MEASURING THE PERFORMANCE OF 'TRAIN A TRAINER' PROGRAMME : A CASE STUDY IN LONG LAMAI, SARAWAK, MALAYSIA

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Abstract

Long Lamai is a remote rural community, located close to the border between Indonesian Kalimantan and Sarawak in Malaysia. The Penan community has a population of approximately 500 people and they are mostly farmers. They have very limited interconnections with the outside world due to the distance between urban area and their village. Centre of Excellence in Rural Informatics (CoERI) from Universiti Malaysia Sarawak has successfully built a Telecentre which provides facilities of telephone, fax, internet, printing, and photocopying for the local community. Researchers of CoERI could only conduct basic computer trainings for them once in two months due to the high cost of travelling and other commitments. An initiative to overcome this problem has been identified which is by introducing a 'Train a Trainer' programme to the community. The programme is intended to train the locals to become trainers to enable them to train their own community. The paper would discuss on the methods used to design and develop training modules, challenges faced during the implementation and results of the performance of the trainers in conducting their classes. Through this programme, training the locals could greatly help in reducing the costs; however the quality of the training conducted by the locals varies, depending on the modules. This paper also looks at measuring the effectiveness of the programme at Long Lamai, Sarawak, Malaysia.

Keywords: Rural community, telecentres, computer trainings

1 INTRODUCTION

Due to the success of eBario model (as described in Gnaniah et al. (2004)) in setting up a telecentre in Bario, Sarawak, Malaysia, Centre of Excellence in Rural Informatics (CoERi) decided to replicate the model to other communities in rural Malaysia. The eBario success not only increased the communication between the Bario community and the outside world, but also improved their level of English language (Harris & Tarawe, 2006).

In February 2008, the journey to start the process of building of a telecentre in a Penan community in Long Lamai commenced. It was chosen as it satisfies the criteria of a rural telecentre. It is isolated physically, does not have any telecommunication coverage, no 24-hours supply of energy, no road access and there is a willingness of the community to accept the project. Long Lamai has a total population of about 500 and they are mainly subsistence farmers. There is a primary school and the nearest rural clinic is 1-2 hours boat ride.

The first official visit was made in February 2008. During the dialogue with the community, the CoERI team met the community and forward a proposal of building a telecentre in Long Lamai. The community agreed with the idea but requested for time for discussion as not all of members of the community are in

the village during the time of our visit. It was a period of harvesting hill paddy and usually they spend their time in the farm huts. They said a full consensus from all members of the community was needed to implement the telecentre.

In the third dialogue, the community gave their full and formal consent to the telecentre in the village. During this time the community elected members of the two committees, the steering committee and the e-centre management committee. The main responsibility of the steering committee is to ensure and monitor the construction of the e-centre building. Once the construction of the building is completed, the management committee will handle the day-to-day running of the e-centre. The CoERI also briefed the community the roles and responsibility of the CoERI to the e-centre. In addition, a representative from e-Bario telecentre shared the experiences of the the Kelabit community.

CoERI is responsible to provide training of the personnel to run the centre and the community has agreed to propose representatives. By the 7th visit, building materials arrived at Long Lamai and the building was completed at the end of June 2009. The VSAT was installed on 18 July 2008 and the solar panel system to power the computers in early September. Training sessions for using computers started in late September 2008.

After the launch of the telecentre, the community has changed drastically and the major catalyst is the usage of the telecentre. Besides the telecentre, a public phone was installed. This has increased the communication between the villagers and their relatives and friends in the towns. They have used the telecentre to check their national level exam results via the web, apply jobs, seeking information and knowledge to raise their awareness of their surrounding and the world at large. Currently, they have started working a homestay programme where the web will play a vital role in making it a success.

The paper is organised as follows. Section 1 introduces the stakeholders (local communities) and the development process of the telecentre in Long Lamai, while Section 2 explains the motivation of introducing the Train a Trainer programme at the telecentre and Section 3 defines the chosen methodology used in creating the programme. Results and analysis as well as Discussion and Conclusions could be found in Section 4 and Section 5, respectively.

2 MOTIVATION

Enthusiasm alone is not enough to carry out computer trainings at telecentres in remote areas such as Long Lamai as researchers / trainers could not afford to travel frequently to the telecentres. This is due to time consuming; resulting sacrificing other commitments and also the journey to the telecentre is costly.

Hence, ‘Train a Trainer’ programme is proposed as a feasible solution to these problems in the hope to have local trainers that are able to propagate the knowledge and skills to their own community. Through this, it would not only save a great deal of traveling cost and time, but, it could be a possible method to help sustain the usage of the telecentre.

3 METHODOLOGY

Thus, a methodology is chosen to build a training programme for the local trainers. There are several instructional design models such as Dick and Carey (Walter, Carey, & Carey, 2005) and Instructional Development Learning System (IDLS) (Esseff & Esseff, 1998).

The most general model used for creating instructional materials is the ADDIE model, where the acronym stands for the five processes involved: Analysis, Design, Develop, Implement and Evaluate. In our continuous research to bring ICT for remote community, a more specific training methodology has been designed and implemented as described in Mit et al. (2010).

3.1 Analysis

Problems, goals and objectives are established as well as learning environment and learner's characteristics are identified. Some of the questions that were addressed during this phase were: *Who are the learners and what are their characteristics? What is the new behavioral outcome? What types of learning constraints exist?*

Learners for the Train a trainer programme are those chosen from the community themselves. They are chosen based on their interests on IT and also their commitment to teach others and help to manage the telecentre. A total of six learners are identified, aged between 18 - 35 years old. They could not speak and write in English well, however, they could write and read Bahasa Malaysia, which is the official language of Malaysia. When the computers and netbooks were first brought in, it is observed that most of them do not know how to use keyboard and mouse or the touchpad on the netbook. Thus, from this observation, (i) training modules should be written in the language that they are familiar with and (ii) outcome of the programme is to produce learners with basic computer skills (typing, use a mouse to point, click and double click, etc).

One of the reasons to have a telecentre in the village is to connect the community to the outside world via Internet. Thus, several web applications are proposed in the programme that could assist them in their communication with their friends and relatives living outside of the village. The telecentre is equipped with three netbooks and three desktop computers, a portable projector and printer. Hence, training is delivered using these equipments throughout the programme. Since the telecentre is situated at the centre of the village, training session could be done from morning until night. This gives more time for teaching delivery and also for the learners to learn.

3.2 Design

The overall structure of the programme is arranged based on the findings in the previous phase. From there, four types of skills are identified that would be able to increase their level of computer skills and help them in communication using Internet. Table 1 shows skills and modules of the programme.

Skill	Module
Basic office	1. OpenOffice.org : Writer 2. OpenOffice.org : Impress 3. OpenOffice.org :Calc
Managing computer files	1. PC maintenance 2. File management 3. Basic Computer Operations
Web	1. Blog 2. Email and chat : Gmail 3. Social Network : Facebook 4. Download/upload files from the Internet
Drawing using computer tool	Microsoft Paint

Table 1. Computer skills and module to be implemented

CoERI will deliver modules classroom style, where the trainer teaches and the learners observe. After completion of tasks and module, learners will go through a practical training and they are facilitated by CoERI. This practical session is conducted in order to evaluate their capability to teach and to assess their understanding.

Assessment methods include pre and post tests, assignments and a competency exam to assess their skills. Media for instruction would be the computers, internet connection, projector and printer which are all available in the telecentre. Online tutorials that are available on the internet and local information are used to create module contents.

Each module requires at least 2 to 3 hours of delivery with a practical session of six hours and each training session is conducted within three days per trip.

3.3 Development

Module contents are developed according to the design above and the language used is Bahasa Malaysia.

3.4 Implementation

CoERI trainers conduct the training to the learners using computers and also the modules provided. Delivery of each module lasted about 3 hours and continued with a practical session, whereby, they teach other local users. CoERI assists when needed during the practical session, and conducts test for each module.

During this implementation, a slide presentation competition using OpenOffice Impress was held as an assessment strategy to measure their understanding of using the application. In this competition, they were given a task to find pictures of local fruits from the internet and name the fruits in the Penan language. Besides that, the six participants were also given an assignment to create a schedule of the telecentre operation hours using OpenOffice Calc.

3.5 Evaluation

Formative and summative evaluations are carried out in order to measure the performance of the learners. Formative evaluation is conducted at every stage of ADDIE while summative evaluation is conducted to measure the learners' overall performance of the training.

For formative evaluation, an internal evaluation is carried out, whereby CoERI trainers evaluate module contents and learners' level of understanding. As for summative evaluation, an overall test on modules is conducted to assess their level of computer skills after the completion of the programme.

4 RESULTS AND DISCUSSION

The section presents findings and discuss on the performance of the programme that had been conducted in the Long Lamai telecentre.

4.1 Analysis of learners

Learners were chosen by the community and most of them had gone to school. They could understand Malay language but the language is not widely used in the village. They have never used computers. During the early stage of training, CoERI spent a lot of time explaining instructions/notifications given from the computer system which were all written in English. Gradually, they began to understand some of the instructions. Most of them are introvert which made it quite difficult for CoERI trainers to identify their problems and their needs.

4.2 Modules

A total of eleven modules were prepared for the programme. Module contents were enough to cover basic computer skills using Malay language as the medium of instruction. However, it was found that

learners had trouble understanding instructions in some of the modules which resulted learners unable to do well in their practical session. They had difficulty to teach Office application modules such as OpenOffice Calc and OpenOffice Impress to other telecentre users which made these modules as the least favourite module to be taught. OpenOffice Calc is an application using spreadsheet which was intended to help users to build tables and make calculations while OpenOffice Impress is an application for creating slide presentation.

4.3 Overall Performance

With the implementation of the programme, many people in Long Lamai is now able to use the computers to connect to the Internet and communicate with their loved ones. It was made possible with the help of the local trainers at the telecentre. Adding to that, CoERI managed to save a great deal of cost in training the locals.

The weakness of this programme is the local trainers (learners) were not competent to deliver all modules. They could teach Web modules such as, email and social networking, but, not the office applications. A competency test was carried out to evaluate their understanding and the result was poor whereby only one of them managed to complete all of the tasks in a given time frame.

4.4 Learners' feedback

The programme received positive feebacks as most of them are proud to be able to use the computers like those in the urban areas. However, they are still not confident to teach some of the modules for they are not very familiar with its functions. They do not see the practicality in using OpenOffice Impress, because they do not use it in their daily activities and with this, they do not see the importance in learning about it or teaching others. In comparison to that, Web modules are much easier to be taught as they used it often to check their emails and communicate with their friends via Facebook. Besides that, computer terms in the computer and applications were still a major problem for them to understand.

They expressed their concern on training those who are more senior than them in age since in their culture, younger ones should be the ones who learn from the older ones. The seniors were not happy to be taught by them.

4.5 Problems and Proposed Solution

Based on previous findings, some solutions are proposed to improve the performance of the programme and also to increase the local trainers' competency level. The solutions are listed in Table 2.

Problems/Issues	Propose Solutions
• Training session for the community by the local trainers did not follow as planned as trainee lack of motivation to come to the centre or otherwise the trainers are from CoERI. • Computers are not enough (sharing basis, more than one user at one computer). Thus, not everyone has the chance to do hands-on.	• A proper schedule with stated time, day, number of people in one session and modules to be taught. It is necessary for local trainers to report to CoERI.
• Local trainers facing difficulty to understand instructions in the modules provided. This is due to their qualification and education standard.	• The best local trainer identified will be monitored closely, and required to prepare another round of training for the trainers. • Local trainers are encouraged to use their own

	language during explanation of the instructions.
• Local trainers are not motivated enough to practice on their own after they were trained by CoERI trainers.	• Three months after programme implemented, CoERI should evaluate the local trainers' competency again as a follow up on their level of knowledge. • Provide awards or incentives
• Adults are unhappy when a young trainer teaches them.	• Involvement of adults not only teenagers as trainers in training sessions to avoid dissatisfaction, as in their culture the younger should learn from older. • Conduct training sessions according to age groups
• Objectives of learning the modules are not clear.	• Provide success stories of other rural areas/business and explain clearly how technology has helped them achieve more for themselves.
• No proper needs analysis were carried out at the beginning of the programme to know about their culture and local needs	• Questionnaires and discussion with the community by the CoERI trainers should be done before the programme starts. This may help in refining the module contents.

Table 2 : Problems, issues and propose solutions

Table 2 presents the problems and issues while conducting the 'train a trainer' programme at Long Lamai. It is apparent from this table that the main contribution to the problems and issues is the lack of understanding of the community culture, which very much related to their daily life. Strong evident of this, for example adult unhappy when teenager trains them as in their culture, the younger should learn from the older. Based on the propose methodology, this is particularly not true as the best selected local trainer should be able to deliver the task. In addition, to change this culture or believe is not an easy task, as it has been practice from generation to generation.

ADDIE approach was first used in remote community at Long Lamai, and it is clear that there are number of improvement will be done as propose in Table 2. Long Lamai experiences will be as a basis for the designing a better 'train a trainer' programme which will be used on other CoERI sites.

5 CONCLUSIONS AND FUTURE WORK

The train a trainer programme is intended to prepare the Long Lamai community to become trainers themselves. By equipping them with the basic ICT skills, they will be able to spread the knowledge within their own community.

Conducted by CoERI, six trainers were selected by the community. In order to assess their capabilities in conducting the programme, pre and post tests were provided. And in addition to this, CoERI facilitated assignments and practical sessions to them. Despite all this, this programme failed to reach the main purpose, as only one out of the six selected trainers performed well in the assessments, while others only able to do well in some areas of the assesment.

Future works to improve the implementation as well as the efficacy of this programme are listed as in Section 4.5. Proper need analysis is important and should be done prior to the training. Results from this could contribute in identifying any particular interests of these groups and may help in refining module contents. Creating awareness on benefits of IT in their daily activities could generate deeper interest to learn. Current performance measurement on the local trainers are assignments, pre and post test on modules. A more concrete performance measurement metrics could be conducted to measure elements

of reliability, efficiency and quality. These measurements should not limit to trainers (both local and CoERI trainers) but also on the modules.

To date, the ADDIE model has been used to build the programme for Long Lamai community. The same programme would be implemented at other remote telecentres under auspice of CoERI (Buayan, Ba'Kelalan and Larapan). Solutions proposed are considered for the subsequent 'Train a trainer' programme.

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