Asia-Pacific
Economic Cooperation

CAPITALIZING INFORMATION TECHNOLOGY FOR GREATER EQUITY & ACCESS AMONG POOR AND RURAL COMMUNITIES

APEC
Human Resources Development Working Group
Capacity Building Network

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Capitalizing Information Technology for Greater Equity and Access among Poor and Rural Communities

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Introduction

Between 2008 and 2009, a very challenging project was taken up by Malaysia with co-sponsorship from the Asia-Pacific Economic Cooperation (APEC) to ensure that rural dwellers and the poor, especially women, were not left behind in the realm of information and communications technology (ICT) or in other words, were not digitally divided from their urban and richer counterparts.

For the project team, this project was important not only because it would bring about modernization but also protect and promote the human rights and freedom of the target groups. In addition, the project involved a shift from the techno-deterministic interpretation of ICT to an interactionist model whereby ICT interacted with the cultural, political and economic landscape.

Particularly important in this project was the emphasis on poor and rural women. They are among the most marginalized groups in the world. The project aimed at finding out their interests, concerns and realities as well as how they communicated. We also wanted to put on the development agenda the conditions which silenced poor women. We hoped that through this project, we could make an impact on poor and rural women's lives by effectively empowering them to move towards economic independence, political participation, community management, solidarity building, individual agency and societal transformation.

The project was challenging as there were a number of hurdles to overcome: lack of basic literacy, the need to purchase or install ICT hardware in rural and poor areas (as compared to ensuring the communities in the areas had sufficient food on their table), and the need to ensure there was electricity to run the computers as well as telephone connections for Internet access.

Furthermore, we were aware that social divides such as inequalities in class, gender, race and religion pre-existed the digital divide. Apart from the above, we also recognized that the use and development of ICT took place in unique cultural, political and economic contexts. Thus, this project was carried out and completed in the face of enormous challenges.

Further, this project could contribute towards achieving the Millennium Development Goals of 2015. Some of these goals, as explained in the World Bank website (http://www.worldbank.org), are as follows:

1. **Eradicate extreme poverty and hunger:** It was reported that between 1990 and 2015, half the proportion of people has income less than one dollar a day and between 1990 and 2015, half the proportion of people suffer from hunger.
2. **Achieve universal primary education:** The objective is to ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling.

3. **Promote gender equality and empower women:** The goal is to eliminate gender disparity in primary and secondary education, preferably by 2005, and to all levels of education no later than 2015.

4. **Improve maternal health:** To reduce by three quarters, between 1990 and 2015, the maternal mortality ratio.

In this report, we provide a brief description of the project, the status of rural and poor communities of participating APEC economies, the development of instructional materials, the pilot test results, the issues which surfaced during pilot testing, the lessons learnt and the implications.

The instructional manual and all accompanying materials such as PowerPoint slides and individual reports will be uploaded in the APEC website besides being provided in the CD-ROMs attached to this report.

Thank you.

Prof Dr Abtar Kaur, Open University Malaysia
Project Overseer
Project No: HRD 03–2008

I Project Description

1. BACKGROUND

The project "Capitalizing Information Technology for Greater Access and Equity Among Poor and Rural Communities" seeks to first achieve a broader vision of APEC – "stability, security and prosperity for our people." The project is in line with the APEC Vietnam 2006 theme: "Towards a Dynamic Community for Sustainable Development and Prosperity."

In meeting the above two visions, the project would help to raise the capacity for knowledge and innovation, improve access and quality of knowledge resources and bridge the gap between urban and rural communities in terms of employment, poverty and digital divide.

In particular, this project would respond to APEC's "Three Pillars," which are related to economic and technical cooperation (ECOTECH). As stated in APEC's website, "ECOTECH is dedicated to providing training and cooperation to build capacities in all APEC Member Economies to take advantage of global trade and the New Economy. This area builds capacity at the institutional and personal level to assist APEC Member Economies and its people gain skills to meet their economic potential."

In preparing for this project, some related milestones that were referred to included:

- New Zealand: Development of framework for integration of women (1999);
- Brunei Darussalam: Increase in Internet access (2000);
- People's Republic of China: Facilitation of infrastructure investment and technology for online transactions and promotion of entrepreneurship and human capacity development (2001); and
- Thailand: Strengthening of efforts to build knowledge-based economies (2003).

For this project to succeed, close cooperation and collaboration between the government and non-government sectors was very crucial. The non-government sector, which played an equally important role in rural and poor communities, has invited to showcase its best practices and share its experiences in planning, designing, developing and implementing similar programmes. The workshop, which included representatives from APEC Member Economies, also provided an avenue for feedback and recommendations in this area.

As one of the target groups of this project was women, the Project Overseer (PO) needed to ensure that female representatives were given priority in the formation of the project team. National/government bodies in the respective economies were to be consulted to identify women who showed dedication and grit in poor and rural communities as well as women who were active in the provision and development of ICT for rural and poor folks.

2. OBJECTIVES

The main purpose of this project was to create a set of materials for use by policy-makers, government agencies and non-governmental organizations (NGOs) as well as research and academic institutions to help support rural dwellers and the poor. They would benefit from being taught and equipped with the right knowledge and skills to access information and data resources related to their vocations which could help them to upgrade their total well-being. The key objectives of this project were to:

(a) Examine and evaluate technological structures in relation to the level of knowledge and skills that exist among the rural poor to acquire further knowledge;

(b) Collectively design and develop workshop programmes that will help build the capacity of community-based organizations to capitalise on open and distance education (ODE) techniques in their day-to-day operations with rural communities; and

(c) Educate community-based organizations to harness the power of ODE methodologies which will help increase the capacity to achieve greater equity and access to knowledge resources.

3. ACTIVITIES

The project comprised four main activities:

3.1. Initials Workshop for Experts (April 2008)

To begin the project, an initial workshop for expert was held in Kuala Lumpur, Malaysia, from 27 to 29 March 2008. Twenty information technology experts from eight economies (China, Chinese Taipei, Indonesia, Japan, Malaysia, Papua New Guinea, the Philippines and Thailand) attended the workshop to identify and present the technological infrastructure needs and issues of rural people and the poor in their respective economies. This was followed by a discussion on the terms of references to be used in developing the ICT content. Decision was then made on the tentative programme for the capacity-building framework.

3.2. Production of Curriculum Materials (May to September 2008)

The second phase of the project required experts to design and develop a curriculum and a training manual in English based on the agreed upon terms of reference to suit the cultural, language and gender concerns in the participating economies using ODE techniques. Each economy was responsible for the development of one section of the curriculum. These were then integrated into one package by the Project Overseer and Development Team at Open University Malaysia (OUM). Upon completion of this process, the materials were distributed to team members for translation into local languages and pilot testing in the local areas.

3.3. Pilot Study (December 2008)

A pilot study using the training manual was conducted in China, Chinese Taipei, Indonesia, Malaysia and the Philippines. Trainers were assigned to train women in the target communities. They were mainly housewives, fishmongers and farmers who were deprived of education and were computer illiterate. They were taught basic information-seeking skills and how to perform simple tasks using the computer. After the training, the participants were given an evaluation form to fill, in order to assess their understanding and obtain their feedback on the manual.

3.4. Final Workshop (February 2009)

Universitas Negeri Yogyakarta (UNY) hosted the final workshop in Yogyakarta, Indonesia, from 11 to 13 February 2009. The workshop was attended by representatives from five of the eight member economies and an ICT expert from Chungbuk University, Korea. Ten graduate students and academic staff from UNY also participated as observers.

The aims of the workshop were to share and discuss the results of the pilot study carried out in each economy, to finalize the materials and to document the project. Each economy reported on efforts to develop and pilot test the training manual in the selected local community. The final version of the materials and its local translation were collected.

The experts separated into three groups to evaluate the outcomes of the pilot test and to start preparations for the final submission of the training manual. They also provided recommendations on how to overcome challenges in improving the content and training stakeholders.

3.5. Preparation of Final Report (September 2009)

The Project Overseer compiled, integrated and edited the information gathered from the final workshop for project implementation into a booklet for submission to APEC. Figure 1 shows the project timeline.

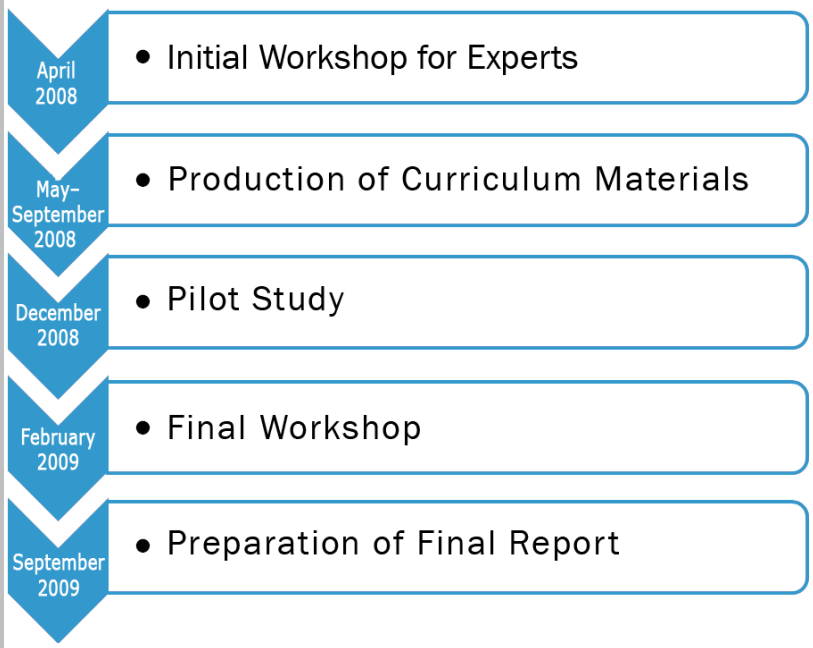

Figure 1. Timeline of APEC's project on "Capitalizing Information Technology for Greater Access and Equity Among Poor and Rural Communities"

II Status of Rural and Poor Communities of Participating APEC Economies

Introduction

The purpose of this project was to support capacity building. One of the ways to achieve this purpose was to provide trainers with materials which they could use directly or with some amendments. The broader vision was to enable individuals within the societies involved to develop economically and become self-sufficient concurrently with those who were better off. Therefore, the first aim of this project was to prepare a set of training manuals on how ICT could be used to increase the skills and knowledge base of individuals, especially women, in poor and rural communities. This base is crucial in the further development of these individuals as respected members of society. While the direct impact might be a better economic condition, the indirect gains could be in terms of better hygiene practices, social conditions and mental faculties.

These gains could be passed on to the participants' immediate families as well as community members. This may eventually create a community of people who are more educated than before in all social and economic areas.

In this section, the overall status of ICT in the participating economies is presented. In the initial stages of the project, a needs assessment was conducted from November 2007 to February 2008 on the status of ICT in rural and poor regions in the following economies – China, Indonesia, Japan, Malaysia, Papua New Guinea, the Philippines and Thailand.

On the whole, it was observed that while the economies had some commonalities in terms of distribution of ICT infrastructure, the differences were despairingly large and distributed where knowledge of ICT was concerned.

China

In 2000, the Ministry Of Education of China proposed a national plan to popularize the use of ICT in school education for pupils between 5 and 10 years. It became an important landmark in China's implementation of ICT use in schools. In the majority of urban schools, there was a multimedia platform in every classroom. Every school also had more than one computer room. In contrast, some rural schools did not even have enough desks, rooms and basic utilities such as electricity.

Half a dozen projects have been carried out thus far to improve the situation in China's rural areas. Since 1995, a "Project on Compulsory Education in Poor Areas," with US$1.9 billion in funds, has been dedicated

towards continuously improving the condition of schools in 522 poor counties. A project called "Renovating Dangerous Housing for Schools" was initiated in 2001 with an allocation of US$1.4 billion. Another US$1.9 billion was allocated for two projects – "Programme on Solving Two Bases in Western Areas" (2004 – 2007) and "Establishing a Boarding System in Western Rural Areas" (2002). In addition, US$10 billion was invested in two projects – "Further Promoting Balanced Development of Compulsory Education" and "Free Tuition, Free Textbook Fee and Subsidies for Boarding Students."

Between 2003 and 2007, a total of US$1.6 billion was invested in "Project of Modern Distance Education in Rural Areas," which covered all primary and secondary schools in China's rural areas. Three modes were implemented to achieve the project's goal of extending ICT access to rural areas – equipping schools with DVD display stations; supplying satellite reception and interactive stations for education; and providing computer classrooms for junior high schools. Training was also carried out for teachers and peasants.

A National Educational Technology Centre was established and it functioned as a support and service system. At the end of 2007, 80% of primary schools and 90% of junior high schools had satellite connectivity. A total of 402,000 sets of DVD display stations, 279,000 sets of digital satellite receiving sites, and 45,000 sets of computer and multimedia equipment were successfully distributed. A total of US$14 million allocated to the development of educational DVD materials is now being utilized by 100 million students. This included complementary materials and demonstrations for the subjects taught in both primary and secondary schools.

Several other noteworthy projects which shared similar goals were the "Rural Primary and Secondary School Distance Education Pilot Project" and the "National Distance Education Project for Poverty Reduction." The average ratio of a student to a computer gradually decreased, from one computer to 123 students in 1999 to one computer to 19.38 students by the end of 2006.

Indonesia

The Indonesian team gave an overall presentation of the country's demographic data and socio-economic situation. The team also explained the status and use of ICT in Indonesia, such as in the education system, and its proposed action plan.

With regard to the socio-economic situation, a graphical representation was provided on the distribution of poor people against literacy levels. Four major quadrants were identified: high poverty-high literacy; high poverty-low literacy; low poverty-low literacy; and low poverty-high literacy. A table was presented on the percentage of people under the poverty line and their distribution in the provinces in Indonesia. Another table was presented on the workforce based on age and gender.

As for the status of ICT use, a table was provided on the number of Internet users from 1998 to 2006. Indonesians had access to the Internet in homes, schools, universities and Internet cafes. Out of 72,000 villages, 50% had no telecommunication connections yet. However, 2,500 educational institutions had Internet access. Out of this number, 80% were secondary schools and 20% were higher education institutions.

A special ICT programme called Community Telecentre (CTC) was implemented for the poor. It was carried out under a project called Partnership for e-Prosperity for the Poor (Pe-PP). This was a collaborative project between the United Nations Development Programme (UNDP) and the

National Planning Agency of Indonesia. The programme had three components: socioeconomic, education and health. The socioeconomic component covered agriculture, fisheries, farming, production and marketing while the education component focused on providing online teaching clinics and the health component focused on providing a telemedicine facility.

For the APEC project, the Indonesian team proposed an action plan which involved the use of ICT for information access in poor/rural areas, the development of multimedia materials based on information needs, the training of trainers and users on how to use the multimedia materials and finally, monitoring and evaluation.

Japan

The Open University of Japan is a typical distance education system. It provides bachelor's and master's degree programmes throughout Japan via television and radio broadcasts. Consequently, diverse age groups could study at home. The university has 50 study centres located all over Japan. At the centres, face-to-face tutorial guidance, consultation, library service, self-study, review of recorded programmes and examinations are conducted.

According to the latest records, the university had 83,126 students, of whom 6296 were enrolled in master's programmes. Of the total number, 56.9% (47,265) were female and 43.1% (35,861) were male. In terms of age groups, 5.7% were teenagers, 18.1% were under 30, 24.9% were under 40, 11.8% were under 50, 19.3% were under 60 and 15.3% were above 60.

The OU Japan has also been aiding the Pacific Region on issues related to ICT and how to deliver many kinds of information to various groups, such as schoolteachers, medical staff, local government officials and ordinary people living in remote islands. As there is no electricity supply or telephone connection accessibility to information is difficult. As the islands typically have a small number of people and poor productivity, telecommunication providers are reluctant to expand their network to the islands.

A programme to train illiterate people was formulated, based on the development of a Multimedia Cyber Centre in Senegal. The centre comprised a local radio and a cyber centre. It cost about US$48,000 for 10 personal computers. The programme was mainly financed by the United Nations Educational, Scientific and Cultural Organization (UNESCO) and Switzerland. The plan was to establish 50 Multimedia Cyber Centres in three years. The International Telecommunication Union (ITU) is the technical partner with three pilot projects in Senegal, Mali and Angola.

Until now, 20 Multimedia Cyber Centres have been established in Senegal. However, difficulty was faced in getting a radio frequency as this involved safety concerns and political inquiry. The radio component was also the most costly. As for the cyber component, the only fixed line operator, SONATEL, did not have access to all villages. Consequently, only some of the 20 centres are operating. As for the others, they use the equipment only locally with operation software such as MSWord.

With the Regional Vulnerability Assessment (REVA) of a back to agriculture programme, the goal is to use ICT to teach farmers cultivation techniques (how, when, how long to grow potatoes, type of soil needed, etc). Instead of words, images are used for teaching. For example, a rice image would allow access to information on how to grow rice and the symbolic traditional farming tool of each ethnic group would allow one to listen to the course in the language of the selected group.

Malaysia

A total of 1,945 telecentres were set up by various ministries and central agencies, state initiatives, private bodies, NGOs and individuals. The common goal was to produce ICT-literate citizens and reduce the digital divide between

rural and marginalized communities and urban communities. In short, the aim was to empower Malaysians by increasing accessibility of digital information and knowledge. The marginalized communities included those which fell into at least one of the following categories – illiterate, physically challenged, have learning difficulties, live in remote or rural areas or belong to an indigenous group.

To meet its goal, a framework was identified. The country required basic infrastructure, a pool of ICT-skilled manpower, a well-established regulatory and policy framework, and the right mindset and commitment of its society's members to support and embrace ICT.

The primary method to achieve the goals was by training the telecentre users. Effective training could help the marginalized communities to attain increased productivity and growth in economy and literacy rates, have the opportunity to live a better and satisfying lifestyle, and see more of their members pursue higher education. Important training prerequisites had to be addressed and integrated into the design and development of training materials to meet the needs and literacy levels of the marginalized communities. A need for relevant local content was also identified. The course content was found to be accurate and relevant and the assessments were valid and reliable.

Papua New Guinea

As one of the most pluralistic nation states in the world, Papua New Guinea (PNG) has rich linguistic diversity, myriad tribal groupings, diverse cultures, remote communities and sharply delineated regions. PNG has a dual economy whereby 87% of its population live in remote and isolated small areas. A large segment of the population has neither the necessary knowledge and skills nor opportunities to participate in a cash economy. The literacy rate in rural areas is far below the national average of 45%.

A critical developmental challenge is to make widely available the benefits of the global information revolution and create a knowledge society through appropriate educational programmes and an ICT-mediated delivery system which reaches every corner of PNG so that people could become aware of the need for a nationally coordinated and coherent response to the developmental challenges they face on a daily basis.

Since 2002, an estimated average of 60,000 Grade 10 and 12 students leave secondary and high schools each year. Less than 15% enter colleges and universities. Most of the remaining 85% live in rural areas and have no way or means of furthering their education.

Different levels of community are given different types of access to services:

(a) Remote and Isolated Areas in PNG:
These comprise villages, which contain the majority of the population. The people have a subsistence lifestyle and are scattered along mountain ridges, rivers, isolated islands and atolls. Direct communication and accessibility is difficult. There is limited communication through local-level governments and provincial governments. There is no access to basic electricity as well as modern communication and information systems.

(b) Local-level Government Districts – Government, NGOs, churches, community groups and some in the private sector:

These are semi-rural, whereby the majority have access to basic electricity. There are limited communication services in the form of telephone and postal services. Direct communication and accessibility are possible for most district-level governments. Villages within the vicinity of local-level government headquarters have access to basic services.

(c) Provincial Government – Government, NGOs, community groups and some in the private sector:

All services are provided. Villages and local-level governments within the vicinity of provincial government headquarters have access to services.

Philippines

In a survey conducted by the United Nations in 2007 (United Nations Public Administration Network Report) on *e-readiness, the Philippines ranked 66 out of 183 countries with the following as indicators – web, infrastructure, human capital, e-participation and e-government readiness. The overall world average e-readiness index was 0.433 and the Philippines stood at 0.5. The report also showed the e-readiness index for Malaysia (0.606) and Thailand (0.503). The largest poverty sections in the Philippines are in the southern island group, which includes the Autonomous Region of Muslim Mindanao, Region XII in Mindanao Island and Region IX in Western Mindanao (see map below).

The status of infrastructure in the Philippines shows that with regard to Public Calling Office (PCO) service/telecentres, 45% of municipalities have Internet access points (as of January 2007) while 96% of cities and municipalities have PCOs as of 2002. As for high-speed broadband service, there is an estimated 1.4 million Internet subscribers and 7.8 million Internet users.

To ensure universal access to ICT, all citizens must be provided with access to basic government services, information, and quality education through the use of appropriate and affordable ICT technologies. The Philippine government has stated its commitment towards ensuring universal access to ICT and prioritizing programmes to benefit marginalized sectors and underserved areas. Thus, the following initiatives have been implemented – Community e-Centre Programme, Low Cost Computing, National Broadband Plan and the Last Mile Initiative.

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*The e-Government Readiness Survey assessed more than 50,000 features of the e-government websites of the 191 UN member states **to ascertain how ready the Governments around the world are in employing the opportunities offered by ICT to improve the access to, and the use of, ICTs in providing basic social services**.*

***Web measure index**. Assesses the websites of the government to determine if they are employing e-government to the fullest.*
***Infrastructure**. Assesses the proliferation of ICT in government processes and dissemination to the public.*
***E-participation**. Assesses "how relevant and useful the e-participation features of government websites around the world are; and how they are deployed by the governments for promoting participatory decision making.*
***Human Capital Index**. Assessment of human skills, based on adult literacy and enrolment ration in schools.*

Chinese Taipei

The Ministry of Education Computer Centre (MOECC) plays a significant role in bridging Chinese Taipei's digital divide in education by maintaining e-learning policies and support measures, e-administration for educational systems and information management. Several related projects were carried out. An ICT Education Infrastructure Plan was carried out between 1997 and 2007. This was followed by the Master Plan for ICT Education (2001 – 2005), the Challenging 2008: National Development Project – Building an E-learning System for All (2002 – 2007) and the Whitepaper on ICT in Education (2008 – 2011).

As part of Chinese Taipei's Create Digital Opportunity for Rural Areas Plan (2005 – 2008), a Digital Opportunity Centre (DOC) was deployed in each of the 168 rural townships in Chinese Taipei. By 2007, 113 DOCs were established. A DOC provides computers with Internet access, digital learning programmes and e-services and serves as an after-school learning facility for students and villagers in each township. Between 2001 and 2007, 557 ICT volunteer youth teams provided after-school online tutoring services at 113 DOCs to improve academic performance in Mandarin, Mathematics and English as well as teach ICT skills. This benefited 21,492 students in elementary and secondary schools as well as villagers.

In 2004, 30 distance learning courses in six categories were provided for in-service teachers in offshore and remote areas. This was a joint effort between universities and local governments. The categories were ICT in Education; e-Learning Fundamentals and Applications; IT Skills and Management; Education Topics; Languages; and General Topics.

In 2007, a One Laptop per Child Programme was carried out. A total of 8,000 low-priced personal computers were distributed to low-income families

with school-age children. The aim of the programme was to provide more equal ICT opportunities and to enhance ICT literacy and living standards.

Thailand

In 2008, Narathiwat had 23,793 residents. Out of this number, 16,028 residents were in the labour force. The literacy rate was 65.7% and the unemployment rate was 31.3%. The economic structure of Narathiwat, as of 2007, was focused mainly on three sectors – agriculture, industry and services. Agriculture makes up for 56.67% of the economic activities, followed by industry (22.37%) and service (20.87%) activities.

A telecommunications business Act came into existence in 2001. Frequency management is still a problem when new technology is introduced in the telecommunications and broadcast industry. Specifications of communications infrastructure are carefully examined. However, ICT has stimulated new business chances in communities. One good example is "One Tambon One Product" (OTOP). There is a need to bring ICT to the poor in urban communities, the elderly and the physically challenged.

A rural community project was formulated to connect rural villages and provide access for the people. It was intended to respond to social needs and had the support of the local government. However, due to little economic activity in the area, the economic feasibility of the project was uncertain. The project was to be carried out in the north of Chiang Rai, near the border with Myanmar. However, the deployment of the physical communication network, needed for both radio and fibre connections, was hindered by the mountainous area. Consequently, efforts were made to introduce the latest radio communications system, WiMax.

III Development of Instructional Materials

The development of instructional materials was based on the ADDIE model of systematic design, development and evaluation of educational/training programme. The model was selected from various available instructional design and development models because it was considered the simplest model to follow in developing instructional materials. Furthermore, ADDIE is one of the models which guide instructional developers in applying a learner-centred approach instead of a teacher-centred approach. Thus, the instructional materials will be more learner-friendly and meaningful for the learners (Peterson, 2003).

The ADDIE model consist of five phases: Analysis, Design, Development, Implementation and Evaluation (Dick & Carey, 1996, in www.learning-theories.com/addie-model.html).

First Step: **ANALYSIS**

In this step, the designer analyzed the learners and their needs in order to determine a suitable programme which could reduce their lack of skills or knowledge. The learners were from rural and/or poor communities from each of the countries represented in the project. The ICT and Internet competencies of the rural and/or poor were also determined.

Second Step: **DESIGN**

In the design phase, Gagne's instructional design model, The Nine Events of Instruction, were adopted as a guide to design the most appropriate learning sequences. This model included aspects of gaining attention, providing learners with instructional outcomes, checking on learners' prior knowledge, providing the content using various instructional strategies and appropriate practice, giving feedback and making assessments. Chunking was an important strategy as the learners were often of lower abilities. In addition, the learning strategy, sequencing of the presentation and other supporting instructional items such as pictures and cases were also designed. Activities for the learners – in the form of text and training activities – were also designed.

Third Step: **DEVELOPMENT**

In this step, the layout of the manual is developed. While the blueprint of the contents was being written, the trainers' manual was also developed. It contained brief information and explanation of specific content, examples, exercises and tasks for the participants to try on the computer. Layout and pre-publishing design were carried out at this stage.

The development of the materials was carried out by each team member for each assigned topic. The draft materials were integrated by the Project Overseer and her development team at OUM. Revisions of materials were done through virtual communication with the writers until the final version was achieved. Graphic design, layout and pre-publishing design were carried out by the development team at OUM.

Fourth Step: **IMPLEMENTATION**

The instructional materials and the training programme were implemented in the form of pilot studies in five economies.

Fifth Step: **EVALUATION**

Evaluation can be carried out in several stages. In this project, three steps were involved – expert review, one-to-one evaluation and large class-evaluation.

The evaluation was formative in nature i.e. to revise and modify the materials to be more effective and useful. It was focused on the readability of the materials, comprehensibility, attractiveness and relevance (contextualization). Furthermore, suggestions on improving and modifying the materials to be more effective and useful were also sought, from both the trainers and the participants, during the implementation.

Strategies for Development of Materials

Each member of the research team was assigned to develop one part of the course content in English. Each part was submitted via email to the Project Overseer, an expert in instructional design who took on the responsibility together with team members from the Centre for Instructional Design and Technology (CIDT) of OUM. Based on the expert review delivered via email, the research team revised the materials accordingly. The revised versions were then sent to the Project Overseer who, with her team, carried out the final development of the materials and pre-publishing activity.

The following topics were included in the training package:

Topic 1: ICT Awareness

Topic 2: Basic Computer Concepts

Topic 3: Word Processing Program

Topic 4: Basic Communication Concepts

Topic 5: Surfing the Net for Information

The development team comprised academicians who reviewed the content and instructional designers who edited and standardized the materials. A great deal of importance was given to designing and editing the content in order to ensure that the instructions were well written for the target group, which was mostly made of rural women who had yet to master basic ICT skills. In order to increase understanding, each topic was started with a curiosity sub-topic such as “Mind Boggler” or “Did You Know,” a statement of learning outcomes, activities and case stories. The editorial and instructional work which was done included suggestions on types of graphics to use, special layout of content and flow of ideas.

The edited materials were reviewed twice by the Project Overseer and academicians to ensure that the materials were of acceptable instructional quality. Once the Project Overseer and her team were satisfied with the modifications and changes, the materials were sent for printing. The final version of the materials was presented to each team member for contextualization. The contextualization included translation into the local language, layout re-design, PowerPoint production, and if necessary, development of trainers guide. The contextualized materials were necessary for the pilot test.

IV Executive Summaries of Pilot Test

PILOT STUDY REPORTS

CHINA

1. INTRODUCTION

China was responsible for writing the first section of the materials – ICT Awareness. Generally, it is accepted that awareness is at the lowest level in the affective domain. Based on the theory of affective domain teaching, it is most meaningful when we provide some basic and background knowledge to the participants and have them realize the usefulness and value of ICT in their lives, which then encourages them to learn ICT.

2. OBJECTIVES

Building awareness was difficult and required a substantial amount of time as rural people did not have sufficient general knowledge. Therefore, one purpose of this pilot study was to judge the suitability of the materials – whether the rural poor could understand and relate to them. Another purpose was to see if the learners realized the usefulness and value of ICT in their lives and if they were eager to gain more knowledge on the subject. The materials were then revised according to the participants' feedback in order to meet their needs.

3. DESCRIPTION

There were two trainers in the development group. One was an instructional design trainer who had experience in training the rural poor and the other was an ICT trainer who had experience in training ICT beginners. The content of ICT awareness was developed on the basis of related theories. The first version was reviewed by an expert. The concerns for the development group were whether the content was too difficult and whether it was related to the lives of the rural poor, especially women.

A questionnaire was designed and the materials on ICT awareness were compiled into a booklet. These were distributed to 30 women in five poor and rural areas, namely, the HeNan, Shandong, Guangxi, Guizhou and Sichuan. Consequently, provinces of 24 women responded to the questionnaire, and the following section provides a detailed description of the participants.

3.1 Age Group

The participants were aged from 19 to 59 and 78% of them were over 30 years old.

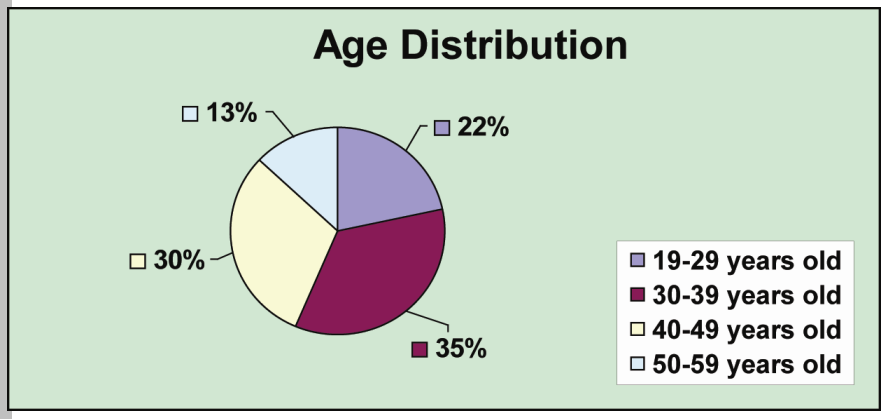


Chart 3.1
Age distribution of the participants

3.2 Educational Level

Of the total number of participants, 91% had secondary and high school or technical secondary school education.

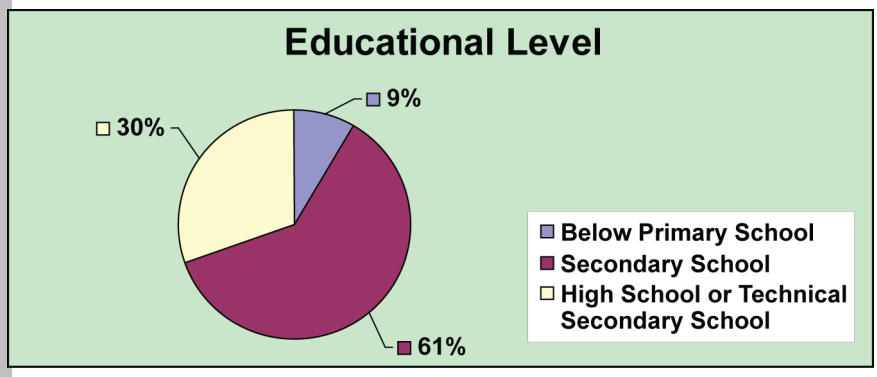


Chart 3.2
Educational level of the participants

3.3 Prerequisites of ICT for Participants

With regard to computer skills, 91.3% of the participants had seen a computer but 60.9% had never used a computer and 65.2% had never accessed the Internet.

4. RESULTS

4.1 Difficulty of Content

4.1.1 Four difficult paragraphs were selected in the materials and participants were asked if they could understand them. In response, 78.3% said they had no difficulty in understanding them.

4.1.2 The participants were then asked, "*Have you ever met with the problems in those cases?*" to find out whether they could relate to the content. The majority (60.9%) replied with "*Have met with*" while 26.1% answered with "*Frequently encountered*" *and* 13% said "*Never met with*."

4.2 Learning Outcomes of ICT Awareness

4.2.1 About 87% of the participants found ICT useful for their lives. The following is the breakdown of responses from the participants after reading the materials: 39.1% found ICT useful in their lives, 30.4% believed ICT could improve their quality of life and 17.4% felt it could raise their work efficiency. However, 8.7% believed ICT was useless in their lives while another 4.3% said it was far away from their lives.

4.2.2 Participants were asked "*Would you like to take part in ICT training?"* to see their attitude towards learning ICT skills. The results were as follows: 52.2% would love to participate in ICT training; 21.7% might give it a go and if they found it useful, they would continue; and 26.1% would like to but did not have spare time. Thus, the findings showed that all the participants were eager to learn more about ICT but some did not have time for it.

4.2.3 On the question *"What do you think ICT can do for you?"* 60.9% had some ideas while 34.8% did not respond to the question. Of those who had some ideas, 39.1% believed ICT could help them to acquire information, 13% thought it could help them raise agricultural production efficiency and 8.7% felt it could assist them in communicating with others while 4.3% said ICT was useless in their lives.

These statistics showed that by only reading the materials with no teaching from trainers, women in rural areas had some basic knowledge of ICT and had a very positive attitude towards ICT and learning ICT skills.

5. ISSUES AND RECOMMENDATIONS

Revisions were made, based on feedback from the participants. These involved mainly re-writing sentences or paragraphs so that rural and poor women could understand and relate to them more easily.

5.1 Issues

The following problems were faced:

- There was insufficient information regarding the rural poor, especially the women's educational background and daily activities. This was the biggest issue in developing appropriate materials for them;
- There were very few real-life cases of the rural poor, especially women, using ICT, which resulted in insufficient illustrations;
- Women in rural areas had little time to take part in the training; and
- Women in rural areas lacked the confidence to learn ICT skills.

5.2 Recommendations

- Learn more about the educational background and daily activities of women in rural areas;
- Add more examples about successful women using ICT in rural areas;

- Add more illustrations into the materials and make the content and layout more interesting;
- Use simpler language to make the content more understandable; and
- Try to build the confidence of women in rural areas.

PILOT STUDY REPORTS

INDONESIA

1. INTRODUCTION

Increasing the income of poor families has been the main focus in many developing countries. Low levels of education, lack of information, lack of access to financial institutions and limited facilities and infrastructure have hindered the development of the marginalized group, causing them to stay in a cycle of poverty. Within various programmes and activities aimed at increasing the growth of public income, women were often neglected despite their highly important domestic roles – educating their children, doing house chores and working as the breadwinner of the family.

Traditionally, information is the key element to efficient markets (Bhavwani et al, 2008). Adjustment of market prices needs information since the difference of prices in two different places is not allowed to exceed the transportation fee. Furthermore, ICT provides access to global information and serves as a means to increase knowledge and skills. As such, ICT could enable women to develop their knowledge and skills, which could then help them to improve their livelihood.

Based on the above-mentioned situation, it was indeed necessary to provide a written guidebook for marginalised village women on how to use ICT and the Internet. The guidebook was meant to be easily learned by literate women who could speak the Indonesian language fairly well. It was also designed to accommodate women who were literate, could speak the Indonesian language and comprehensible had completed elementary school education.

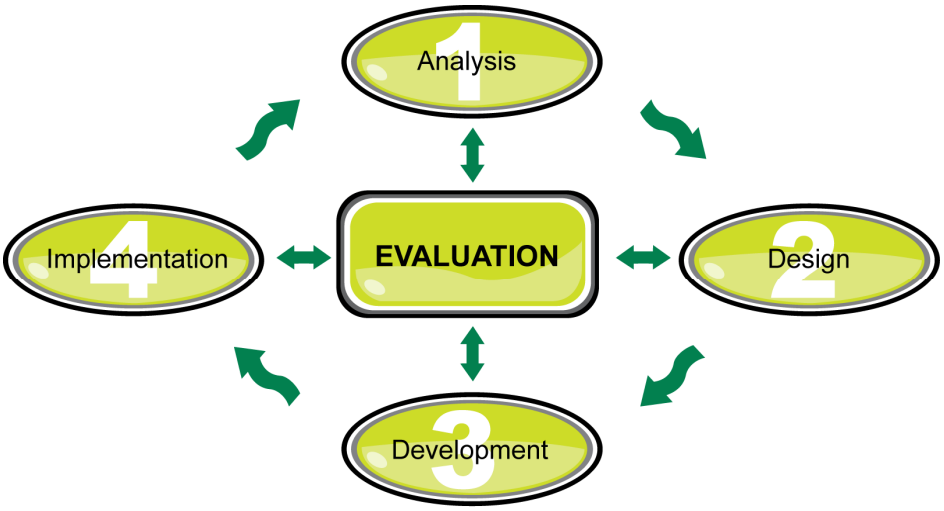
2. OBJECTIVES

This research and development effort was aimed at creating a set of training materials in the form of a guidebook to enhance the information-seeking skills of the rural poor, especially women. The materials were expected to be used by policy-makers, government agencies and NGOs as well as research, academic and training institutions to help support the rural poor, providing them with the knowledge and skills to access information and data resources related to their vocations in order to upgrade their total well-being.

3. METHOD

The development of the training programme for teachers and women was based on the ADDIE model for systematic design, development and evaluation of educational/training programmes. The model was selected from various available instructional design and development models as it was considered the simplest model to follow in developing instructional materials. Furthermore, ADDIE was one of the few models able to guide instructional developers in applying a learner-centred instead of a teacher-centred approach. The instructional materials would then be more learner-friendly and accessible to the learners.

The ADDIE model is a systematic instructional development model consisting of five phases: (1) Analysis, (2) Design, (3) Development, (4) Implementation, and (5) Evaluation (Dick & Carey, 1996, in www.learning-theories.com/addie-model.html).



ADDIE Model

4. DESCRIPTION

The instructional materials and training programme were implemented in two places: Bogor (West Java) and Wonosari, Gunung Kidul in Yogyakarta (Central Java). The trainers in Gunung Kidul were from the science junior high school teachers working group. Most of the science teachers had acquired advanced ICT skills. The trainers in Bogor were students, who were in the fifth semester of their elementary education programme at the School of Education in Universitas Pakuan. Most of them had acquired basic ICT skills needed for the training. The teachers came up with the schedule and designed the lesson plan for training the women in acquiring ICT skills.

Earlier, in the analysis step, the developer analyzed the learners and their needs in order to create a suitable programme to increase their knowledge and skills. In the design phase, it was decided that the training for the teachers would take one day while the training for the women would take four to five days depending on their needs and the local situation. In the implementation phase, the training in Gunung Kidul was carried out in four consecutive days while the one in Bogor was carried out in five days. The training in Bogor was held in the afternoons while the one in Gunung Kidul was held in the mornings.

The materials were developed as soon as the material blueprint was ready, The learning materials were in the form of a student worksheet, which consisted of a brief explanation, an example, exercises and tasks for the participants to try out on the computer. Materials were then produced so that they would be ready for the pilot test. A questionnaire was also developed to study the perceptions of the teachers about the potential benefits of the programme for the improvement of the women's economic situation.

Before using the materials for training in Bogor and Yogyakarta, the learning materials were tried out on two women who owned food stalls near the SEAMOLEC area. The programme was implemented in five half-day sessions for the women so that the women would not lose too much of their earnings.

This research had three processes of evaluation – expert review, one-to-one evaluation and a large class evaluation. The expert review was conducted

by sending the materials to the research secretariat in OUM, through the coordinator of the programme, Prof Dr Abtar Kaur, to evaluate the learning materials. The team suggested making the learning materials as simple as possible and not too academic so that these would be easier understood by the women, who had only an elementary education certificate. The materials were revised accordingly.

The second process of evaluation was the one-to-one evaluation by the two women who ran food stalls. They had completed only the fifth grade of elementary education. The researchers found out the following:

1. In two hours, the two participants only covered Internet searching and they were not able to fully understand the material. Therefore, extra time was needed for the participants.
2. During the practice session, the participants needed tutors/instructors to guide them in doing the exercise step by step.
3. Computer basics such as typing and using the mouse needed to be introduced before training, as it was discovered that it was the first time the participants used a computer. Similar situations might be found during actual training sessions.
4. The participants were not fluent in reading the text.

After the one-to-one evaluation, the materials were revised because the language used was too difficult for the participants to understand and the materials needed some systematic sequencing. After the revision, the materials were utilized in the third step i.e. field tests in Bogor and Gunung Kidul.

Training in Bogor

Training in Gunung Kidul

5. RESULTS

It was apparent that the pilot test was a significant phase in the development of the instructional materials. The heavily academic-oriented materials needed to be pilot tested in order to judge the feasibility of utilizing them for the target audience. The results of the pilot test provided directions to improve and revise the materials to suit the needs of the target audience.

The materials on ICT skills and surfing the Internet had been developed based on the ADDIE model by a group of lecturers at university level. It took more than three pilot tests and revisions to achieve valid and effective materials for the audience.

The materials had been pilot tested with a specific target audience in mind i.e. female graduates of junior and senior high schools. Thus, whenever the materials were going to be applied to other target audiences, a pilot test should first be conducted for the new audience, as modification might be needed.

In using the materials in any training setting, it was necessary to equip the materials with a PowerPoint presentation and trainers' guide. Both the presentation and guide were expected to be contextualized and adapted into any setting while the materials were generic in nature.

The training, as a vehicle for pilot testing, was effective and had multiple effects. First, the training for trainers established the availability of local experts and a connection between the local experts and target groups. Second, the training increased the women's confidence to experiment with ICT and the Internet, motivating and encouraging them to further browse for various kinds of information.

Third, there were personal and social benefits for the women – the ICT served as a means to access information to increase knowledge on health or environmental issues, news, politics and etc. Since women were the central figure in the village household, widening their knowledge horizon would increase healthy living and they would gain a deeper understanding of the importance of preserving their environment and becoming aware of their rights and responsibilities as individuals.

Fourth, in terms of economic benefits, ICT skills could increase the women's income. Information on production technology, food technology and marketing which was related to their vocations could be easily accessed via the Internet. Poor rural women working as fisherwomen were expected to produce better and more variations of fish food while women farmers would be more exposed to the rapid agricultural technology development which could increase their productivity. Businesswomen, on the other hand, could obtain information on prices and quality of their products through the Internet, as well as increasing their opportunities for entrepreneurship.

6. RECOMMENDATIONS

It is recommended that the first phase of the study be followed up by other actions which will directly guide the female participants into more active involvement in economic activities which will lead to the improvement of their livelihoods.

MALAYSIA

1. INTRODUCTION

This project sought to alleviate the enormous lack of knowledge and skills faced by the rural poor, mainly women. Since women are important contributors in raising household incomes, it is important that they are equipped with technological knowledge so that they can participate actively in the economy. This project aims to create a set of material which could be used by policy-makers, government agencies and NGOs as well as research and academic institutions to help the rural poor by narrowing the digital gap, predominantly in womenfolk. The purpose of this project was therefore to educate women from poor and rural areas to acquire knowledge and skills in computers and the Internet so that they would be at ease with technology and utilize it to become more skillful in their respective vocations.

2. OBJECTIVES

The workshop, "Introduction to Computer and Internet," was aimed at teaching computer novices the basic skills involved in using computers and the Internet. As such, the objective of the workshop was to provide the participants with basic concepts and skills related to computers and the Internet to enable them to:

- Communicate instantly using email;
- Search for information related to their various vocations;
- Market their products; and
- Search for materials to improve sewing skills and other related areas such as health and hobbies.

3. IMPLEMENTATION OF THE PROJECT

3.1 Participants

Twenty women from the Kundang and Paya Jaras villages in Selangor were selected as participants. Their villages were about 80km from Kuala Lumpur. The main activities of the villagers were paddy and vegetable farming as well as catfish rearing. The participants were homemakers, coconut rice sellers, fruit sellers, masseuses, tailors, farmers and work breeders. Most of them had no knowledge in computers and had never used one before in their lives.

They ranged from the ages of 35 to 66, with 45% aged from 50 to 59 and 20% aged 60 and above. Therefore, more than 50% of the participants were above the age of 50. The following chart shows the age distribution.

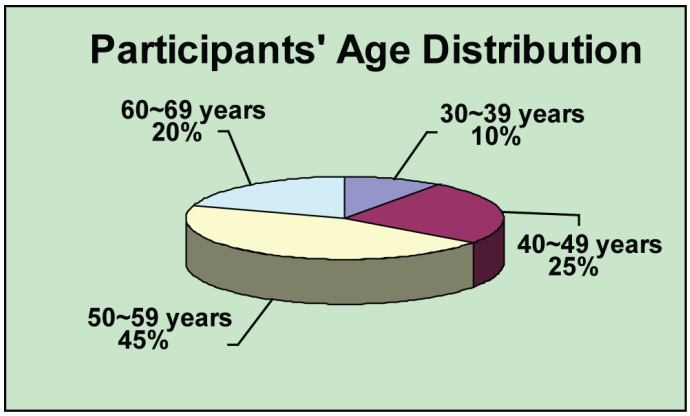


Chart 1: Participants' Age Distribution

3.2 Venue

The project was conducted in a computer lab at OUM. The initial plan to conduct it in the rural areas did not materialize due to limited IT infrastructure and resources there. So, the participants were brought to OUM for the workshop.

Participants in the Workshop Session

3.3 Methodology

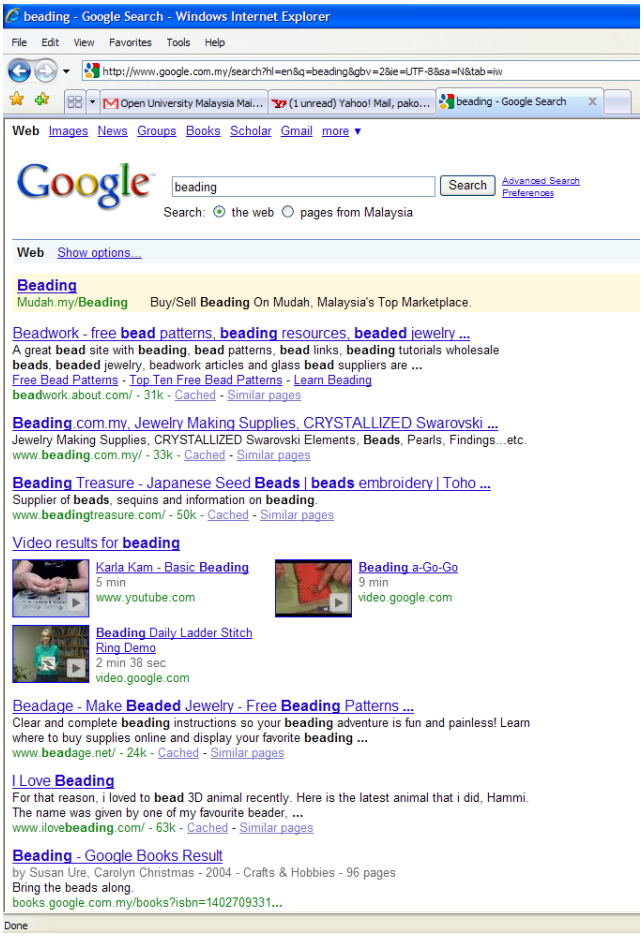
The pilot study was conducted over two days, from 1 to 2 December, for eight hours daily. The facilitators included OUM academic staff and two volunteers from the National Council of Women's Organizations (NCWO). For the first day, the contents included: (a) Computer Basics: How to Use A Computer; (b) Introduction to the Internet; and (c) Introduction to Email: Composing, Replying and Sending Emails. For the second day, the agenda comprised of (a) Group Work and Presentation; (b) Activity: Making Accessories with Beads; and (c) Presentation of Certificates.

To motivate the participants, they were shown examples of true success stories such as that of a Malaysian woman who ventured into the food business and now exported *pau* (dumplings) to London and a businesswoman from a rural area who became a major meat supplier throughout Malaysia. Both women had achieved their success through their knowledge and use of technology.

At the end of the second day's morning session, the participants presented their findings for group work. The assigned question required them to search information on the Internet on skills such as sewing, cooking, beading and gardening. The participants successfully presented and demonstrated the ICT skills and knowledge they had acquired during the workshop.

Subsequently, questionnaires were distributed to the participants to seek their comments and feedback. In the final workshop session, the participants were engaged in the activity of beading, with the purpose of enhancing their knowledge in searching the Internet for information on beading while increasing their skills in beading itself.

Participants in the Beading Session



Google Website Search for Beading Information

4. RESULTS

Eighteen participants responded to the questionnaires. Overall, the results from the workshop showed that more than 95% of the participants responded favourably towards the workshop.

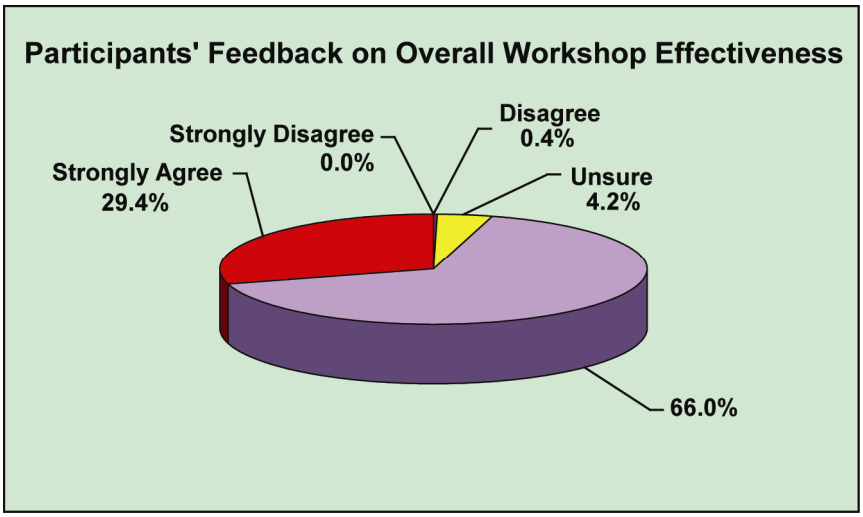


Chart 2: Participants' Feedback on the Workshop

The items in the questionnaire were divided into three categories: workshop satisfaction, meeting objectives and handbook's effectiveness. The results below show the responses of the participants based on "strongly agree" and "agree" answers: (a) 94% of the participants were satisfied with the workshop; (b) almost 99% agreed that the handbook was very useful for them; (c) almost 90% agreed that the objectives of the workshop were met. The graph below shows the details of the results:

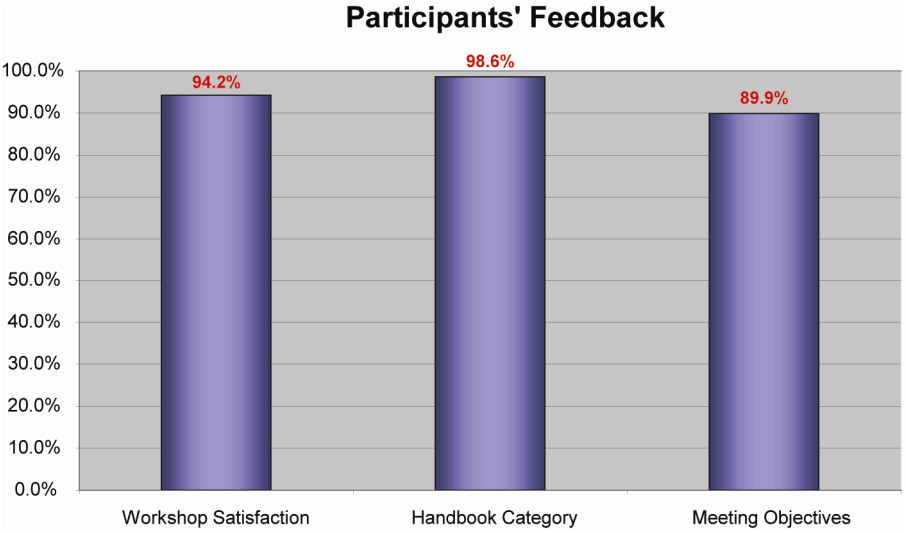


Chart 3: Participants' Feedback Based on Categories

Based on the questionnaires, it was concluded that:

- The workshop activities encouraged the participants to use computers;
- The handbook was very useful for the participants as they kept referring to it throughout the workshop;
- Group work was a good activity for them to practise their skills in searching for information via the Internet; and
- Email and search engines were the most exciting and interesting topics for the participants.

During the workshop, the participants proved that they were comfortable using online technology. In fact, they were able to use the Internet to:

- Search for information related to homemaking and farming;
- Keep in touch with family and friends via email;
- Seek knowledge on other social aspects; and
- Obtain the latest news.

5. ISSUES AND RECOMMENDATIONS

The following are the issues encountered during the workshop:

- Two participants were found to be functionally illiterate. Therefore, it is recommended that in future, an audience analysis be carried out thoroughly beforehand; and
- It is more appropriate to conduct the project in rural areas, so IT infrastructure in those areas should be a major concern for future implementations.

The following are recommendations to improve the overall implementation of similar workshops in the future:

- A session on typing skills need to be included in the workshop so that inexperienced participants could familiarize themselves with the keyboard first before progressing to other sessions;
- The workshop should start with typing skills, followed by MSWord and Internet, lastly email;
- The trainers should have other email options on standby such as Yahoo;
- The duration of the email session should be extended to at least one day; and
- There should be more trainers or volunteers to assist the participants.

In conclusion, the workshop proved to be successful. Although the participants were of different backgrounds and ages, they were singularly spirited and enthusiastic to learn about computers and the Internet. By the end of the workshop, they had acquired information and knowledge of computers; as such, the objectives of the workshop were met.

PILOT STUDY REPORTS

PHILIPPINES

1. INTRODUCTION

The Philippines conducted their/its first pilot test on 18 December 2008 with 13 learners, all from the Christian sector. Since the area had a Muslim sector as well, another pilot test was needed to determine whether the materials would be applicable to that sector as well. The two studies would help the Project Leader to identify the areas to be enhanced and ultimately, produce an improved manual. As a result, the second pilot test was conducted on 13 January 2009.

2. OBJECTIVES

The aims of the pilot study were to:

- Determine the effectiveness of the materials and methodologies used;
- Assess the usefulness and relevance of the chosen topics;
- Provide ICT awareness to deprived, depressed and underserved areas; and
- Determine the impact of the project on out-of-school youth.

3. STRATEGIES

While awaiting comments on the materials submitted to the Malaysian team, the Project Leader started other identified tasks. To meet the objective of reaching the inner, less privileged areas, the Project Leader coordinated with the Department of Education in Region IX to identify the areas which would be covered by the pilot study.

With the support of the Bureau of Alternative Learning Systems (BALS), three barangays – Taluksangay, Sta Maria and San Roque (all in the city of Zamboanga) – were identified. To facilitate the availability of prospective learners as beneficiaries of the pilot test, two District Alternative Learning Coordinators (DALCs) from the Department of Education in Region IX served as focal persons. The DALCs would select the learners and ensure their availability during the actual study with the help of the Barangay Chair of the mentioned areas.

Scouting of prospective lecturers and facilitators also commenced. Preparation of materials and training kits, venues, facilities and other peripherals such as presentation slides were among the other tasks completed. A timetable of all activities was prepared to constantly monitor the development of the preparations. Constant follow-up with other project partners was also made. All other activities such as a dry-run of PowerPoint presentations, briefing of lecturers and facilitators, timing, reproduction of materials such as registration forms, evaluation forms, name tags, attendance sheets, draft certificates, food and others were also completed/finished before the pilot tests.

4. DESCRIPTION

The selected learners were out-of-school youth aged between 15 and 24 who could understand English, had no ICT background and belonged to poor families.

The methods used during the study were lectures, interactive discussions, hands-on activities and exercises. To determine the extent of learning, a written examination was held and at the end of the session, an evaluation of the various topics, lecturers, venue, equipment, materials and overall management of the pilot test was made. To get more information on the success and failure of the pilot test, selected participants were asked to give their personal impressions.

The lecturers and facilitators were briefed prior to the start of the session and given some points to consider during the pilot test, such as giving a recap before proceeding to the next topic, encouraging participants to ask questions and being considerate of the level of understanding of each learner. The two laboratory assistants were advised to be ready at all times in responding to the needs of the participants during hands-on activities and exercises. To help learners better understand the topics, their computer units were loaded with a copy of the manual for immediate access in case they needed detailed information about the topics.

In recognizing the efforts of the learners and to motivate them to improve themselves in the field of ICT, some entitlements were given such as training kits containing bags, pens, note pads, CDs and food. Participants who completed the eight-hour training were issued a certificate of participation and simple tokens were presented to those who gave personal impressions.

5. RESULTS

Below are the commentaries of the participants during the evaluation and their impressions:

- They felt the training on Basic Computer Concepts would help their work to become easier. They could now differentiate data from information. In addition, they realized the importance of IT in the current day and age;
- The training on Computer and Its Environment made them realize that to understand computers, one needed to be familiar with its various parts. They could now identify the parts of a computer and properly turn a computer on and off. They found the topics of hardware, software and people ware very/to be interesting; and
- During the training on MS Word, they learned to type for the first time. They learned to type and put “decorations” in a file. They discovered functions and menus to make work faster and easier. They felt working with a computer was fun.

On the exercises and activities, the following observations were made:

Essay
The participants were given the freedom and opportunity to express their own ideas. These would determine the extent of their understanding of the topics.

Fill in the blanks and True or False
The participants tended to guess in answering the questions and sometimes interchanged the answers. This activity could be changed to require them to define the terms asked.

Enumeration
The participants appeared to be good in this activity and could be construed as having good memory and retention.

On online exercises
The participants found the work fun and enjoyed the actual encounter with the computer. They were amazed at what a computer could do to make their work easier and faster. Since it was their first time using a computer, they needed one-to-one coaching to complete their exercises.

On the mentors and lab assistants (facilitators)
Lecturers and laboratory assistants provided clarification for learners' queries; they were patient and accommodating, well-versed on the subject matter and ready to assist at all times during hands-on activities.

On the venue, equipment and training kits
The participants found the venue conducive for learning and the facilities good. Some participants said it was their first time attending training with a bag and CD.

The learners were interested in learning other topics such as Internet or web surfing, emailing, websites, folders, PowerPoint, programming, designing, links and chatting.

6. PROBLEMS ENCOUNTERED/ISSUES

- Lecturers were not formally trained;
- Difficulty in ensuring availability of learners;
- Presence of laboratory assistants was necessary;
- Location or area of coverage; and
- Funding.

7. FUTURE IMPROVEMENT

The hitches encountered showed the importance of:

- Funding;
- Ample time for preparation;
- Good planning, proper coordination and constant communication with partners;
- Selection of venue and availability of good facilities;
- Connectivity;
- Continuous supply of electricity;
- Manpower (lecturers and assistants); and
- Advance collection of list of learners.

8. RECOMMENDATIONS

- Provide funding;
- Provide facilities;
- Conduct a training-the-trainers course;
- Assign alternate lecturers and lab assistants; and
- Include more graphics in the consolidated manual

PILOT STUDY REPORTS

CHINESE TAIPEI

1. INTRODUCTION

This pilot test was intended to be conducted do in a rural village in Chinese Taipei. The people living in rural areas usually did not possess the convenience or advantage of ICT development. An ICT-related training course should be given to them so that their vision and skills could be broadened.

2. OBJECTIVES

The content of the pilot study was about communication with ICT, with the course titled “A Touch of Communication.” Several communication methods and tools were introduced in the content including email, MSN, online games and usage of file transfers (downloading of files). The objective of the content was to give learners basic knowledge of using ICT tools to communicate with others, regardless of place, age, economic status and educational background. The course content utilised diagrams, graphics and pictures so as to increase the interest of the learners. It was hoped that the learners would become more motivated to use ICT tools to improve their lives.

3. DESCRIPTION

The location of the pilot study was ShanFeng village's Digital Opportunity Centre (DOC) in GuKeng Township, YunLin County, Chinese Taipei. It is a small rural village with a population of 200. There is only one elementary school for local children. People make their living by planting agricultural products such as oranges, bamboo shoots, coffee, etc. The DOC is equipped with 12 computers which have Internet access. Training courses are provided for villagers. The villagers are highly equipped with ICT infrastructure, with almost one personal computer per family; however, the use of computers are underutilized. Group courses have been provided to increase their learning incentive. The pilot study was conducted from 14 to 16 December 2008. Three classes were held with a of 29 participants, both male and female. The lecturers were local ICT trainers. A background survey of the participants was conducted. The results are as follows:

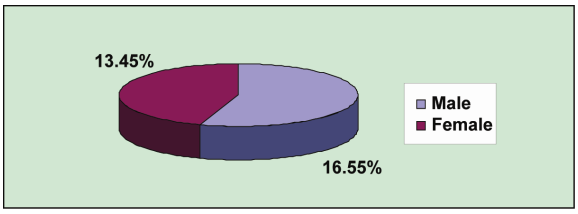


Chart 3.1: Gender of Participants

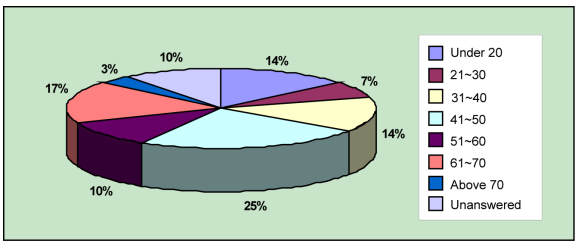


Chart 3.2: Age distribution of participants

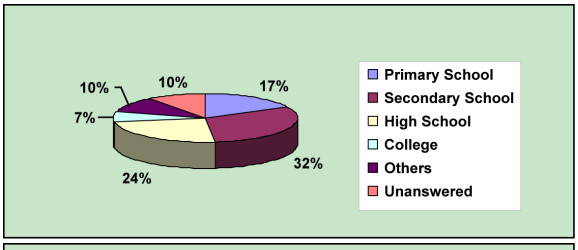


Chart 3.3: Educational background of participants

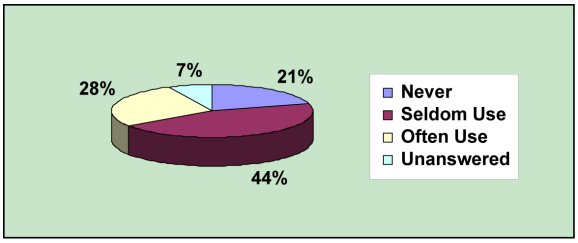


Chart 3.4: ICT usage experience of participants

Chart 3.5:
Working status of participants

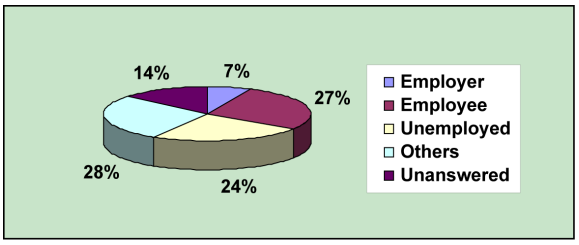


Chart 3.6:
ICT course attending experience of participants

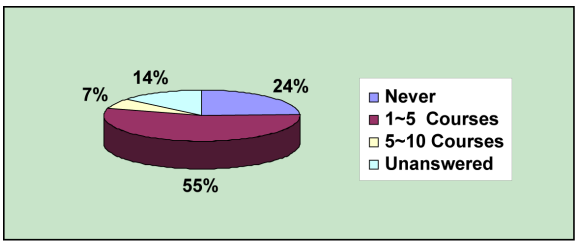
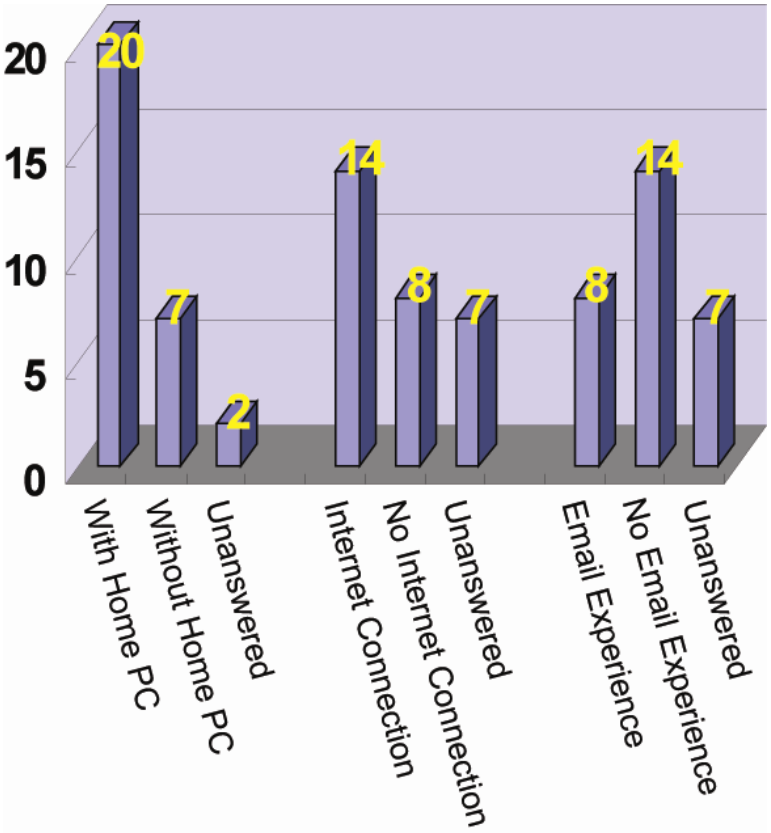


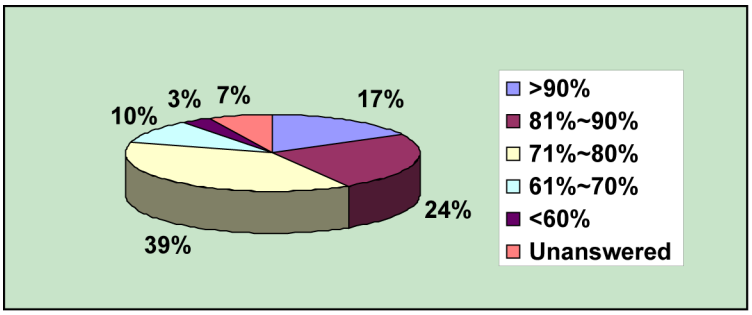
Chart 3.7:
ICT environment status of participants



4. RESULTS

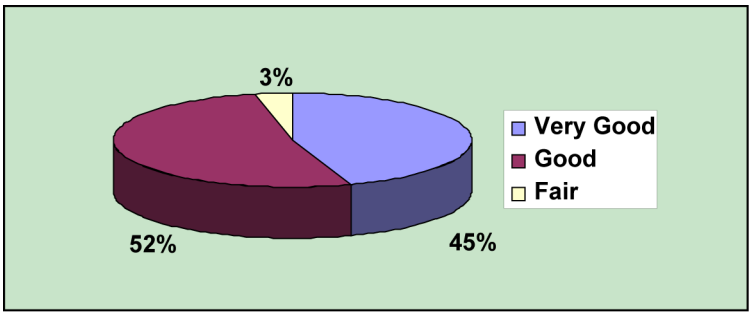
In general, most participants were quite satisfied and enjoyed the course. A course evaluation was conducted among the participants and the results are as follows:

Chart 4.1: Comprehension of the course



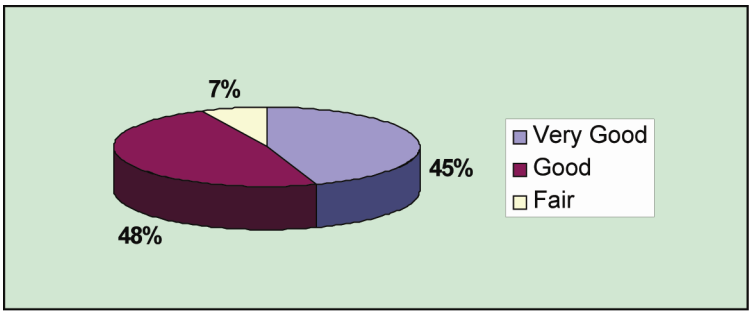
A large majority, 90%, of the respondents understood at least 60%of the course.

Chart 4.2: Appropriateness of course content



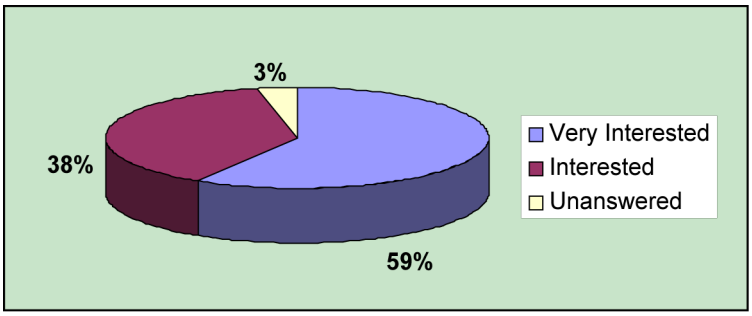
While only 3% thought the course content was fairly appropriate, all the rest thought it was either good or very good.

Chart 4.3: Performance of lecturer



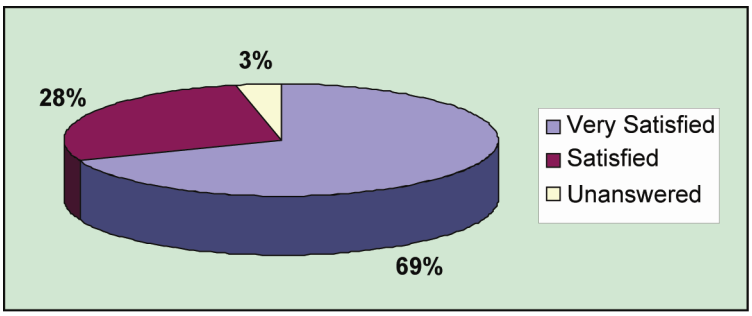
The lecturer who taught the course was rated as having given a good or very good performance by 93% of the participants.

Chart 4.4: Interest of attending related follow-up courses



An overwhelming majority, 97%, of the respondents were keen on attending further courses.

Chart 4.5: General satisfaction of course



The level of satisfaction was also high, with 97% of the respondents saying they were satisfied or very satisfied with the course.

5. ISSUES AND RECOMMENDATIONS

- Some technical terminologies are still unfamiliar to the participants e.g. the meaning of “file,” “Internet,” “publishing,” etc. A more detailed interpretation should be added into the content for better understanding. The course could be improved by including these words into the “Significant Words” part of the content;
- Computers will be needed to do the exercise in class and the network connection should be steady because it is necessary to use the Internet to apply for an email account and practise sending emails to each other;
- When talking about something to be aware of when using email, a practical case or snapshot of a news report can be added to alert the participants and allow them to relate it to their real-life activities;
- The “emotional expression symbol” (e.g. orz, :), XD) can be introduced when talking about writing emails; learners are very interested to know the “e-generation” characters;
- The pilot test is conducted at different locations besides the designated place per trainer’s request, implying that the content is quite suitable and desirable for the rural poor. Therefore, a complete ICT training course would be more useful and helpful;
- Sometimes, the trainer can add some timely topics into the material to make the content more interesting. For example, the names in the sample of practising writing emails can be substituted with popular movie characters in the Chinese Taipei film “Cape No. 7,” ”Aga” and “Maubo,” so that the participants will feel more involved in the activity;
- Some participants expressed the opinion that the class was too short. They felt that the pace of the two-hour session was too rushed. The content of the course should be less condensed or the class time should be extended;
- The entire content needs to be compiled into an integrated material and translated into different languages for use. Also, a concise presentation file (e.g. PowerPoint file) needs to be generated in order to save the trainers preparation time and to help them deliver the content more clearly; and
- For future training needs of the content, it is suggested that a digital copy of the course content be developed, either for the trainer or the learner, and a website be established for all related materials.

V Issues Related to Implementation of Project

Definition of Greater Equity and Access

The project, *Capitalising Information Technology for Greater Equity and Access among Poor and Rural Communities*, seeks to address and alleviate the enormous lack of knowledge and skills faced by the target group made up of the rural poor, mainly women. Equity here means a state of quality or ideal of being just, impartial and fair for all. Access is defined as the liberty or freedom to obtain or make use of something. Hence, the collective definition for greater equity and access is better and increased opportunity where the target group would have a fair and less restricted situation to obtain their intended objectives.

Computer Literacy Rate

In China, the target group were aged between 19 and 59 and 78% were over 30 years old. Ninety-one percent of the participants had secondary and above education level. The majority of them have seen a computer. However, 60.9% had not used a computer and 65.2% had not surfed the Web.

In Indonesia, 20 female participants took part in the workshop, with ages ranging between 16 and 43 years old. Most of them had not accessed the Internet before. In Malaysia, 20 women from rural areas were selected as participants. More than 50% of the participants were above 50 years of age. Prior to the workshop, all the participants had zero knowledge in computers and had never used one before.

In Philippines, 24 participants (13 females and 11 males) aged between 15 and 24 were involved. All 24 participants were conversant in the English language. However, none of them had ICT knowledge or background. In Chinese Taipei, the participants for the workshop belonged to a small rural village with 200 residents. Out of 29 participants, 25% had no ICT exposure while others had some experience in using a computer.

Availability of Trainers and Facilities

In China, two trainers were involved in the project. The first trainer had experience in training the rural poor and the second was an ICT trainer with experience in training beginners. In Indonesia, the trainers were science teachers from a science junior high school. Most of the teachers had acquired advanced ICT skills. Most of them had also acquired basic ICT skills needed for the training of beginner-level students. The teachers came up with a schedule of their own and designed the lesson plan in order to train the women to acquire ICT skills.

In Malaysia, the training was conducted in OUM's computer lab. The facilitators were the university's academic staff and two volunteers from the National Council of Women's Organization (NCWO).

In the Philippines, the trainers were lecturers from colleges and senior students with a degree in Computer Science. There were also two laboratory assistants stationed at all times to respond to the needs of participants during hands-on sessions and exercises. To help the learners to better understand the topics, their computer units were loaded with a copy of the manual for in case they needed detailed information about the topics. In Chinese Taipei, the workshop was facilitated by local ICT trainers.

Logistical Issues

In China, the project organisers designed the questionnaire, printed the materials of ICT awareness part as a booklet and distributed it to 30 women in five poor and rural areas, which were the HeNan, Shandong, Guangxi, Guizhou and Sichuan provinces. Twenty-four women responded to the questionnaires.

In Malaysia, 20 women from rural areas, Kundang and Paya Jaras, villages in Selangor, were selected as participants. Their villages were about 80km from Kuala Lumpur. The project was conducted in a computer lab in OUM. The initial plan to conduct the workshop in the rural areas did not materialise due to limited IT infrastructure and resources at the planned location.

In Chinese Taipei, the location of the pilot study was ShanFeng village's Digital Opportunity Centre in GuKeng Township, YunLin County. This was a small rural village with 200 residents. The people made their living by planting agricultural products like orange, bamboo shoots, coffee beans and others.

Increase Usage and Awareness Level

The workshop participants from China provided a lot of feedback after going through the training in the workshop and after reading the materials. For example, 39% of the participants commented that the training was useful for them and 30% agreed that the knowledge obtained could improve their quality of life. Around 87% of the participants indicated that the workshop made them become aware of and realise the usefulness of ICT in their life.

In Malaysia, the participants said the workshop activities stimulated their interest in using computers. The participants commented that emails and search engines were the most exciting and interesting topics.

In Philippines, the participants stated that based on the Basic Computer Concepts topic, their work life would become easier and the workshop made them realise the importance of IT usage in the current age. The participants from Chinese Taipei lived in a village which was highly equipped with ICT facilities, whereby the ratio was almost one personal computer per family but these computers were not utilised effectively. However, this workshop generated interest among them and they were keen to attend follow-up courses which might be organised in the future.

Long-Term Sustainability Efforts

In terms of sustainability, 52% of the participants from China stated that they would like to participate in relevant training. Out of the 52%, 39% of them commented that they would use their newly acquired knowledge to search for information and 13% stated that they would use the knowledge to raise agricultural production efficiency. Overall, the project team felt that it would be good to learn more about the educational background and daily activities of women in rural areas as it would help in better development of the training materials. Other sustainability efforts included adding more examples about successful women who had used ICT in rural areas and providing more illustrations for the materials and make the content and the layout more interesting.

In Indonesia, the pilot test organisers were able to establish confidence in the women to use the Internet, as well as motivate and encourage them to browse and search for various kinds of information. Via this new knowledge, it was expected that some of the participants who were poor rural women working as fisherwomen would be able to produce better and more variation in their daily catch and for participants who were farmers to gain more knowledge on rapid agricultural technology development which could increase their productivity.

In Malaysia, based on the pilot test, it was found that in order to maximise the effectiveness of the training, audience analysis should be carried out thoroughly. This would ensure that functionally illiterate women would not be included in the training as they could not benefit from the programme at all. As it was more appropriate to conduct the project in rural areas, the IT infrastructure should be a main concern for future implementations and cooperation from the government sector should be sought to ensure that these facilities were provided in these areas.

Based on the initial findings in Chinese Taipei, it was concluded that it was better if the materials contained samples and practical cases regarding ICT which were related to their real-life activities. The pilot test was also conducted at different locations other than the designated place per trainer's request, implying that the content was quite suitable and desirable for poor and rural people. Therefore, an ICT training course with complete content would be more useful and helpful.

Sharing "Best-Practice" Information

Based on the pilot test in Indonesia, it was recommended that the first phase of the study be followed up with more activities which were related to the female participants' occupation. This would encourage them to participate more actively, which would lead to the improvement of their livelihoods.

Based on the observation done in Malaysia during the pilot test, it was found that keyboarding skills needed to be included in one session in the workshop so that inexperienced participants could familiarise themselves with the keyboard first before progressing to other sessions. As such, future workshops should start with keyboarding skills, followed by Microsoft Word and the Internet; and lastly, email training.

The project organisers from Chinese Taipei suggested that for future training, a website be established and that it should contain all related materials to meet every participant's needs.

VI Lessons Learnt and Implications

LESSONS LEARNT AND IMPLICATIONS

This section identifies lessons learnt from the project, from the kick-off workshop in Kuala Lumpur to the second workshop in Indonesia as well as the implications of these lessons.

Lesson 1: Sharing best practices and importance of capacity building

- It is of great importance for APEC as a whole to share experiences and best practices among its members, identify common issues and jointly address them to develop capacity in APEC economies;
- Global competition and rapid technological breakthroughs are putting pressure on rural areas; and
- Two-thirds of the population in the Asia-Pacific region (64% in 2006) live in rural areas (Asian Development Bank).

Sharing best practices/lessons learnt

- The pilot test (formative evaluation) has been proven to be a significant phase in developing instructional materials (more than one cycle of pilot testing is needed);
- The results of the pilot test do not guarantee generalization across various audiences;
- The presentation needs to be contextualized and be adaptable to any setting (assuming materials are generic);
- Revisions of the materials were made as a result of the pilot test experiences in the different economies. The integrative package included a much more streamlined and focused set of topics to help the target groups understand better. It is hoped that these materials in general can be used to equip the rural poor with skills to access and seek information through the use of ICT and the Internet;
- The pilot test established the availability of local experts and connection between local experts and target groups;
- The project increased the participants' confidence in using ICT and the process of searching for information on the Internet. They were motivated and encouraged to access various kinds of information; and
- The project brought about personal and social benefits for the women and could bring them economic benefits as well.

Implications:
The first step is to exchange information and conduct of the situation analyses of the current situation to gain a better overview and understanding. Overall, this project achieved highly significant results: clarification of issues unique to individual economies and common to the region, the sharing of experiences and best practices; discussion of appropriate responses and identification of effective solutions.

Importance of capacity building:

- APEC has recognized the importance of developing human capacity and of harnessing information technology for the future;
- The project focuses attention on rural areas and how ICT can enhance capacity building. It also promotes social and economic opportunities for less privileged communities;
- To ensure sufficient capacity-building and to establish IT societies in each of the APEC economies as well as APEC-wide, a huge input of time and energy will continue to be necessary;
- For the project to achieve long-term success, it relies heavily on the social system, technological and human elements, human resource development and capacity-building;
- Assessment of human skills based on adult literacy and enrolment rate in schools in each of the APEC economies is necessary;
- Innovation in human capital development needs to be explored; and
- Developing capacities of rural communities in using ICT will create opportunities to learn new life skills, new ways of accessing information, develop current skills and increase the use of existing information infrastructure to facilitate their integration into global information societies.

Implication:
Capacity-building activities and the sharing of best practices through APEC-based cooperation have proven to be highly effective approaches.

Lesson 2: Legal and institutional frameworks and the market

- Having a legal and institutional framework without appropriate enforcement is ineffective; and
- Different historical and social backgrounds mean that a legal system cannot simply be transferred intact. Rather, systems have to be specifically designed to suit the characteristics of a particular economy.

Implication:
While developing laws and designing systems are the primary roles of a government, the market and its functions also play a critical role in supplementing the legal and institutional framework.

Lesson 3: Responsibilities of each stakeholder

- All stakeholders have important roles to play in implementing this project not a responsibility;
- Educating community-based organization to harness the power of open and distance education methodologies to help increase the capacity to achieving greater equity and access to knowledge resources;
- Close cooperation and collaboration between the government and the non-government sectors is crucial as of many rural community projects are largely influenced by the quality of government and non-government sector/public-private partnerships;
- There is a need to explore the range of multi-stakeholder partnerships to maximize available expertise, technology and logistical resources. Coordinated efforts among these stakeholders, including the government, the non-government sector and citizens, are necessary to achieve long-term success for the project; and
- Local leadership champions must be identified and involved. As one of this project's targets is women, working closely with women's associations and representatives is the main focus.

Implications:
All stakeholders play a vital role in this project. In addition to managing their respective areas of responsibility, they will have absolutely critical roles to play in collaboration, information exchange and capacity-building activities.

Lesson 4: Technology development and transfer, and international cooperation

- In rural areas technological, infrastructure is generally poor and communication is a big challenge. As such, judicious use of modern technology tools capitalizing on open distance methodologies can provide critical help in increasing access and equity to knowledge that in turn, can reduce isolation and poverty;
- APEC economies differ in their levels of ICT development and extent of utilization;
- Because of the rapid growth and development of ICT, APEC recognizes the importance of information exchange and experience sharing. For example, opportunities or limitations in ICT deployment in some economies could serve as case studies for others when implementing similar projects or conducting problem-solving;
- The digital divide continues to exist in the APEC region and there should be concerted efforts to address this issue. A more strengthened collaboration is needed among APEC economies. Capacity building for women can be developed by providing training opportunities in using available ICT productivity tools;
- A web portal needs to be set up as a repository of information on technology planning, implementation and evaluation; and
- There is a need to establish a network of experts to continue to share information and build a workable system in APEC.

Lesson 5: Dealing with trans-boundary issues

- The transfer of technology and sharing of information will play a vital role in promoting the smooth movement and recycling of resources in the APEC region; and
- There is a need to expand access to the Internet infrastructure throughout the APEC regions and reduce access gap among different student groups in rural and urban areas in APEC economies.

Lesson 6: Issues and Recommendations

Issues

- Data – Insufficient background information was gathered about the rural poor, especially participants' educational background and their daily activities in rural areas. Hence, there were big gaps in participants' abilities;
- Infrastructure – There is an insufficient number of computers and inconsistent Internet connection for the rural poor to use. Inadequate ICT infrastructure seems to be the underlying cause;
- Funding – If similar ICT training were to be conducted in other areas in the APEC countries using the developed manual in the future, funding support is needed to ensure sustainability;
- Quality of trainers – Mastery of the subject matter does not guarantee quality training. Teaching of the subject matter and participants' comprehension level of the content is as important and needs to be considered. Therefore, future trainers must undergo a "training-the-trainers" course. The course should cover not only becoming a specialist of the various topics covered but also develop skills in communicating well what is to be taught;
- Transportation – Since the target participants are poor and come from far-flung places, their attendance would be uncertain unless transportation or a transportation allowance is provided;
- Cases – Insufficient number of real-life cases in ICT use and application by the rural poor, especially women. Hence, not enough graphics or interesting illustrations could be included in the training materials;
- Time – Women in rural areas have little or no spare time to take part in the training; and
- Confidence – Women in rural areas lack the confidence to learn ICT.

Recommendations

Regarding the materials
The following are needed:

- More colourful illustrations;
- Translation of ICT terminology into local language;
- A full package (complete content) i.e. PowerPoint slides for trainers on all topics;
- Teaching of typing and other basic computer skills to participants; and
- More contextualized examples and/or cases of use of ICT by the rural poor.

Regarding the training
The following are needed:

- Hands-on practices;
- Contextualized examples;
- Expanded time for training.
- Systematic sequencing of training;
- Preparation of PowerPoint presentation of materials;
- Incorporation of games to make the training more fun and enjoyable; and
- Training of trainers in order to have good and contextualized trainers;

Regarding the support system:

- To be able to use the materials effectively in a well-designed training for the rural poor, the following support provisions are needed:
  (a) Funding from donor agencies;
  (b) Collaboration with local governments;
  (c) Training facilities; and
  (d) Access to ICT and Internet facilities after training.
- Source local citizens with enough ICT skills and experience as trainers and experts.

Lesson 7: Carrying the torch of the project

- Gather lessons and recommendations from projects related to implementing the use of ICT in rural communities as additional input in order to form a strategy for regional collaboration on the same issue;
- Form a network of experts, collaborators and practitioners whose efforts are focused on using ICT for capacity building in rural communities for future partnerships in the region;
- Agree on best practice criteria applied to rural area projects in a given country and if possible, establish these on an international level;
- Systematically disseminate success stories and best practices; well-publicized awards could be used for the purpose;

- Devise specific funding mechanisms to support such initiatives, in particular, through proper co-ordination of different sources of public financing to facilitate future projects;
- Continue to produce wholesome and quality curriculum materials for capacity building as well as training materials in different languages and settings to suit cultural, language and gender concerns in the various participating economies, using various ODE techniques; and
- Continue to raise awareness of rural communities on ICT and enable them to become IT literate.

APPENDICES

Appendices for First Kick-off Workshop
(27 – 29 March 2008)

APPENDIX 1: List of Participants

Name of Experts/Participants	Country	Institution
Prof Dr Liu Mei Feng	CHINA	Beijing Normal University
Prof Dr Paulina Pannen	INDONESIA	SEAMEO SEAMOLEC, Universitas Terbuka Indonesia
Ms Losina Purnastuti	INDONESIA	State University of Yogyakarta (UNY)
Dr Osamu Makino	JAPAN	Institute for International Cooperation, JICA
Mr Aria Hailaeavila	PAPUA NEW GUINEA	University of Papua New Guinea
Ms Marion Bernadette Cabrera	PHILIPPINES	ISIS International Manila
Dr Teresita Narciso-Torremonia	PHILIPPINES	National Computer Center (NCC) – Commission on Information Communications and Technology (CICT)
Mr Pollapatr Pornkunanupap	THAILAND	Foundation for International Human Resource Development
Mr Ritthiwut Puwaphat	THAILAND	Princess of Naradhiwas University
Ms Tu Ai-Pao	CHINESE TAIPEI	Ministry of Education
Assoc Prof Datin Dr Norizan Abdul Razak	MALAYSIA	National University of Malaysia (UKM)
Ms Dhanya Low Choon Fui	MALAYSIA	Malaysian Yoga Society
Mr Azham Shah bin Jamali	MALAYSIA	Ministry of Rural and Regional Development
Ms Sandra Simon	MALAYSIA	YWCA of Malaysia / NCWO
Datin Halimatolhanin Mohd Khalid	MALAYSIA	Open University Malaysia
Mrs Nik Azlina Nik Yaacob	MALAYSIA	Open University Malaysia
Ms Majumin Hanum Abdul Samad	MALAYSIA	Open University Malaysia
Mrs Siti Farina Sheikh Mohamed	MALAYSIA	Open University Malaysia
Prof Dr Abtar Kaur	MALAYSIA	Open University Malaysia
Mrs Maisarah Ooi	MALAYSIA	Open University Malaysia

APPENDIX 2: Agenda

First Kick-Off Workshop at Seri Pacific Hotel, Kuala Lumpur, Malaysia, from 27 to 29 March 2008

Date / Place	Time	Activities
Day 1 Thursday 27 March 2008	8.30 am 9.00 am	Registration Opening Ceremony
	10.00 – 10.30 am	Tea Break
	10.30 – 11.30 am	***Session 1*** 1. Overview and session targets 2. Discussion and issues on flow of overall workshop
	11.30 am – 1.00 pm	3. Presentation by Experts • Presentation 1: **Malaysia (E-Communities)** • Presentation 2: **Chinese Taipei**
	1.00 – 2.00 pm	Lunch
	2.00 – 3.30 pm	***Session 2:*** Continuation – Presentation by Experts • Presentation 3: **China** • Presentation 4: **Papua New Guinea** • Presentation 5: **Phillipines**
	3.30 – 4.00 pm	Tea Break
	4.00 – 5.30 pm	• Presentation 6: **Japan** • Presentation 7: **Thailand** • Presentation 8: **Malaysia**
Day 2 Friday 28 March 2008	8.30 – 10.00 am	***Session 3:*** • Presentation 9: **Indonesia** 1. Discuss the curriculum and methodologies to be used to execute the training materials 2. Create a sample of the intended curriculum materials
	10.00 – 10.30 am	Tea Break
	10.30 am – 12.00 noon	Visit to OUM
	12.00 noon – 2.00 pm	Lunch
	3.00 – 5.30 pm	Visit to Vocational Training Centre
Day 3 Saturday 29 March 2008	8.30 – 10.30 am	***Session 4:*** 1. Discussion of Post Visit 2. Presentation of first draft of sample curriculum materials
	10.30 – 11.00 am	Tea Break
	11.00 am – 1.00 pm	***Session 5:*** Improvement of materials
	1.00 – 2.00 pm	Lunch
	2.00 – 4.30 pm	***Session 6:*** 1. Discuss work schedule and protocol for preparation of materials by experts 2. Discuss plans, deliverables, venue and schedule for second meeting
	4.30 – 5.30 pm	Closing ceremony followed by Tea

APPENDIX 3: Photographs

DAY 1 (27 *March 2008)*

Opening Ceremony

Arrival of YBhg Dato' Thomas George, Secretary General, Ministry of Human Resources, accompanied by YBhg Prof Tan Sri Anuwar Ali, President/Vice-Chancellor of OUM

Opening ceremony attended by OUM's top management, academic staff and APEC participants

Presentation of souvenir by YBhg Prof Tan Sri Anuwar (left) to YBhg Dato' Thomas George

Opening speech by YBhg Dato' Thomas George

YBhg Dato' Thomas George with some APEC participants

Group photo after the opening ceremony

Workshop

Prof Abtar briefing participants on the project

Mr Ritthiwut of Thailand and Ms Tu of Chinese Taipei

Presentation by participants

Group photo after the workshop

Dr Teresita-Narciso Torremonia of Philippines

Mr Aria Hailaeavila of Papua New Guinea

Mrs Siti Farina of OUM (left) and Prof Paulina of Indonesia

DAY 2 (28 March 2008)

Visit to OUM

Brief meeting with Prof Mansor Fadzil, Senior Vice President of OUM

Dr Osamu Makino of Japan making a point

Visits to OUM Digital Library

Visit to the Centre of Instructional Design and Technology (CiDT)

At the CiDT's i-Radio studio

Group photo in front of the OUM building

Visit to the National Council of Women's Organizations (NCWO)

Visit to NCWO

Computer labs in NCWO

Sewing Class at NCWO

Class at NCWO

Briefing by Mrs Sandra at NCWO

DAY 3 (29 March 2008)

Closing Ceremony and Dinner

Closing speech by YBhg Prof Mansor Fadzil, Senior Vice President of OUM

Also present was the Financial Controller of OUM, Mr Che Omar Ahmad (centre)

Group photo with Prof Mansor and Mr Che Omar Ahmad

Farewell Dinner at KL Tower Restaurant hosted by Mr Che Omar Ahmad

From left: Ms Marion, Ms Losina, Prof Paulina, Ms Tu and Prof Liu

Group photo at the KL Tower

APPENDIX 4: List of Participants

Name of Experts/Participants	Country	Institution
Prof Dr Liu Mei Feng	CHINA	Beijing Normal University
Prof Dr Paulina Pannen	INDONESIA	SEAMEO SEAMOLEC, Universities Terbuka Indonesia
Dr Teresita Narciso-Torremonia	PHILIPPINES	National Computer Center (NCC) – Commission on Information Communications and Technology (CICT)
Ms Tu Ai-Pao	CHINESE TAIPEI	Ministry of Education
Ms Sandra Simon	MALAYSIA	YWCA of Malaysia / NCWO
Ms Majumin Hanum Abdul Samad	MALAYSIA	Open University Malaysia
Mrs Siti Farina Sheikh Mohamed	MALAYSIA	Open University Malaysia
Prof Dr Abtar Kaur	MALAYSIA	Open University Malaysia
Mrs Maisarah Ooi	MALAYSIA	Open University Malaysia
Mr Rames Mariapan	MALAYSIA	Open University Malaysia
Dr I.N. Baskara Wisnu Teja	INDONESIA	Universitas Terbuka Indonesia
Ibu Dina Mustafa	INDONESIA	SEAMEO SEAMOLEC
Prof Okhwa Lee	KOREA	Chungbuk National University

APPENDIX 5: Agenda

AGENDA FOR APEC DELEGATION AND INTERNATIONAL SEMINAR ON ICT IN EDUCATION

Second APEC (HRD03-08) Meeting on "Capitalizing Information Technology for Greater Equity and Access among Poor and Rural Communities"
Yogyakarta State University (UNY), 11 to 14 February 2009

TIME	EVENTS	VENUES
Tuesday, 10 February 2009		
Morning - afternoon	APEC Delegation Arrival and check in hotel	Jogja Plaza Hotel
2.00 pm - 5.00 pm	Free and easy	
7.00 pm - 9.00 pm	Welcome Dinner hosted by Rector of UNY, traditional dance performance	UNY Main Meeting Room
Wednesday, 11 February 2009		UNY Main Meeting Room
8.00 am - 4.00 pm	APEC Session: Presentation by Groups of Pilot Test Results and Discussion	
7.00 pm - 9.00 pm	Free and easy	
Thursday, 12 February 2009		
8.00 am - 4.00 pm	APEC Session: Redo Final Materials Endorsement of final materials	UNY Main Meeting Room
7.00 pm - 9.00 pm	Ramayana Dance Performance.	Prambanan Indoor Stage
Friday, 13 February 2009		
8.00 am - 11.30 am	UNY international seminar on ICT and Education, Keynote presentation by Dr Joko Sutrisno, Prof Okhwa Lee (Chungbuk National University Korea), and Prof Abtar Kaur (OUM)	KPLT Building at Faculty of Engineering
11.00 am - 1.00 pm	Friday prayer for Muslim delegates and seminar participants.	Campus Mosque
1.00 pm - 4.00 pm	Seminar participants continue with invited papers	KPLT Building
1.00 pm - 6.00 pm	Borobudur and Sunset tour for APEC participants	Magelang
7.00 pm - 9.00 pm	Farewell dinner hosted by Director of Graduate School	Jimbaran Resto
Saturday, 14 February 2009		
7.00 am - 2.00 am	City tour to "Taman Pintar" and "Sultan's Palace"	Yogyakarta City
12.00 am - 2.00 pm	Check out for APEC participants	Jogja Plaza Hotel
7.00 am - 4.00 pm	Seminar participants continue with invited papers	KPLT Building

APPENDIX 6: Final Workshop Photographs

Welcome Dinner (10 February 2009)

Welcome speech by Dr Rochmat Wahab, Rector of State University of Yogyakarta (UNY)

Prof Abtar, Project Overseer of APEC Project

Welcome Ceremony in the UNY Conference Room

Cultural dance performance by students of UNY

Participants at a welcome dinner hosted by Dr Rochmat Wahab

Group photo after the welcome speech and cultural dance performance

DAY 1 (11 February 2009)

Press Conference

From left: Prof Paulina, Prof Soenarto, Director of Graduate Studies and Prof Abtar

Press Conference on UNY International Seminar and APEC Workshop

Workshop

Prof Abtar with the training manual

Briefing on the agenda of final workshop

Ms Tu of Chinese Taipei presenting outcomes of pilot study

Graduate students of UNY also participated in the workshop as observers

DAY 2 (12 February 2009)

Workshop

Group 1 headed by Prof Liu: In charge of compiling and summarizing the outcomes of pilot study

Group 2 headed by Prof Okhwa: In charge of compiling and summarizing the outcomes of training manual

Group 3 headed by Prof Paulina: In charge of preparing the final report

Visit to Baron Beach at Gunung Kidul, the Indonesian Team's Pilot Study Site

Group photo with the local folk who participated in the computer class of the pilot study

The local folk presenting some local dishes for the APEC delegates

DAY 3 (13 February 2009)

Workshop

Prof Abtar reviewing the materials submitted by the three groups

From left: Prof Okhwa of Chungbuk University, Korea, Mrs Sandra and Ms Majumin

Group photo in front of Yogyakarta State University

UNY International Seminar on 13 February 2009

Prof Abtar facilitating a session at the seminar

From left: Prof Okhwa, Prof Soenarto, Prof Abtar and a representative of the seminar secretariat

Prof Abtar presenting a set of souvenirs on behalf of OUM to Dr Rochmat Wahab, Rector of UNY

Group photo after the first session