail and chat are also popular.

**Figure 2: Users of telecentres**

<table>
<thead>
<tr>
<th>Thrusts</th>
<th>Strategies</th>
<th>Target Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Target at least one telecentre per village.</td>
<td>1. Target at least one telecentre per village.</td>
<td>1. Telecentre operators.</td>
</tr>
<tr>
<td>2. Ensure equitable access to affordable PCs &amp; online</td>
<td>2. Ensure equitable access to affordable PCs &amp; online.</td>
<td>2. Management of initiatives.</td>
</tr>
<tr>
<td>3. Increase use of electronic services and applications</td>
<td>3. Increase use of electronic services and applications.</td>
<td>3. Telecentre operators.</td>
</tr>
<tr>
<td>5. Utilize telecentres to increase socio-economic value of the community</td>
<td>5. Utilize telecentres to increase socio-economic value of the community.</td>
<td>5. Management of initiatives.</td>
</tr>
</tbody>
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The users also visited the telecentres often which is 54.3 percent used the telecentres facilities weekly. **Figure 3: Frequency of use of telecentres**

In terms of what information that they sought when using the telecentres, majority responded that they surfed for the educational materials 60.2%, news 46.8%, general information 41.8%, job opportunities 32.5%, sports 33.3%, health tips 27.4% and only a minimal number 26.9% actually looked for business opportunities online. **Figure 4: Types of information surfed**
Community Involvement
Thus, based on the findings of the research and the observations made at the telecentres, one of the key factors in ensuring that the initiative to bridge the digital divide via the telecentres is successful is the undivided support from the community and their involvement. As observed at the telecentres located at Bario, Sarawak, Simpang Empat, Perlis, Kg. Pamah Kulat, Pahang and also telecentre at Balik Pulau, Pulau Pinang strong support from every level of the community starting from the users, the committee members and the local champions help to expedite any decisions made and successful implementation of activities by the telecentres operators. Their involvement will also ensure that the ICT activities planned could be carried out in time and attended to.

Users Support
The support should firstly come from the users themselves and these bottoms up approach such as what has been observed at the Simpang Empat, Perlis telecentre, the members of the community themselves requested and volunteered for courses and activities. The support from the users is the determinant factor of success. Even though the fees incurred is very minimal and sometimes free, the participation give strong motivation to the telecentre operators to plan for more training sessions and involvement of other agencies to assist and contribute financially. If the telecentre is very active in organizing events and training but participation from the community is low, this will eventually demotivate and the telecentre will be less active. At the successful telecentres, the active users are those in the age cohort of 15-25 years old and they are mostly students (50%). From our observation there is a very strong indicator that the telecentres around the area of KETENGAH Terengganu will be successful in the next two years. This is due to the undivided support from Ketengah. The corporation is very supportive and will use the telecentres not just as access points but also as tuition centres for the students and as e-payment and e-inclusion activities. Ketengah is also very keen in collaborating with the varsities and other industries to ensure that the transfer of technology and portal development for e-learning can be developed and implemented via the telecentres. The corporation also invests in research and development activities on online and digital contents and training.

The Local Champions
The support should also come from the local leaders, politicians or state representatives. The leaders have to be very supportive and willing to give time and energy to attend activities at the telecentres and also very much involved in promoting the telecentres by conducting events and meetings at the same place. It is also worth mentioning the success of another telecentre in Kg Bujang, Kedah is also due to the strong support and leadership from the local champions. The community actively participated to assist the telecentres to be successful by promoting, attending and managing the telecentres. As the telecentre is located within the mosque compound, side by side the community library and religious school for 7-12 years old, the telecentre is frequent not only by students but also other community members of all ages and status. Majority of the community members are aware of the services offered as the head of the mosque and the head of the village also promote and advertise the benefits of the telecentres to the community via the talks at the mosque and local gatherings such as wedding receptions. Strong local champions support is also observed at Parit Tengah, Johor telecentre.

The Leadership of the Telecentres' Operators
There is a strong correlation between the attitude and personality of the telecentres' operators and the success of the telecentres. For the e-Bario project the success of the telecentre depends heavily on the telecentre's operator. He is responsible in
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The whole operation of the telecentre from the management aspects and networking as well. His pleasant personality and willingness to help the users and tourists who come to Bario is important to ensure regular flow of visitors to Bario and the usage of the telecentre there. He also plans for the business, cultural and educational activities within the area. Another exemplary telecentre operator is at Simpang Empat, Perlis one of the award winning telecentres. The supervisor's role is crucial in assisting the telecentres to be popular and successful among the Simpang Empat community. He is a business graduate from a local university and very passionate about his job. He is also married to the local and very well accepted by all the community members and committee members of the telecentre. His business background helped him to manage the telecentre more effectively and network with other organizations and agencies to sustain the telecentre.

Collaboration with other Agencies and Organizations

Another telecentre in Besut Terengganu provides not just training and awareness programmes but also distance learning education service. This service is offered in collaboration between the telecentre and two local universities in Malaysia. Students can get to know more about the courses offered by the two universities and at the same time register online with the help of the staff from the two universities. This procedure seems to be very cost effective for the rural community to be involved in e-learning and at the same time encourages rural community to continue their study either on full time or part time basis; thus allowing more members of the community to obtain a diploma or a degree later on. This initiative even though is still new, provides good prospects as there are 1945 telecentres in Malaysia. Furthermore, e-learning is also gaining its popularity among the marginalized groups. Another effort that is being planned at the moment is to introduce the use of microcontrollers at the telecentres. This project is collaboration between the Faculty of Engineering UKM, E-Community Research Centre UKM and also telecentres around the Hulu Langat areas. This is still at planning stage as we are looking for sponsors to provide the microcontrollers to be introduced to the rural youth. This project will assist the engendering of the innovative ideas and solving the community based problems via the use of microcontrollers.

Adequate Infrastructure and Management at Telecentres

There are various models of infrastructure provided at the telecentres. If the telecentres are located at the rural clinics or rural libraries, normally there are around 2-4 units of computers and telecentres located at the post office, the number of computers is around 6-8. The newer initiatives such as rural broadband libraries and community broadband centres allocated around 12-14 computers in a rented premise. Another model called Medan Info Desa has 18-24 computers and usually located either at a community hall or place donated or built as computer labs. From our observation, we found that in order for the telecentre to function as a one stop centre and as an agent in developing knowledge society of the future, it will be comfortable if the telecentre is equipped with 10-14 computers per centre in which 2 computers for administrators/supervisors, and the other 12 is for community to self access or for training purposes. The computers must be upgraded to ensure that they are compatible to the latest software in the market and can be used for online transaction. The use of multimedia facilities call for the provision of headphones and also higher bandwidth and broadband access. There is also a need to equip the telecentres with WIFI for those who want to use their own laptops and when the computers are fully used. Equally important, the telecentres must also provide assistive technologies for the handicapped groups whose need varies and very specific to identified disabilities. Another recommendation that we would like to make is a reading corner for those who are queuing to use the computers. While waiting, the users may read the magazines
and use the place to write or read. This will ensure that the telecentres function as
effective agents for the community to access knowledge and for Socialization.

The Commitment and Active Participation of the Central Agencies and Industries
The commitment and active participation of the central agencies and all involved in the
setting up of the telecentres including the contractors, suppliers and participating
agencies are another important criteria. The central agencies' role is on giving the
allocations for the development and purchasing of the equipments and also
monitoring and evaluating the progress and development of the telecentres. A complete
standard operating procedure which includes the setting up, training, assessment and
monitoring of telecentres is a must to ensure systematic management. Central Monitoring
System is also handy to be placed at all telecentres to manage and monitor the
usage and for management purposes. The role of the contractors is very crucial as, in
some initiatives they are the ones that will be contacted if there are any technical
problems at the telecentres such as computer break down or low Internet
connections. The contractors are also the ones responsible to equip the telecentre with
all the equipments identified and ordered. Effective monitoring and reporting will
ensure that service time will be shortened and access to Internet and the technology
can be ensured.

Identified Programmes for Community Empowerment
It is planned that at each district there is one
telecentre to serve the community. The
telecentres will not be successful and sustainable if there is no programme
meeting the needs of the communities at large. Thus after analyzing the needs and
the existing infrastructures I would like to propose framework of 5E in empowering the
rural communities.
(1) Empowering mechanism - telecentres
with all the identified factors for the telecentres to be sustainable
(2) Exchange of information and lifelong learning-information needs - telecentres to
be the catalyst for the human capital development and training
(3) E-Entrepreneurship - e- transactions and
e-skills to enhance the socio economic status
of the rural communities via the
development of websites, e-payment
gateways and also emarketeers
(4) Employment opportunities, assistance
and tele-workers - more work opportunities
offered at the rural areas with the provision
of broadband access and Internet links.
Rural communities can work at homes and
also at the telecentres and this will assist to
attract more youth to work at the local areas
and reduce the migration of rural youth to
the cities
(5) Enhancing contacts and collaborations -
private sectors, banking, insurance and also
computer companies to collaborate and
telecentres will be effective agents for
the rural communities.
Telecentres will also be effective agents to
disseminate information for the government
development plans.

Conclusion
Based on the study it shows that there are
many interrelated factors in to the success of
telecentres as agents to bridge the digital
divide. The communities level of ICT literacy
can be upgraded through several layers of
training and awareness programmes. The
telecentres can become effective centres for
social activities among local communities.
There are evidences some telecentres are
making ways towards social business model
and network with other organizations as
partners in training and economic activities.
The observations and recommendation made
hopefully will ensure the rural communities
can be empowered via the ICTs tools and
the telecentres.
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