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The Evaluation on the Project of Information Communication Technology in Rural Schools (ICT)

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Executive Summary

The ICT development project aims to support, promote, and develop the use of ICT for students and teachers in rural schools of Thailand. The project aims to increase the opportunity of the students and teachers to use ICT for knowledge search to improve learning skills and the quality of education and life of the people in the community. The objectives of the project are

1) to strengthen the ability in using ICT to search for knowledge of people in the communities, improve learning skills; improve the quality of education and life by using school as the base for the improvement toward the community

2) to build efficient supporting system for the improvement of ICT by cooperating with school, community, government agency and other private sectors

3) to build network with community and be a model for learning system through pilot project benefited from the use ICT in schools as well as widely promote the interest in the community

The project began in November 2004 B.E and was completed in October 2005 B.E. The project organizers coordinated with the Educational and Psychological Test Bureau, Srinakharinwirot University to conduct a research to evaluate the project with three objectives, namely,

1) to evaluate the success of the project

2) to analyze the factors affecting the success or the failure of the project and

3) to make recommendations for the organization of the next project

The evaluation was a follow-up study by collecting quantitative and qualitative data from various sources such as documents and reports, interviews of staffs from PLAN, schools' committee, teachers, and students participating in the project, and the people in the communities. The research instruments used in the study were document analysis, observation, and focus group and individual interviews of 17 selected schools from 52 schools, and questionnaires distributed to staffs of PLAN Thailand, the coordinators of universities and Education Service Areas, people in the communities, and people participating in the trainings and activities (including 146 teachers, 710 students, and 20 citizens).

Content analysis was used in analyzing the qualitative data through frequency and percentage. The results of the evaluation were presented according to the objectives of the project.

Objective no. 1

PLAN Thailand designated three desired output for objective no. 1. As it appeared in the 2004 annual report, the three outputs were successful as expected but the outputs in terms of the preparation for readiness of hardware, personnel was considered based on the numbers of people who received the opportunity for the improvement, not the result of the improvement to be able to use ICT according to the objective. Therefore, the Effectiveness evaluation of the project indicted that the evaluation of ability to use ICT for knowledge search to improve learning skills, the quality of education and life of teachers and students was not satisfied.

Therefore, the expected outputs should cover the actual success and the project should be modified in terms of the objectives and the activities in the project.

Considering the detail, it can be seen that there are several weak points in the principles that PLAN Thailand did not take into consideration while planning the operation of the project or specified in principle approach factor analysis such as social factors. There were at least two social factors that were not in the consideration, namely, psycho-social and social economic. The psycho-social factors were value and paradigm toward the knowledge, knowledge searching process, the acceptance of changes as well as learning psychology. Because the ICT project was an innovation that will have a role in the community, and if the community had not much value to accept the change, the chance of success of the project would be small. These factors were very important for the acceptance of people in the community. The paradigm toward the acceptance of the fact that there were changes in knowledge and there was always new knowledge to be studied, and the knowledge searching process needed to be a scientific approach.

In addition, the target groups of the project differed in terms of ages, experiences and interests. The improvement of ICT of the target group depended on organizing the courses, trainings, activity types that were suitable for the target group. Therefore, learning psychology was another principle approach factor to the success of the project and caused many technical problems.

Objective no. 2

PLAN Thailand used development system, coordinating system and monitoring system according to the conditions and limitations to conduct the operation to build supporting system and assistance from university, Education Service Area, and the use

of ICT in schools. PLAN Thailand was the center of all decision making for the organization of the activities with recommendations and advices from working units responsible for the development. The schools did not have much participation and accountability for each activity. As a result, schools lacked self-reliance system and initiation, which were important for the sustainability of the project. The target group did not have continuing motivation to use ICT and the communication through rewarding system or other reinforcements. There was a lack of coordination with community leaders for transportability and sustainability of the project.

The important factors in accomplishing Objective no. 2 were principle approach problems, psycho-social, learning psychology and the problems of management, which were technical problems, especially in building visions for schools in using school-base management.

Objective no. 3

The evaluation team found that the pilot schools in the northern region had positive role in providing the knowledge for the community and received good responses from the community. The support received were the equipments that school needed from the District Administration Council, which is an important working unit in the local community. The communication system was also supportive to the efficient use of ICT. On the contrary, the pilot schools in the northeastern region, which had the same readiness for the improvement, but the communication system, had many problems. In some schools, students had to use the service from private providers, which was faster and more efficient, in the city of district areas.

In order that developing schools to be the learning system model through pilot project that used ICT as well as encourage a wide range of interest in the community was a building of a network with community, schools had to have school-base management, which aimed for participation, accountability decentralization and empowerment of the community and reduce cultural gap by becoming the learning center of the community.

From the evaluation according to Objective no. 3, the evaluation team made recommendations for all stakeholders for the operation of the next project or the start of a new project. The recommendations are; in terms of the preparation before the project, the target group should be selected, there should be a selection of medium and method of public relations for information—news to directly reach target population. The staff

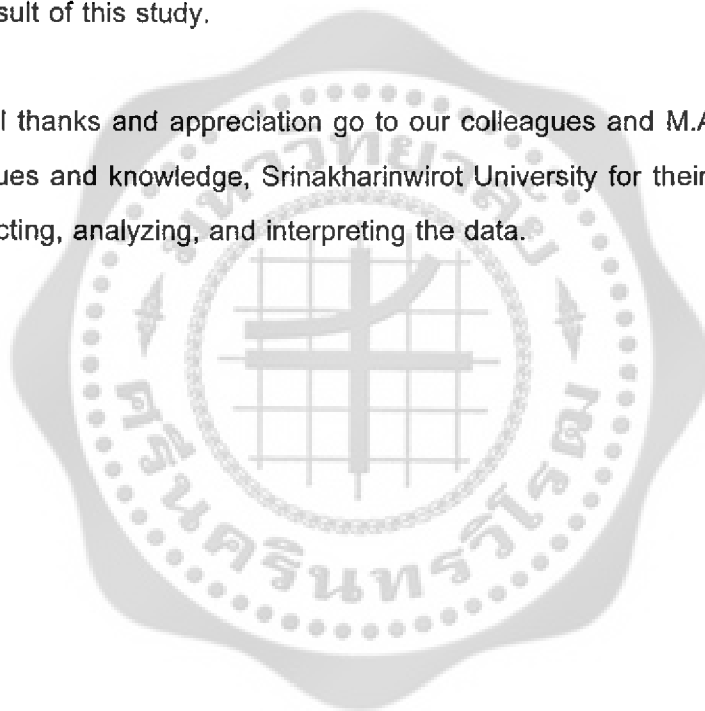
development courses, programs, or development schedules must be in line with the potential and the readiness of the learners. The administration must have clear structure; there must be scope of work and the role of each staff. The determination on the mechanisms in administration must be clear, efficient, and transparent and can be examined. Everybody should have a part and present oneself to work willingly rather than are assigned to work. The documentation system of the secretarial or administrative section must be standardized for the convenience of the researching or referencing. The financial system must be flexible and efficient. The disclosure for information about the administration of the project must be presented in every level and at every stage. There should also be a coordinating network system to operate the project. During the operation of the project, there should be a monitoring system according to the framework of each activity, time, and budget, working team. There should be a conclusion of the operation of the project, which include problems, success, and ways to modify the activity for the special or small activities and follow up with the target when these small activities end. There must be mechanism for problem solving and when each small activity ends, there should be a conclusion of the results of the project for the target group and the participant immediately at the end of each small activity. If possible, there should be a report for the community to publicize the project. Also, a making of information database about the activity and staffs network related to each activity and a revision whether the project is effective or not and the factors affecting the effectiveness of the project should be initiated

Acknowledgement

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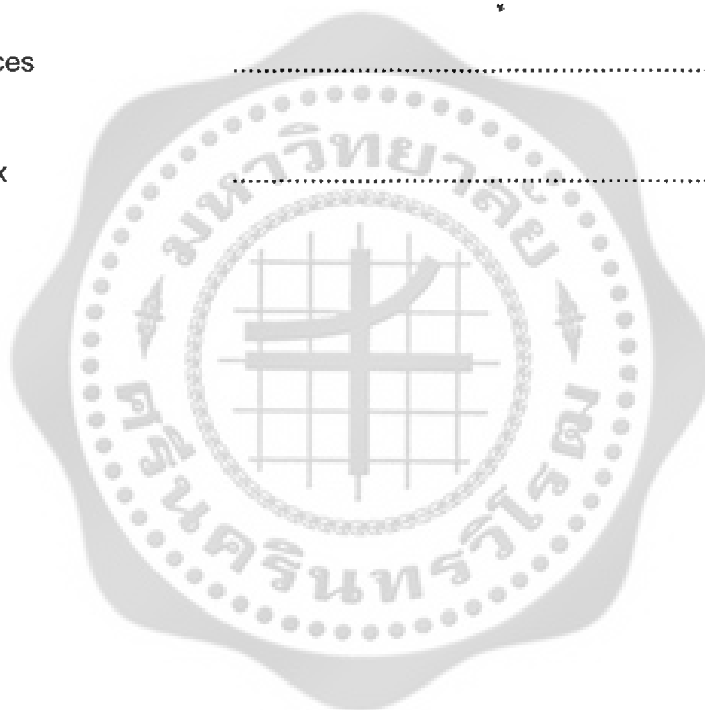


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Chapter 1

Introduction

Background

Plan organization (Thailand) with its representative of the Netherlands lends support to this project ICT implemented in the rural areas of the north and the northeast of Thailand. There are 52 schools involved. The objectives are to provide an opportunity for both students and teachers in the countryside, especially those from the north and the northeast, in accessing information and utilizing communication technology in order to improve their knowledge, learning skills, quality of their educational development as well as livelihood of their communities.

To be more specific, the project aims at strengthening local capacity in utilizing information and communication technology for such purposes mentioned. By doing so, it will help facilitate the development and utilization of the ICT effectively because there will be collaborations among schools, and between schools and communities along with government and non-government sections. In order to achieve its goals, Plan organization of the project ICT will arrange a contract in collaboration with supervising universities such as Mae Fah Luang University, Khon Kaen University and Mahasarakham University. Computer systems will be installed, and training and a variety of activities will be provided according to the project ICT starting from January 2004 to September 2005.

When these activities are completed, there will be a follow-up evaluation of the project's success. This would include an evaluation of advantages along with disadvantages, as well as a determination of the factors that cause the project to succeed including guidelines to improve the project for its long - term use. Therefore, the evaluation of this project is needed.

Objectives and Questions for Evaluation

Objectives

- 1.1 To evaluate the success of the project.
- 1.2 To probe for both advantages and disadvantages of the project and the factors that lead the project to succeed.
- 1.3 To give suggestions on the ongoing project to become a long - term reality in the rural areas.

Questions for evaluation

- 2.1 How effective is the project?
- 2.2 What factors are involved in the success or failure of the project or the designed activities?
- 2.3 What factors allow ICT to have a permanent presence in the community?

Evaluation Framework

1. To answer questions for evaluation mentioned in 2.1 which will compare the details of what actually happens with the expectations set by the project.
2. To answer questions for evaluation mentioned in 2.2 above, which will analyze the context of each activity implemented and also to review and act on comments from those who are in charge of activities and the expertise involved.
3. To answer question 2.3 (See the procedures in 2.3 Comments and stakeholders's satisfaction are being analyzed as well.

Scope of evaluation

A follow-up study of the ICT in School Project was designed to evaluate project objectives, project activities and project outputs in 5 dimension relevant, effectiveness, efficiency, impact and sustainability to satisfy objectives of evaluation.

The CIPP model was selected to analyze and present the findings.

The discussion of the evaluated finding was covered all 7 program units of Plan Thailand in 52 rural schools.

Definitions of terms and Abbreviation

Definitions of terms

ICT project : The information communication technology in rural school project which Plan organization (Thailand) with its representative of the Netherlands lends support to this project ICT implemented in the rural areas of the north and the northeast of Thailand.

Relevant : How well the project addresses the key issues or problems that affected the communities over the implementation period. In order to look at the question of program relevance two steps need to be taken :

1. Analyze what has happened over the period of the program's lifespan and build a historical context.
2. Explore the degree of fit between the project and this historical context.

Efficiency : The measure of the extent to which the project has used the least possible resources to achieve the required quality of outputs/outcomes.

Effectiveness : An assessment of effectiveness analyze whether or not the project has achieved what it sets out to achieve.

Impact : The systematic analysis of the changes in people's lives (children, families and communities) brought about by the project that needs to look at three aspects :

1. The positive changes in people's lives.
2. The negative changes in people's lives.
3. The level to which it is possible to conclude that these changes in people's lives can be attributable to the project.

Sustainability : To what extent will the impact of the project continue after the project has ended. The questions being addressed are as follows.

1. Are the positive results/effects of the intervention likely to continue after its completion and if so in what ways and under what condition?
2. What can be done to ensure that these conditions are realized ?

Abbreviation

MOE	: Ministry of Education
ESA	: Education Service Area
NE	: Northeastern Thailand
IT	: Information Technology
CAI	: Computer Assisted Instruction



Chapter 2

Related Literature

This research aims at evaluating the success of the Information Communication Technology in Rural School Project (ICT). The result will act as the indicator to analyze whether or not the project has achieved its goal. The result will also act as the guidelines for the committee of plan organization (Thailand) and those involved to improve the project in the future. To meet such a goal, the following related literature will be considered :-

- Part I : Historical context of Plan Organization
- Part II : Implementation of Plan Organization (Thailand)
- Part III : Background of the Information Communication Technology in Rural School Project (ICT)

Part I : Historical context of Plan Organization

Plan is an international humanitarian NGO who implements child centered community development, without any religious, political and governmental – operational affiliation

Plan vision is of a world in which all children realize their full potential in societies which respect people's rights and dignity.

Plan do this by working with children, their families and the wider community, to help them achieve positive change in their own lives. For more than 60 years, Plan have stood for the rights of children, and helped millions of children to have the opportunity to contribute to their societies in a positive way.

Plan's Mission

Plan aims to achieve lasting improvements in the quality of life of deprived children in developing countries, through a process that unites people across cultures and adds meaning and value to their lives, by:

- enabling deprived children, their families and their communities to meet their basic needs and to increase their ability to participate in and benefit from their societies
- building relationships to increase understanding and unity among peoples of different cultures and countries

Promoting the rights and interests of the world's children

Plan have long recognized that children are not passive recipients of aid. Plan believe that long-term improvements and change can only be sustained if children are 'development actors': they participate, voice their opinions, are listened to and taken seriously because their opinions count.

Children in communities Plan work with are often involved directly in planning, implementing and monitoring projects which benefit themselves, their families and their communities.

Plan work is broadly based around five key areas:

Education

All children, young people and adults deserve access to learning and life skills that enable them to realize their potential

Health

Everyone has the right to grow up healthy

Habitat

Improving living conditions to provide a safe environment for all

Livelihood

Working out ways for families to improve their income

Building relationships

Creating a worldwide community working to improve children's lives

Part II : Implementation of Plan Organization (Thailand)

Plan Organization (Thailand) has been financially supported by private as well as government sectors in various Countries namely Belgium, France, Germany, the Netherlands, the UK, Spain, Canada, the USA, Japan, Korea, Australia, Denmark, Norway, Sweden and Finland. The offices are located in 5 provinces : Mahasarakarm Unit in Mahasarakarm, Nongbualumpoo/ U-dornthani Unit in U-dornthani Srisaket Unit in Srisaket, Chiangmai Unit in Chiangmai and Puwieng Unit in Konkaen.

Plan Organization (Thailand) specifies its domains as follows : -

1. Growing – up Healthy
2. Learning
3. Habitat
4. Livelihood
5. Building Relationships

It also includes the following programs : -

1. Program for the better – Living of children
2. Promotion of families and communities's responsibility on Aids
3. Improvement of economic situation of families and communities
4. Strengthening of local capacity
5. Protection and prevention of environment
6. Support of understanding among multi – cultural people

Plan Organization (Thailand) believe that the goal to the sustainable success in the commitment of the government in implementation of the project, the knowledge and awareness of the communities, and the networking on prevention and improvement at all levels.

Part III : Background of the Information Communication Technology in Rural School Project (ICT)

The primary goal of the ICT project is to create an environment in which all children – different learning styles, genders, diverse background – could learn to read, to think, to apply, to critique, to synthesize, and to evaluate in ways more like their life long learning. Therefore, the project will employ information technology utilization as a strategy of increasing the opportunities available to disadvantage rural school children for research, information gathering, effective communication, and to broaden their learning capacity and horizons. Moreover, the project will create collaborative networks between*schools and colleges, communities and schools, governmental organizations and various agencies. This is to ensure desirable technology utilization models through the partnerships of public, private, and non-profit organizations to contribute to the country human and social development. With collaboration among many organizations and agencies, it is anticipated that the utilization of technologies for education will not only improve the quality of teaching and learning but also encourage life long education for all people. The project will also create opportunities for children to learn about and communicate with people in other villages and countries. In addition, children will gain useful skills in information technology which will assist them in future life and work. This project will not only bring about the computer technology into classroom, it will empower and motivate teachers to bring about change in the practice. This will result in developing the school and communities' capacity to engage in improvement at the classroom level. More importantly, this project will give students a "VOICE" in their classrooms. Thus, at the very heart of the project, capacity building is an ultimate goal. The experience of utilization of technology in education will thus be a key factor in transforming the society into a knowledge-based society.

The ICT project has conducted two types of activities :

1. The training courses on basic computer skill, computer assisted learning program, computer and system maintenance, web – site creation and e – learning in teaching – learning ;
2. The activities on ICT camp for children, ICT exhibitions, school visits, conferences and ICT seminars for communities. The strategic implementation, its indicator for success and the outcome of the implementation from January 2004 to December 2005 are as follows :-

Review of the log frame

The project logical framework below further explains and provides more details on the progress of the project during the reporting period. It is noted that some parts of the progress in quantitative format has already been presented in the above table.

Summary of Overall Achievements between January 2004 to December 2005

Objective 1 : To strengthen local capacity in utilizing information and computer technology to improve the quality of the education and livelihood of their communities

Output 1.1 : 52 selected schools will be equipped with adequate specification of computer technologies

	Activities	Strategies	Indicators	Progress as of December 2005
1.1.1	Procurement of computer equipment	a) Allocate budget for each school to procure computers equipment with contributions from community. School and committee should decide on the specification of computers that is responsive to their needs.	a) Number of new computers in each target school b) The specification of computers requested from each school committee (as reported by school committee minute or official letters).	a) 52 schools received new computers and other peripheral equipment. A local area network (LAN) was installed in each school. b) MOE provided equipment specifications, with justification as per needs from each school. c) Technical support from concerned education zone offices received

Output 1.1 (Continue)

Activities	Strategies	Indicators	Progress as of December 2005
1.1.2	Maintenance of equipment	b) Collaborate with the Ministry of Education for supports of software licenses for the school computers as well as up to date materials for teaching IT. a) Collaborate with technically strong schools, zonal offices and universities to conduct training for selected teachers (one teacher from each school) to be able to do	a) Number of software licenses which MOE allows or provide for target schools b) Number of up to date teaching materials provided by the MOE a) MOE has been trying to seek for software licenses. At the time of installation, all school had used Microsoft package. b) A few samples of software applications from MOE have been sent out to some schools. c) (Commercially available) education softwares were distributed to all target schools under a close collaboration with the ESAO and MOE. a) A variety of training courses were organized for teachers from all schools. In addition, the suppliers have provided basic training on LAN and system maintenance as a part of the purchasing

Output 1.1 (Continue)

Activities	Strategies	Indicators	Progress as of December 2005
	maintenance, trouble shooting, install software and set up LAN system. The training should be conducted at the same time of procurement and prior to school break to enable facility for training of other teachers during the school break.	b) The level of teacher knowledge and skills on IT maintenance related to trouble shooting, install software and set up LAN system. c) The number of trained teachers in different skill levels d) The volume of annual fund raising at each school e) Frequency of each school committee, communities, and educational districts discussing on IT budget plan.	agreement after installation. b) Mid-term assessment was completed. Report was available in both Thai and English. c) No figure was available. From school visits, a number of schools have received fund through community fund raising. d) N/A
	b) Collaborate with school board, local administration and educational districts to solicit annual budget for maintenance of the equipment		

Output 1.1 (Continue)

	Activities	Strategies	Indicators	Progress as of December 2005
1.1.3	Resources and materials	a) Collaborate with the ESA, other schools, local universities to conduct training for selected teachers and advance IT teachers to identify resources on the internet and select appropriate materials for their schools b) Budget for software and teaching materials for each schools c) Budget for registration of website and hosting services for the project	a) The percentage of teachers trained relating to internet resource identification and appropriate material selection in each school. b) The volume of solicited or allocated budget for software and teaching in each school. c) The volume of solicited or allocated budget for school websites d) The number of the school websites in target schools which students, parents, and community members are allowed to participate in construction, implementation, and promotion.	a) Collaboration with ESA Office, school networks and local universities has been made. The MOE personnel also helped in building up network with concerned agencies. b) Up to now, budget for purchasing of equipment had been made. Procurements of software for all schools have been completed. c) N/A d) A number of schools have their own websites and can have access to Internet.

Output 1.2 : 75% of teachers in the selected schools will be trained to utilize the ICT for their development and students' learning

	Activities	Strategies	Indicators	Progress as of December 2005
1.2.1	Conduct TOT for teachers on how to use IT supporting the learning of basic education for beginner, intermediate and advance levels.	a) Budget for teachers who have no computer skills to learn basic computer skills on their own b) Collaborate with higher educational institutions to design and conduct trainings for beginner, intermediate and advanced IT teachers in their provinces. The training should be conducted on the learners' center approached with periodic follow up training throughout the school term. The emphasis of the training should be placed on how to use IT to support	a) The volume of budget allocated for teachers to seek for basic skills on computer literacy b) The proportion of trained teachers between pre and post project implementation c) The available IT courses and seats for teachers in different capability levels d) The participant satisfaction levels on the trainees' manuals which facilitate self-study and suit their interest. e) The relevant levels of training on how to use IT with the school curriculum	a) – g) Teachers training have been completed for all schools on various topics based on interest of teachers. Training courses conducted included; 1) basic computer skill for all teachers, 2) computer and system maintenance for 1 teacher per school and 3) advanced computer training (CAI), lesson planning, etc) for 5 core subject teachers from each school, 4) graphics and animations. List of teacher training during this reporting period is available in the above section Output 1.2 Follow up monitoring was carried out during this reporting period by the provincial team and the project monitoring team.

Output 1.2 (Continue)

		Activities	Strategies	Indicators	Progress as of December 2005
1.2.2	Local Exhibitions		the school curriculum in all subjects area and for different grade levels.	f) The volume of budget allocated for teachers to seek for advance courses on IT skills.	
			c) Budget for Advanced IT teachers to attend workshop and/or training annually.	g) The proportion of trained teachers between pre and post project implementation.	
			a) Budget will be allocate for each school to organize IT exhibitions at the end of the school term in their community.	a) The volume of budget allocated for schools to organize IT exhibitions. b) The number of visitors in each IT exhibition c) The volume of local contribution on organizing IT exhibitions d) The percentage of schools holding IT exhibitions in their community e) The number of students' IT project displaying during the exhibitions	a) – e) All schools participated in at least two exhibitions; one at the provincial level, and the other during the ICT children symposium.

Output 1.2 (Continue)

	Activities	Strategies	Indicators	Progress as of December 2005
1.2.3	Cross visits	a) Allocate budget for each school for teachers to visit innovative IT schools once a year	a) The volume of budget allocated for teachers to visit leading IT schools in the region b) The percentage of teachers having IT schools visits c) The level of satisfaction and gained information from IT school visits	a) – c) cross visits were made within the same ESAO. A cross visit outside project area was made for all schools to the ICT project funded by MOE in Bangkok and Karnjanaburi.
1.2.4	IT Forum	a) Organize IT forum in the region to promote, disseminate innovations and exchange lesson learned for teachers, students and community representatives	a) The volume of budget allocated for higher institutions to hold IT forum b) The number of visitors and conference participants in each IT forum c) The number of student IT products to display at each IT forum d) The percentage of teachers or students from target schools being able to participate in IT forum e) The number of community members from each schools participating or visiting IT forum f) The number of dissimilated innovation publications	a) – e) planning meeting was held in December 2004 at Mahasarakham University. The forum called 'ICT Children Symposium' was conducted in July 2005. All schools participated and put up their exhibitions and children works.

Output 1.3 : 80% students will utilize computer technology to enhance their learning of basic education and other interests.

	Activities	Strategies	Indicators	Progress as of December 2005
1.3.1	Access for using computer	a) Schools will develop calendar for teachers and students to use computer rooms b) Computers will also be available to students and teachers at their free time	a) School calendar for computer use b) The number of teachers and students' computer access c) School compute use rules in agreement with teachers and students	a) All target schools have prepared calendars for the use of computer rooms. Some schools prepared timetables for computer subjects including during the free time. b) All schools have computer use rules. No formal data has been collected in this area.
1.3.2	Skills in using computer	a) Teachers conduct pre and post test of students' knowledge and skills in using computer. b) Students will be trained to develop their typing skills, basic word processing and creative thinking games	a) The available number of computer knowledge tests and computer skills tests for assisting teachers in test administration b) Student scores on computer literacy skills comparing pre and post tests c) The number of lessons on basic computer literacy and creative thinking delivered in each school d) The frequency use of lessons in classrooms and hands-on activities	a) Students in target schools have access to computer use, at varied ratio. Older students (at least Grade 4 to Grade 12 depending upon types of schools) have more access. b) Only basic computer courses, typing skills are provided to students. Other schools are developing teaching techniques, plus hands-on activities.

Output 1.3 (Continue)

	Activities	Strategies	Indicators	Progress as of December 2005
1.3.3	Utilizing computer for learning	a) Students utilize computer for learning of their basic subjects area through document, research and experiments with technology b) Interested students will develop skills to construct webpage and sell the products of the communities c) Advanced students can also be trained to assemble, trouble shooting and maintenance of the school computers	a) The student ability levels in utilizing computer for their information inquiry and knowledge building b) The number of students who are able to construct webpage in each school c) The percentage of students constructed webpage aiming at the products of their community promotion d) The proportion of students who are able to perform the tasks before and after the project.	a) All schools have set a plan / schedule for the use of computer rooms. Simple and advanced programs or web related activities were introduced to both teachers and students based on training needs. b)-- d) N/A

Output 1.3 (Continue)

	Activities	Strategies	Indicators	Progress as of December 2005
1.3.4	Sharing and dissemination	a) Students will be trained to communicate via internet b) Information search by students will be shared with parents and community c) Collective works on IT will be exhibited to community	a) The percentage of students at the secondary level being able to communicate via internet b) The frequency of school contacting parents and community regarding the harm and use of internet c) The percentage of students who hold at least an e-mail account d) The frequency of schools and community communicating activities regarding students' IT product e) The number of parents and community members visiting schools during IT exhibitions f) The number of students' work regarding their communities g) The number of interested parents and communities in IT activities at the point that the project starts and ends.	N/A.

Objective 2 : To establish the technical supporting system to facilitate the effective development and utilization of the ICT for schools through collaborations among selected governmental, private and non-governmental agencies.

Output 2.1 Mechanism and/or process of technical assistance and sharing among higher educational institutions, zonal offices, and schools will be established to provide support to target schools and community.

	Activities	Strategies	Indicators	Progress as of December 2005
2.1.1	National Policy Supports	a) Meeting will be held quarterly with the concerned agencies in the Ministry of Education to review project monitoring report, and to solicit support for policy, integration of ICT into curriculum, copyright software, network and materials, etc.	a) The agenda on MOE executive meeting b) The memorandum of understanding signed by the minister or the permanent secretary.	The formal agreement or the memorandum of understanding signed at the beginning of project (January 2004). The Project Steering Committee was setup at the beginning. Two project meetings were organized during this reporting period.
2.1.2	Zonal Education Support	a) Meeting will be held periodically with the zonal educational office for project orientation, support and progress report.	a) Quarterly agenda appearing on educational districts meeting b) The number of educational district directors' visits at each target school c) The number of educational district staff's visits at each target school	The formal agreement or the memorandum of understanding at the educational zone levels was completed at the beginning of the project. School visits took place during the year by MOE and Plan staff. The school visit reports are available. Visit to education zone offices took place during the year by MOE and Plan staff.

Output 2.1 (Continue)

	Activities	Strategies	Indicators	Progress as of December 2005
2.1.3	Technical supports to schools	a) Higher educational institution will be identified by each participating province to contract the Technical Supporting Partner (TSP) to the project. The TSP will work closely with project staff to design, conduct and monitor trainings for school teachers as well as assist in the development of networks and website for schools.	a) The list and contact persons of different agencies b) The official appointing committee members on TSP c) The designed training, implementation and monitoring conducted by TSP in relevant to teachers and community need assessment	Contracts were made with three local universities for NE areas; Mahasarakam University's Faculty of Informatics (http://www.msu.ac.th/) and Khon Kaen University's Faculty of Education (http://www.kku.ac.th/) and Maefaluang University (http://www.mfu.ac.th/) for technical assistance and support to the target schools. The three universities have provided training to all target schools over the project life. Follow up monitoring was carried out.
2.1.4	Community Supports	a) Periodic meeting will be held with school board and community for orientation of the project, develop school IT plan and report progress. b) School board will assist school to solicit contributions to the IT projects particularly for infrastructure and annually maintenance fund.	a) The agenda appearing on school board meeting b) The level of school committee and community members' understanding on the project c) The volume of budget solicited from communities	School committee in all target schools were informed and updated about the background of the project and its progress. Some communities have already raised fund to further support the ICT in school project. Further follow up on the particular issue will be planned and conducted. At this stage, there is no information on how much the community contributions to support the ICT project.

Output 2.1 (Continue)

	Activities	Strategies	Indicators	Progress as of December 2005
2.1.5	School to School	a) Cluster of schools will form networks to promote support, sharing and learning from experience.	a) Number of networks formed b) Frequency of network meetings c) Number of issues, challenges or constraints addressed by the network showing degree of self reliance	As of now, a form of network has been created in almost education service areas, except those where only one school was selected. The network acts as a focal point of contact, as well as helping each other. The start of network was during purchasing of computer & equipment and has continued. This should lead further in future activities.

Objective 3 : Establish school-community linkages and demonstrate learning through a pilot approach that ICT in schools project can be utilized to promote the interests of the wider community.

Output 3.1 Five schools will establish a pilot scheme with their respective communities and demonstrate and disseminate learning on how ICT can benefit the community.

				Progress as of December 2005
Activities	Strategies	Indicators		
3.1.1 ICT use by communities	a) Five schools shall pilot using their ICT to support community projects	a) Application of ICT in community projects b) Activities completed	Nongnokkhanpoanthan Village School, Dongyang Secondary School, NamKraeng Village School, Chumchonnongbuanoi Noankhard Nonghen Wittaya School and Santonthong Village School were selected to be pilot schools. a) – b) Seminars in school were provided and promoted access to learning through ICT to people in communities, including community members training on how to use computer for their activity.	
3.1.2 Learning and dissemination	a) Reflection and sharing workshops through school boards, school to school networks and project visits	a) experiences replicated b) Number of workshops conducted and materials disseminated	a)-b) 6 workshops conducted to promote the use of ICT in community.	

Chapter 3

Implementation

This project evaluation is a follow – up evaluation of the Information Communication Technology in Rural school project (ICT). The planning procedure, procedure, the project design and the evaluation process are as follows :-

Identification of objectives and issues used in project evaluation

The research team had a meeting with the group of the project administrators and managers in order to clarify the objectives, indicators, the success or failure of the project, all of which lead to the consideration of the data to meet the objective of the project evaluation.

Table 3.1 Objectives and issues used in project evaluation

Objectives	Data/issues used in project evaluation
	1. Details and appropriateness of the program's management as follows :- 1.1 Relationship between activities and the objectives 1.2 Implementation framework 1.3 Opportunity/risk in implementing the project 1.4 Expected outcome
	2. Details and appropriateness of training courses/ activities as follows :- 2.1 Identification of the target group 2.2 Objective 2.3 Content 2.4 Training process 2.4.1 Speakers 2.4.2 Time allocation 2.4.3 Number of participant 2.5 Venue
	3. Change in terms of technical knowledge and application after participants attending the training courses.

Table 3.1 (Continue)

Objectives	Data/issues used in project evaluation
	4. Participants view on training format, activities, Knowledge and benefit gained from attending the Training courses.
	5. Views from those involved : schools admirals, participants and PLAN officers towards the implementation.
	6. Views from the evaluation committee on project implementation : process, training and activities

Strategies and data collection

Table 3.2 : Strategies and sources for data collection

Topics/Issues	Techniques/Data Collection	Sources
1. Context evaluation	1. Observation 2. Elicitation 3. Individual/group in – depth interview	1. schools and communities 2. PLAN's personnel responsible for the project 3. Teacher, students and those involved in the project 4. lecturers form universities involved in the project
2. Input Evaluation	1. Document analysis 2. Observation 3. Elicitation 4. Individual/group in – depth interview	1. Annual report 2. School computer labs 3. PLAN's personnel responsible for the project 4. Teacher, students and those involved in the project 5. lecturers form universities involved in the project
3. Effectiveness Evaluation	1. Document analysis 2. Observation 3. Elicitation 4. Individual/group in – depth interview	1. Annual report 2. School computer labs 3. PLAN's personnel responsible for the project 4. Teacher, students and those involved in the project 5. lecturers form universities involved in the project

Table 3.2 (Continue)

Topics/Issues	Techniques/Data Collection	Sources
5. Impart a valuation	1. Observation 2. Elicitation 3. Individual/group in – depth interview	1. School administrators, teachers, schools and the commonality
6. Sustainability Evaluation	1. Observation 2. Elicitation 3. Individual/group in – depth interview	1. School administrators, teachers, schools and the commonality
7. Transportability Evaluation	1. Observation 2. Elicitation 3. Individual/group in – depth interview	1. School administrators, teachers, schools and the commonality

Data Collection

The data for the project's evaluation were gathered from document from various sources as well as observation and interviews through the following channels :

1. Observing and interviewing PLAN Thailand's personnel.
2. Observing the conditions of the schools, classrooms, and communities; interviewing participants attending training courses.

The interviewing was done in a form of focus group conducted by the evaluator. The group was informed the objectives of the data collection. The data from the teachers, students, citizens, on the other hand, were collected in form of questionnaires by the coordinators and returned them to the officers.

Data from universities were collected in forms of the interview with the project coordinator, and the questionnaires done by the speakers and mailed them to the evaluators.

Key Informants

The key informants were selected from people involved in or have gain or loss with the ICT project. They can be categorized into those benefited or directly affected by the project, and those who use the result of the evaluation.

1. The target group of the project was those the project aimed to promote and develop their potential so that they can create learning media or search for knowledge to facilitate in self-learning, and perform their duties more effectively , which resulted from participating in the training. They are teachers, students, and citizens in the Udonthani, Khonkaen, Nongbualampu, Chiang Mai, Chiang Rai, and Sri Saket provinces.

2. The group affected by the products of the project i.e. the group of people the target group interact with upon completing the training. These are the people in the community.

3. The administrators and the organizers of the training, who participate in, decide on, and were affected by the evaluation of the project. These were PLAN's personnel who coordinate the project, project administrative personnel and speakers.

The data were collected from 17 schools. The research team specified the number of the subjects from each school to be 10 teachers, 50 students, and 10 community people. The total subjects were 170 teachers, 850 students, and 170 community people. However, only 146 teachers, 710 students and 20 community people were able to give data because people in the community had little knowledge about the project, hence unable to provide data.

Table 3.3 Provinces and schools specified to be the data resource for field data

Region	Province	District	Schools	Level
Northern	Chiang Rai	Chiang Saen	- Baan Sontonthong	Primary school
			- Wiang Kaew	
			- Baanrai Tarnthong Branch	
Northeastern	Nongbualamphu	Suwankhuha	- Nongbuanoiononchart	Extension school
			Community	
			- Nonghenwittaya	
	Mhasarakham	Borabue	- Baanwangplatau	Extension school
			- Nongmuang wittayakarn	
				Secondary school
	Udonthani	Nadoon	- Mattayom Dongyang	Secondary school
			- Nongphaidamkhan	
		Pen	- Baan Sangluangsangkham	Extension school
			- Baan Nhongnökkheanphontan	
Khonkaen		Baanphue	- Dontandongbung wittaya	Secondary school
		Phuwiang	- Wiangnakorn wittayakhom	
			- Kudkhonkaen wittayakom	
		Phrayuen	- Nongtonpho prachanukul	
Srisaket		Namkleang	- Baan Namkleang	Extension school
			- Baankoop	
		Prangkuu	- Baan Pok	Secondary school

Instrument for data collection

The framework for constructing the instrument was built from applying appropriate strategies, methods, and information sources for data collection so that it is appropriate and convenient.

The instrument for data collection are for three groups of people involved in the project, namely:

- 1. Service provider : personnel responsible for the project of PLAN .Thailand, mentor universities and the educational district
- 2. Service receiver : School administrators, teachers, students, and school committee
- 3. Affected agents : citizen

The instrument was examined in terms of content validity and construct validity. Meetings among research team members and PLAN Thailand's personnel responsible for the ICT project were held to consider the quality of the instrument so that questions covers all desired information, suit the subjects, and follow the strategy for data collection.

1. Questionnaire for PLAN Thailand's personnel. The questionnaire for the subjects was used together with the in-depth interview. The questions cover:

1.1 Basic information about the subject and the physical condition of the project implementation.

1.2 Information about the implementation, for example, the objectives, framework for participant selection, curriculum setting, speakers, format, training method media and general environment.

1.3 Agreement between activity and project objectives, opportunities/risks of the operation, project accomplishment, and pride gained from participating in the project

2. University/educational district coordinators

The structured questionnaire inquired the subjects their opinions about the appropriateness of the implementation, problems/obstacles in accomplishing the project goals, community network building, follow-up and assistance for participants after completion of the project.

3. Questionnaire for speakers

The structured questionnaire inquired the subjects about preparation before giving the lecture, activities on each topic in terms of objectives, content, activities, media, learners, physical conditions and the size of the classroom, the open-ended questions about the suitable training format, problems/obstacles, for the accomplishment of the project, and the agreement between the activities and the project objectives.

4. Questionnaire for the citizens

The structured questionnaire was composed of questions about basic information about the subjects' occupation, features and problems of the community, and the attitudes towards the ICT project by PLAN Thailand.

5. Questionnaire for the participants in the project (teachers, students, the community)

The questionnaire contained direct questions that inquire about the basic information of the subjects and their general opinions about the organization of the training, the process of the project implementation, the speakers, the results of the participation, what happened after the participation, knowledge and ability change after the training, opinions or recommendations for the training, further improvement, and other general opinions.

Data Analysis

The data were analyzed using content analysis methods for the qualitative data gained from observation, interview and open-ended questionnaire. The data were then categorized. The quantitative data from the questionnaire and the structured interview were analyzed using frequency and percentage.



CHAPTER 4

EVALUATION RESULTS

This follow-up study aims to evaluate the ICT Project. The quantitative and qualitative data were collected from various sources such as documents, reports, and interviews of PLAN's staffs, school administrators and school board of committee, teachers and students participating in the project and the community. Various instruments were used to collect data such as document analysis, observation, group and individual in-depth interview, and questionnaires, in order to collect the realty data and meet the objectives set.

The order of the data analysis and interpretation will be in the followings :

Part 1: Evaluation of the Effectiveness and Efficiency of the project, including:

- Context evaluation
- Input Evaluation
- Process Evaluation
- Effectiveness Evaluation
- Impact Evaluation
- Sustainability Evaluation
- Transportability Evaluation

Part 2: The Analysis of the Factors Affecting the Success of the Project

The details of each part are as follows.

Part 1: Evaluation of the Effectiveness and Efficiency of the Project

Context Evaluation

The subjects for context evaluation were teachers, students, and people and the communities from 17 schools. The instruments used to collect the data were observations and group and individual in-depth interview. The general interview about the project was also used to collect data from PLAN's staff who were responsible for

the ICT Project, coordinators and lectures/instructors from universities participating in the project.

School chosen as the subjects for context evaluation were primary schools, extension school, secondary schools under Office of the Basic Education Commission. Primary schools and extension schools are school that serve people in nearby communities, while the secondary schools serve the communities that are out of the responsibility of district schools.

Schools are situated in small communities. The majority of houses are one-story house surrounded by fruit trees with no fence between the houses. Normally, the relatives live closely together in houses scattering around the communities. Roads in the communities are made from compressed laterite. The only concrete road is the main road for cars to run smoothly on.

Basic drinking water system is community-own water supply, wells, and cesspool. The electrical system in the community and government buildings can support all technological progresses that require electricity. The telecommunication system does not cover all areas. Most landline telephone is public telephone of the community. It is not yet available to all households. Therefore, mobile phone is a means that people use to communicate. Each community lacks potential in basic infrastructure to support the application of IT through telephone network. Even the government buildings such as schools and District Administrative Council do not have that potential.

Agriculture such as rice farming and livestock is the main source of income for people in the community. Other jobs include cloth weaving and plantation. Moreover, a lot of parents go to work in other provinces such as sugar cane cutting in Kanchanaburi, construction working, and taxi driving in Bangkok. As a result, people who stay in the community are children who have to attend school and the elderly. The only family having three generations is the well-established ones.

The policy to promote the use of IT to improve learning and teaching started in 2542 B.E., when Mr. Sukhawit Rungsitpol headed the Ministry of Education. A project aiming to promote the use of computer in schools in the rural areas was initiated. As a result, almost every school participated in ICT Project of PLAN have computers and knowledgeable staff to run the project. Computers in these schools, though, are used for administrative and office purposes rather than learning purposes. According to the data obtained from the questionnaire giving to 146 teachers and 710 students regarding the use of computer before the participation in the project, 78.8% of teachers can use

Word, 41.8% can use Excel and 6.8% can use multimedia program relating to learning and teaching. As for students, 56.1% can use Word, 36.5% and 33.5% can use Power Point and Excel respectively. Only 6.5% of the students can use multimedia program relating to learning. The number of computers is not enough for learning and teaching purposes, especially classroom teaching.

Table 4.1 Percentage of teachers and students who were able to use computer programs before the training or before participating in the Project.

Programs	Teacher	Student
	(Percentage)	(Percentage)
Word	78.8	56.1
Excel	41.8	33.5
Power Point	37.0	36.5
CAI	13.7	6.5
Autoware	6.8	1.0
Photoshop	10.3	6.2
Dreamweaver	6.8	2.8
Flash	6.8	3.9
Access	3.4	2.3

The ICT Project of PLAN aims to strengthen the use of IT to improve learning and teaching as well as the lifestyle of people in community. The objectives of the project thus have to be in line with the need of the schools and communities so as to maximize the benefit of the project if it succeeds. However, according to the important conditions of using IT, namely, hardware equipment such as high-speed computer, telecommunication network system, and sources of basic knowledge such as wireless are necessary for the use of Internet network. However, from the Context evaluation of schools and communities, the results indicated that there were many weak points i.e. in the last six months of the projects, every school were able to use telephone network communication through Internet, but the use was still difficult and not continuing. The reception was not always good. Therefore, it can be said that the success of the ICT Project of PLAN, despite the attempt to meet the need of the community, did not come easily. Moreover, improving or changing the lifestyle of people was not easy because people were strongly attached to agricultural lifestyle and local knowledge. People left in the communities are the elderly, whose enthusiasm for new knowledge was not high.

For students, they have to focus on their study and use IT for learning. Therefore, there is a possibility that the objectives to strengthen the use of IT to improve the learning and teaching be successful. The assumption was similar to the conclusion by PLAN Thailand, lectures from universities, teachers and educational committee who agreed that among the three objectives, the chance of success, the first part of first objective is high. As for second and third objectives, despite the fact that they might meet the need of community, the chance of success is little. However, the success possible is the project can create and improve the basic structure system to high potential so as carry out IT activities efficiently.

Input Evaluation

The ICT project needed to manage the environment to accomplish the objectives of the project by supporting schools to have input in terms of hardware, software and personnel in order to have the potential to carry out the project successfully.

PLAN provided budget for equipments necessary for IT use, according to the need and size of schools. PLAN would provide budget according the data given by schools such as numbers of teacher, students, and classroom. After receiving the budget, the schools would determine the specifications of equipments according to the necessity and need of schools. The schools were responsible for the whole purchasing process. The various purchasing system follows the agreements set among schools in the group and PLAN Thailand. Two systems of purchasing are.

1. Exam pricing system
2. Tendering system

To purchase hardware equipment by exam pricing is good for schools as they will get the equipments according to the specification and after-sales service will be good because the shop is nearby and familiar. It is easy to get the service and there are not many shops nearby schools. Exam pricing is limited due to constrain mentioned earlier.

Tendering system is to purchase a large numbers of computers, which will give an opportunity for schools to negotiate the price with the shops. However, since tendering system is wide open for everybody, it gives the chance for shops outside nearby area and if those shops win the bid, after-sale service would be inconvenient

and it is not worth it to travel to repair equipments when a problem about the hardware occurs during warranty.

The specifications of almost all equipments were specified to maximize the chances of getting as many computers as possible with the given budget. It is found that the specification for a server terminal of most schools is Pentium 4 CPU, Speed of 2.4 Ghz, 512 RAM. The specifications of all network terminals are Celeron CPU, Speed of 2.4 Ghz, 128 MB RAM, in order to maximize the numbers of terminal the school could purchase. The specification came with inkjet printer. There is no other accessories equipment. There are few computers that have multifunction printer and digital camera to support multimedia works.

IT data from 17 schools and annual report of Information Communication Technology in rural schools, from 52 schools, indicated that each school purchased PC equipment to support Local Area network (LAN) rather than to support the use for learning and teaching. Accessory equipments such as a big projector TV that can be viewed clearly by every student in the class failed to be purchased. PC is used for office works rather than facilitating learning and teaching. Printers and ink which are waste materials needed, then to be purchased.

Schools received financial supports from PLAN prepare the areas for the setting up of equipments by constructing a new building for these PC received from MOE. However, a lot of schools, when receiving the budget from PLAN, were not certain about how many computers they would get. As a result, they did not prepare suitable areas in advance. When the computers arrived, classrooms or teacher rooms were modified for the installation of these PCs to support LAN system. The place was full of dust and it was difficult to maintain computers, or sometimes the area was quite limited. The computer terminal had to be arranged so closely together. When students work, there was be a lot of noise and they disturb each other.

Schools' administrators who have basic knowledge of computers are in charge of the preparation of staffs and making specification for computers at the beginning of the project. Teachers with basic knowledge of computer in each school will be selected to coordinate with PLAN. However, only two schools have teachers who graduated in the computer major. Other teachers did not have much knowledge about computer. PLAN was aware of this problem, so some trainings for these teachers was prepared especially the basic knowledge of computer and knowledge to create and improve multimedia for learning and teaching as well as promoting the trainings. Teachers who

can train other teachers in the schools and schools under the network were assigned to help improve the teachers potential in using PC the project.

PLAN coordinated with Education Service Area and local universities to determine the trainings programs and activities to improve potential in using computer. Each university was given freedom to propose any kind of activities. Therefore, the programs are different. For example, school visit and assistant students to give advices to the schools. The programs are included in one program, but not in the others. All of these depend on the conditional agreement made by PLAN and each university. The budget for each activity was all seated in advance, thus extra activities could not be financially supported. Since PLAN focused on the content of the training rather than the ability to use computers, a number of teachers who still couldn't use computers were found, especially female and elder teachers.

Moreover, schools were responsible for staff's selection. Schools had to determine the qualification necessary for each training and budget. It is found that coordinators of each school have greater chances to participate in the activities than other teachers in schools. Even though the Annual Reports of PLAN indicated that there were trainings for every teacher, each teacher did not get all trainings and the trainings they had were not enough to run the ICT Project successfully.

The organization chart of PLAN included four administrators and one coordinator. The coordinator was responsible for coordinating with the program unit and government agencies (MOU) that had the agreement with PLAN, such as Education Service Area, local universities in order to increase the numbers of schools. The contact system was normally telephone-based.

The organization of each activity was set based on the objectives of the project to determine the logical framework for each activity. However, since PLAN Thailand had to act upon the agreement and support of PLAN Head Quarter, some activities could not be completed within the timeframe. Moreover, each school, university, and Education Service Area had its own task to focus, so the coordination between these working units was quite slow, which led to the delay of the purchasing of equipments and the project itself. As a result, the training were focused on the content of training rather than skill practice. In other words, there was not enough practice for teachers to use computers at their schools.

Process Evaluation

PLAN Thailand operated the ICT Project according to its plan. The selection of schools was based on the criteria that these schools must be situated in the deficient communities and have already been supported by PLAN's other projects. These schools must have adequate potential to support the success of ICT system development within the 2-year timeframe. As a result, 52 schools in the northern and northeastern regions were selected.

After the school selection, PLAN asked each school to give basic data of schools regarding number of teachers, students, classes and community data as well as the need for ICT in order to provide budget to strengthen the potential of ICT of each school according to the plan. Meanwhile, PLAN needed some supports from government sectors. Therefore, PLAN coordinated with MOU by Office of Basic Education Commission and Education Service Area office of each province to develop the potential of ICT in rural schools. PLAN also cooperated with local universities to establish a helping unit to help improve staffs of the schools and community.

After receiving the budget, each school arranged for the purchase of hardware equipments as mentioned in the **Input Evaluation**. However, due to several obstacles such as the delay of budget provided and the installation of the equipment, the purchase was not complete within the time frame. It should be noted that the contact of universities in the northern region was slower than those in the northeastern region.

Organization Framework

The ICT Project was organized by using the objectives of the project to determine the logical framework of each activity. The objectives were set to support the measurement or the observation of the indicators for the success of the project. Moreover the activities were designed as effectively as they were expected to accomplish the objectives of the project. There were appointments of people responsible for the activity, a coordinator, and the participants as well as the priority and the continuation of activities. There was a follow-up study for the results. The progress of each activity was compared with the accomplishments of the objectives throughout the timeframe of the project. There were also reports of problems and obstacles that led to the delay of the operation. Moreover, there was also the analysis of the relationship between the target groups and the success of the project by analyzing the opportunities

and the risks in operating the project and by setting up meetings with the administrators of educational institutions.

The result of the meeting indicated that the operational framework or the project management of PLAN Thailand was in line with the principle of good management. However, the main task of the management of PLAN in this project was to coordinate with strategic partners, i.e., schools, education service area, assisting university, who are the stakeholders of the project and PLAN Head Quarter who is the owner of these financial support for the project. This led to the poor coordination which caused the delay of the organization of activities. As a result, the operation was unable to conduct within timeframe or sometimes the schedule was too tight.

The universities in the project acting as a program unit had to make a proposal on how to improve staff of the schools. These proposals included the budget, and the time frame of each activity. Most activities proposed by universities were in the form of training. The universities selected the qualified lecturers based on teaching experience to provide the training. The trainers would be contacted 30-45 days in advance, which gave them time to prepare for the good lecture.

The result showed that the participants were satisfied with the knowledge and ability of the trainers both in terms of academic knowledge and the transferring of the knowledge. However, due to the load of work of the trainers during the trainings, the focus of the training was on the content of the trainings. Some participants who did not have enough basic knowledge could not follow the whole training.

At the beginning of the implementation, there was some confusion among the working unit in the Education Service Area whether it was the policy-planning department or Educational-supervisory department who were responsible for the project. This caused some problems in the coordination. However, towards the end of the project, the responsibility went to Educational-supervisory department.

The schools participating in the project not only had to prepare space for the installation of PCs to be used as classroom for ICT subject area, but also had to select teachers, students and schools' committee to participate in the project as preserved by of PLAN Thailand. For the training of basic computer knowledge, there was no specification for the qualification of the participants. Therefore, there was no problem in recruiting the participants for the training. For the advanced computer training and the training of Computer Assisted Instruction (CAI), however, there were some problems because these kinds of training required people who have some background about

computer. The schools solved the problems by selecting teachers from other subject areas. As a result, the lecturers had to adapt the training to suit the background of each participant, which led to the ineffectiveness of the training. As for the training of the students and people in the communities, because of the limitation on the budget, schools selected only students who already had some background in computers and only people who were interested in the training. Therefore, the training went smoothly.

Every school had set for each school level to have IT as one of the subject areas and had to be taught for 2-3 hours per week. This regulation then enabled all students to have a chance in using IT.

Furthermore, schools also allowed students who were especially interested in IT to participate in the IT Club, so they could practice outside their class time. The club helped people improve computer skills. The members of the club also helped the teachers and motivated parents to buy PC for their children.

Each school had rules or regulations in using the computer room. One teacher was assigned to be responsible for the maintenance of the room with the help from students from IT Club. Normally, students who helped were those who had the teacher responsible for the computer room as their homeroom teacher. However, assigning students to watch over the room was problematic when students who came to use the room were older than the students who looked after the room because older students did not listen to the younger students. Moreover regulations in using the room were set by schools and teachers without participation of the students. Even though students accepted most of the regulations, they still had some doubts about some of the regulations. Thus they normally violated such as bringing food and drinks in the room or talking during using computer. School needs to give reasons behind the setting of each regulation to students or allow students to take part in setting up these regulations in order to reduce the problems.

The computer room in each school opens from 8.30 am. to 5 pm. during weekdays and closed on weekends and other public holidays. In some schools, the room might open during weekends if the responsible teacher agreed to do so. It was found that a lot of people who came to use the room were former students of each school who already have jobs.

Some District Administration Offices came to asked schools for service. However, it was found that people in the communities did not come and use the service. Some people did not know that they could use the service. This might be the result of

insufficient public relations into the communities. Most public relation was done through parents ; therefore, most people did not get the information. Some of them did not have PC at home and those who had skills and knowledge of computer normally had PC at home, so there was no need for them to come to the schools.

In order to improve the potential in ICT of teachers in school, some schools, or group of schools arranged extra trainings by cooperating with the Education Service Area office. The trainers were staff in the Education Service Area or in the cluster schools. However, these extra trainings were difficult to set due to the limitation of budget. In addition, in the case of using primary school as the center of the training, there were some problems with electrical system during practice time. Participants could not use many PC at the same time.

The five pilot schools had more potential in ICT than other schools because they had staff with good computer knowledge. These pilot schools had transported the knowledge to the communities by organizing the trainings for members of District Administration Office and community leaders. These people were the first target group because the need to use ICT was crucial for them. Improvement in attitudes was noticeable. The target group responded well to the trainings and requested for more training. Some District Administration Office also supported some accessories equipment for ICT use in order to increase the potential of these schools.

In conclusion, the **Process evaluation** of ICT project of each school indicated that the organization of the project was good according to the strategy, plan, and vision of each working unit. The external factors such as the delay of budget and the transfer of school administrators, teachers resulted in the delay of the operation of the project and the output was not as expected.

Apart from supporting the improvement of personnel to have ability and skills to produce multimedia to facilitate learning with computer, PLAN Thailand also supported the use of CAI software in classroom, which was organized through the committee from Education Service Area and the assisting universities, consider the use of this software. Teachers and students may use this software on their own to search for knowledge in their subject areas. However, field study showed that CAI software was used in a stand-alone system rather than LAN system which had been installed in every school. Some schools did not use the software or did not have good management on the list of the names or contents. Most teachers used their own learning materials or assigning project work for students to produce learning material.

It should be noted that every school did not encourage or suggest students to save their data in the form of diskette or CD. Students saved their works on the hard disk of the computer. Therefore, after finishing the work, teacher deleted all data on the hard disk in order to prevent the personalization of the computer. This kind of management made students unable to work continually and had to make a new start every time even though it was the same work.

Effectiveness Evaluation

The effectiveness evaluation of the project was categorized into two types: comparing the objectives with the expected output, and the actual output.

The principles and all three objectives of the ICT Project determined by PLAN Thailand were used as the principles and actual operational guideline for the project throughout the two-year period. There was no change and modification to avoid the failure of the project, even though some objectives were difficult and risky to accomplish. The organizer also used other alternatives to support the accomplishment such as coordinating with Office of Basic Education Commission, Ministry of education and Ministry of Information and Communication technology in encouraging target schools with enough basic structure in telecommunication to use IT.

The factors related to the operation of the project namely, budget, number of target group, staffs, and hardware equipments were in fact in line with almost every objective. Each school would receive budget according to its proposal, but there might be some delay. However, the expansion of the use of computer to all teachers and students and the improvement of potential in the real practice was within the timetable. Even though not everybody could participate in the activities that PLAN cooperated with local universities to increase potential and skills of IT for teaching and learning, they could have chances to improve this potential through network schools or their own schools.

Among 52 target schools, 47 schools had one high-quality PC as the server. Number of client PC ranged from 1-18 PC. There were 8 schools that had 7 client PC, seven schools had 10 PC, and 7 schools that had less than five client PC. All 47 schools had LAN system that can be used as prescribed in TOR. The quality of the Internet depends on the basic telecommunication structure in the community that schools are situated. Whether there were accessory equipments such as digital camera,

printers, TV, tables and chairs or not, depends on each school. The production factors necessary for the activities such as document for the training as well as number of activities such as training, exhibitions, and ICT camp would be managed according to the TOR of PLAN and the proposal of each working unit.

Staff working in the ICT Project, PLAN Thailand, and local universities are those who were originally appointed in the logical framework. As for the Education Service, the staffs were changed from the Policy-planning Department during the purchase of equipments to the Educational Supervising Department during the training. As for schools, the staffs responsible for the project, the school administrators or teachers sometimes changed according to the transferring season. Most of the time, however, these were the same people from the beginning of the projects.

It can be said that PLAN completed the implementation of the project prescribed in the strategic plan. Even though there were some errors in the timeframe or process of some activities, PLAN Thailand tried to rank the importance of activities and those activities that had all sorts of problems including the process, budget and timeframe. PLAN Thailand used coordinating and negotiating techniques to make sure that these activities could be operated effectively.

The organization framework accomplished the objectives of the project to support, promote and develop students and teacher in rural schools of Thailand to receive information by using IT to search for knowledge, improve learning skills, and improve the quality of education and life. The objectives specifically for the projects expected to be accomplished within the two-year timeframe were as follows :

1. To strengthen the ability in using ICT to search for knowledge for people in the communities, improve learning skills, improve the quality of education and life by using schools as the base for the improvement toward the community.
2. To build efficient supporting system for the improvement of ICT by cooperating with school, community, government agency and other private sectors.
3. To build network with communities and be a model for learning system through pilot project that benefit from the use of ICT in school as well as widely promote the interest in the community.

PLAN Thailand determined the project's logical framework and reported the results in the 2004 Annual report as follows :

For the first and second objectives, PLAN Thailand provided budget to the selected schools to purchase PC according to the proposals, the installation of computer in schools, and the training of schools' staffs. PLAN also requested cooperation from MOE about the license of the software. Furthermore, PLAN Thailand signed MOU with Office of Basic Education Commission, MOE, Education Service Area of each province that had selected school under and local public universities.

Each activity organized by PLAN Thailand supported the accomplishment of objective number 1 and 2 if these activities were effective.

The analysis from the annual report indicated the list of hardware and educational software. The data from the observation and the files interviewed showed that 52 schools have PC according to the specification and numbers as provided by PLAN's budget. The data also indicated that the use of computer for learning and teaching was stand-alone more than network, even though the LAN system was installed in most schools. They said that they did not have enough client PC for students in each class and they retest for accessory equipments such as projector or large screen TV to use in the teaching through PC. Such learning – teaching technique was actually the traditional way of teaching, but replacing blackboard with using electronic machine.

As for the support on software, specification of computer and other equipment, there was the MOU between PLAN (Thailand) and MOE and Education Service Area for local purchase, and the installation of telephone in schools. It was found that PLAN Thailand provided budget to purchase 98 CAI software. There were 27 software programs for kindergarten and primary schools. 46 schools would receive 46 copies of the 27 software programs, 16 software programs for junior high school, 42 software programs for high schools, and 6 software programs for general high schools. Six copies of each software programs were given to each school. Another 21 soft wares were software that can be used to produce learning materials, namely Flash MX 2004 and Dream Weaver MX 2004, six copies for each software program. However, according to the interview, the purchasing of CAI did not focus on the details of CAI and some schools did not take part in the purchasing. Therefore, some schools never use CAI. Only the coordinator used it sometimes.

As for the improvement of staff to strengthen the potential in using ICT skills, PLAN Thailand used training and activity related to ICT to train the target group. Teachers and students were the main target group for the improvement and people in the area were motivating target group and see the importance of ICT project. This operation was a technical support to schools and community by cooperating with universities in the local area with Education Service Area to design the course, format, training method, trainers and the monitoring and the evaluation that conformed with the need of teacher and community.

It was expected that at the end of the project, 75% of the teachers in the target school would receive trainings to have ICT skills enough for self-improvement and learning of students. Moreover, it is expected that 80% of students could use computer technology. PLAN Thailand supported budget through projects of universities and Education Service Area to train and organize activities related to ICT for teacher and students in the project. This support not only improved ICT skills of teachers and students, which was the main objective of the project, but also built the support system that support the improvement and use of ICT efficiently by cooperation between schools and local universities and Education Service Area which was the second objective of the project, at least the relationship between training participants and trainers of each course.

The analysis of the questionnaire and teachers and students focus group interview showed that every teacher participated in at least one of the trainings or activities that PLAN supported. The selection for participants in the project was based on criteria of PLAN Thailand and the readiness of teachers and schools during the implementation. Students were selected according to the criteria of PLAN, the numbers of participants limited by the budget. The results showed that 78.8% of teachers and 63.1% of students participated in the training of basic computer use, 54.8 % teacher and 26.8 % students participated in the course for producing learning materials. The activity that the majority of the teachers and students participated in was ICT exhibition and the second activity was ICT camp for children (see Table 4.2 for details)

Table 4.2 Percentages of teachers and students participated in the training and activities.

Activities	Courses	Teachers	Students
Trainings	Basic computer use	78.8	63.1
	Programming to produce learning materials	54.8	26.8
	Computer maintenance	24.0	21.5
	Creating web site	22.6	12.5
	Using e-learning in teaching	29.5	9.4
Activities	ICT Camp for children	15.1	15.1
	ICT exhibition	52.1	28.3
	Visiting pilot school	13.7	19.7
	Academic meeting	30.1	4.4
	ICT seminar for community	18.5	6.2

As one can be seen from Table 4.2, the project succeeded in terms of the number of teachers and students participating in the training and activity that helped improve the potential in ICT especially the training of basic computer use. However, according to the focus group interviews of teachers and students in 17 schools, the results indicated that they could use computer during the training with the help from trainers and helpers but when they went back to school, they forgot and could not use computer on their own, and ended up asking other teachers and rarely look at the documents given during training.

Many teachers assigned work for students, which can be observed from the presentation of CAI. Most of them were students' work rather than teachers' work. The results indicated that only 5-10% of students and teachers had good computer skills. Teachers claimed that there were not enough PCs for students and about 10% of students did not have much interest in it. They said that computers were complicated and did not want to do anything about it. Some students did the work because they were assigned to do, not because they were interested to do it. However, according to the coordinators from cooperating universities and staff from PLAN, they agreed that the organization of the training supported the accomplishment of objectives number 1 at the high level, moderately supported objective number 2 and actually was not conformed to objective number 3.

As for the activities, the results showed that they had little support on objective number 1 but highly supportive for objective number 2 and the activity that conformed

with objective number 3 was a seminar for community, which indicated that even though the activities were effective in the target group, it was not enough for sustainable development. The staff from PLAN suggested extra activities to encourage the participation of students by using rewarding system to motivate the creating of ICT work project and looking for strategic partners who have potential and interest. As for university lecturers, they suggested that there should be Intranet system in schools and within school network instead of Internet. There was also a need to train staff in schools to have knowledge in maintaining the system as well as maintaining the PCs by cooperating with the assisting universities to work closely together with schools and gave advices until the schools could do it on their own. These extra activities needed to be operated with the intent in order to accomplish the objectives.

The results from the questionnaire on the suitability of the organization of the trainings and activities indicated that more than 75.5% of teachers and students said that it was suitable. (see Table 4.3) The clarity of the project's objectives, the selection of participants, the contents of the training, preparation for participants, sound system, light, style of training were also suitable. (see Table 4.4). Teachers participated in the projects were satisfied with the trainers in terms of the knowledge in the content of the trainings, method of transferring knowledge, the transferring method being motivating, transferring method making learning occur and the use of teaching aid facilitating the understanding of the content of lectures. The satisfaction at the good level was 43.2 – 59.6% and at the moderate level 26.0 – 40.4%. The suggestion on the need to be improved was less than 3%.

As for the context of the training such as document for the lecture, the general atmosphere that encouraged the participation to the project, time used for each activity, the continuation of content/activity, time for practice were suitable and clear. The majority of teachers and students were moderately satisfied with the clarity of the step of practice but more than 10% of teacher said the amount of time for each practice need to be improved and they need more time for practicing.

The data indicated that the project succeeded in term of the organization and management of the training to improve the ICT potential in format course lecturers and environment for the organizing of the training.

Table 4.3 Percentage of teachers and students agreed on the suitability in organization of ICT project of PLAN.

	Teachers	Students	No answer
1.1 Format of training	84.2	79.4	13.7
1.2 Format of activity	82.2	78.9	13.7

Table 4.4 percentage of teachers and students' opinion toward the clearness of general aspect of the training

List of Evaluation	Teachers	Students
1.1 Objectives of the Project	76.7	83.0
1.2 Selection of participant into the project	80.1	81.4
1.3 Preparation of participants in eh project	72.6	78.5
1.4 Location for the training	79.5	81.5
1.5 sound system	79.5	78.9
1.6 lighting	80.1	81.3
1.7 Content of the training	84.2	83.5
1.8 Format of the training	80.8	81.0

Table 4.5 Percentage of teachers' opinion toward lecturer and context in the training

The list of Evaluation	Good	Average	Need to be improved	No answer
1. Knowledge in the content/activity	56.6	26.0	.7	13.7
2. Transferring method motivated the interest of the participants	47.9	35.6	2.7	13.7
3. Transferring knowledge helped to occurrence of learning	43.2	40.4	2.7	13.7
4. Teaching aid helped the understanding of the content	44.5	38.4	1.4	15.8
5. Document of the lecture was beneficial to the understanding during the training	34.9	41.1	8.9	15.1
6. General atmosphere motivated the participation in the Project.	47.3	36.4	1.4	15.1
7. Time used for each activity	28.1	44.5	13.7	13.7
8. The continuity of the content/activity	30.8	47.3	7.5	14.4
9. Suitability for the time practicing	29.5	41.8	12.3	16.4
10. The clearness of step in practicing	31.5	50.0	2.1	16.4

Table 4.6 Percentage of students' opinion toward lecturers and context in the training

List of Evaluation	Good	Average	Need to be Improved	No answer
1. Knowledge in the content/activity	43.9	43.5	2.1	10.4
2. Transferring method motivated the interest of the participants	44.9	40.1	4.2	10.7
3. Transferring knowledge helped to occurrence of learning	54.2	32.7	2.7	10.4
4. Teaching aid helped the understanding of the content	44.6	40.3	3.8	11.3
5. Document of the lecture was beneficial to the understanding during the training	43.7	39.9	5.6	10.8
6. General atmosphere motivated the participation in the Project.	45.4	39.2	4.8	10.7
7. Time used for each activity	43.0	40.0	6.5	10.6
8. The continuity of the content/activity	41.7	42.0	5.4	11.0
9. Suitability for the time practicing	40.8	41.1	7.3	10.7
10. The clearness of step in practicing	50.1	34.5	4.6	10.7

The effectiveness of the improvement of ability in ICT in terms of the course, the trainers, and the environment of the training was evaluated by considering the reaction of the participants. Since this research was a follow-up, the assessment of knowledge and skills of the participants after training, which were the primary data, cannot be obtained whereas secondary data from the project included the method, target group and reaction of participant were evaluated in terms of satisfaction and dissatisfaction. The evaluation committee asked teachers and students to evaluate themselves from their current status and go back to their status when they were in the training. This part of data cannot be used to represent the knowledge and skills resulted from the trainings, but it reflected the feeling of participant toward their knowledge and skills.

The data analysis showed that teachers believed that they had knowledge and understanding in the content from the lecturer and coned work on their own and the general technical knowledge of computer was at the good level at 41.1% and 33.6%, respectively. The others were at the average level, and only 4.8% claimed the needs to be improved. The computer skill, the ability to use computer to produce learning materials, Internet skills to create website, and to communicate and search for

academic work were at the good level at 39.0%, 26.0%, 15.8% and 28.1 respectively. The other was at the average level. The data also showed that teachers believed they gained that the skills of Internet to create website, and to communicate and search for academic work at 27.4% and 15.8% respectively.

As for students, the results showed that students have knowledge and understanding in the content from the trainers and can work on their own and the general technical knowledge of computer was at the good level at 46.9% and 42.0%, respectively. The ability to use computer to produce learning materials, Internet skills to create website, and to communicate and search for academic work were at the good level at 36.6%, 39.0%, 29.3% and 36.9 respectively. The other was at average level. The data also showed that teachers believed that they gained the skills of Internet to create website, and to communicate and search for academic work at 11.3% and 9.3% respectively (see Table 4.7 and 4.8)

Table 4.7 Percentage of teachers' opinion toward the output of participation in the Project

Knowledge and ability	Good	Average	Need to be improved	No answer
1. Knowledge and understanding in the content from lecturers				
- Knowledge that can be used in practice	41.1	39.0	4.8	15.1
- General techniques about the use of computer in learning	33.6	39.7	4.8	21.9
2. The ability in using computer				
- Computer skills	39.0	43.2	4.1	13.7
- The use of computer to produce learning materials	26.0	50.0	9.6	14.4
- Internet skill to create website	15.8	42.5	27.4	14.4
- Internet skills to communicate and research	28.1	41.8	15.8	14.4

Table 4.8 Percentage of students' opinion toward the output of participation in the Project

Knowledge and ability	Good	Average	Need to be Improved	No answer
1. Knowledge and understanding in the content from lecturer				
- Knowledge that can be used in practice	46.9	40.1	2.0	11.0
- General techniques about the use of computer in learning	42.0	40.7	3.8	13.5
2. The ability in using computer				
- Computer skills	36.6	47.2	4.4	11.8
- The use of computer to produce learning materials	39.0	42.7	5.8	1.5
- Internet skill to create website	29.3	44.6	11.3	14.8
- Internet skills to communicate and research	36.9	39.3	9.3	14.5

The learning experience provided for the target group was the content and skills of ICT. The details and the depth of the knowledge was enough for ICT use in school but the content was quite difficult for people who are not familiar with PCs, especially elderly teachers. The results indicated that most teachers lacked real practice, even though they think that they were able to use computer. In contrast the students, they felt that using computer is challenging. They wanted to try even though they did not get as many chances as they wanted. The results from the interview and field observation indicated that most ICT work of schools in the exhibition were students' works.

The successful aspect of the effectiveness of the project, which was the direct result of activities of PLAN Thailand in response to objective number 1, was the number of participants but not the skill nor the ability. The effectiveness of the project responding to objectives number 2 and 3, however will be discussed in the Impact, Sustainability, and transportability Evaluation Section.

The impact of ICT Project toward teachers and students, people and community occurred when the activities that PLAN Thailand organized and directly affected the target group which to resulted in changes in behavior, concept, paradigm to improve the quality of education and life of the people.

The instruments used to evaluate the impact on teachers and students were interview and questionnaire. The result showed that less than 5% of teachers had little change in learning behavior, searching and managing knowledge through the use of ICT. Teacher changing their behavior was of 28.1 – 46.6% at the average level, 6.8-27.4% at the high level, and 13.7-39.0% at the low level. The creation of website as a means for communication among teachers, students and the community, teachers network to help improve learning with ICT and the use of Internet in teaching were the activities that had little change when comparing with others.

Less than 5% of students had little change their behavior. The majority of about 40.3 – 47.5% changed their behavior at the medium level, 23.1-32.3% at high level, and 0.3-2.4 % at low level. The creation of website as a means for communication among teachers, students, and the community was the behavior they had the least change.

Apart from the changes of teachers and students mentioned above, teachers and students also indicated that there were some changes in the schools and the community. The school administrators and teachers planned together to improved the learning with IT. There were supports from other schools such as other computer trainings that extend their knowledge on IT. (There was the public relation to let the people in the community come and use the service and learn cooperatively. (see Table 4.9 and 4.10)

Table 4.9 Result after teachers participating in the ICT Project of PLAN

List of Evaluation	High	Average	Low	No change	No answer
1. Producing the learning material with the program from the training	21.9	46.6	15.8	2.1	13.7
2. Research extra knowledge from Internet	27.4	38.4	17.1	2.7	14.4
3. Organizing learning activity that se Internet	13.0	40.4	28.1	4.1	14.4
4. Creating website to be medium between teacher, students and community	6.8	28.1	39.0	9.6	16.4
5. Teacher network to help improve learning with IT	15.1	37.0	29.5	4.1	14.4

Table 4.9 (Continue)

List of Evaluation	High	Average	Low	No change	No answer
6. Schools administrators and teachers in schools cooperating in plan for the improvement of learning with IT	22.3	46.6	13.7	3.4	13.7
7. Supports from schools such as other computer trainings that further their knowledge on IT.	26.7	34.2	21.9	3.4	13.7
8. Public relation for people to come and use service	17.8	40.4	24.7	2.7	14.4
9. Parents and people in the community coming to use computer and learning occurred.	11.6	39.7	30.1	4.8	13.7

Table 4.10 Result after teachers participated in the ICT Project of PLAN

List of Evaluation	High	Average	Low	No change	No answer
1. Producing the learning material with the program from the training	32.3	47.5	5.9	0.3	14.1
2. Research extra knowledge from Internet	28.7	41.8	13.2	2.1	14.1
3. Creating website to be medium between teacher, students and community	25.5	41.7	16.8	1.5	14.5
4. Supports from schools such as other computer trainings that extend their knowledge on IT.	23.1	40.3	19.6	2.4	14.6
5. Public relation for people to come and use service	32.5	39.0	12.8	1.0	14.6
6. Parents coming to use computer and learning occurred.	22.3	30.8	27.7	4.4	14.8

Sustainability Evaluation

The sustainability evaluation aims to evaluate the chance that each community have to strengthen the use of ICT to search knowledge, improve learning skills and the improvement of the quality of education and life by using schools as the base of the improvement and expand to the community. The project was the cooperation between schools, community, government agency and other private sectors to create a network with communities. The pilot project was a model for learning system that benefit from the use of ICT in schools. Moreover, it supported the interest of ICT in the whole community. The objectives of the project are to support, encourage and improve students and teachers in rural schools of Thailand to have more opportunity to receive information. They can use ICT to search for more knowledge, improve learning skills and the quality of the education and life of the people in the future.

This evaluation used the data from schools and communities to reflect the opportunity. It was analyzed without the consideration of the factor about hardware that was supported by PLAN Thailand. From the evaluation on the use of computer and opinion toward the benefit and importance of the project, the results showed that the change in frequency of computer was 39.0% for teacher and 20.7% for students. It is found that the trainings and the participation in the activities were beneficial and could be used in real life. The subjects had more confidence to use their skills in leaning and they believed that their ability in using computer were the results from the participation in the training and the activities. Moreover, more than 90% of both teachers and students requested PLAN to organize more of this kind of project.

These findings indicated that the opportunity of sustainability students and teachers in rural schools of Thailand had, provided them the opportunity of receiving more information by using ICT to search for knowledge, improve learning skills and improve the quality of their education and life.

The individual has higher chance for this sustainability. However, the success of this improvement will depend on the communication system and the adequacy of hardware in schools and communities, whether they can support the need of people in the community or not. The economic problem and job in the community also had important roles to the sustainability of this improvement. These data were collected from the people who were give the chance to improve, and were only the minor group in the community.

Table 4.11 The use of computer before and after the participation in ICT Project of PLAN

Frequency of computer use	Teachers		Students	
	Before	After	Before	After
Everyday	11.6	21.2	7.3	8.5
Every second day	10.3	14.4	18.7	22.7
Once in 3-4 days	17.1	13.7	13.2	14.1
Once a week	15.8	15.1	27.5	24.6
Once a month	10.3	8.2	1.1	1.0
Never use	21.9	11.6	15.2	9.9
No answer	10.3	15.8	16.9	19.3
Increase the frequency of use		39.0		20.7

Table 4.12 Percentage of teachers' general opinion toward the ICT Project of PLAN

List of Evaluation	High	Average	Low	No change	No answer
1. The training and the participation in the activity were beneficial	57.5	26.0	2.7	-	13.7
2. The knowledge can be used in real life	47.3	34.9	4.1	-	13.7
3. Have confident in using skills for learning	45.9	37.7	2.7	-	13.7
4. The ability in using computer were the results from the participation in the training and the participation in the activity	52.1	30.8	3.4	-	13.7
5. Make a request to PLAN to organize this kind of project more.	65.8	17.8	1.4	.7	14.4

Table 4.13 Percentage of students' general opinion toward the ICT Project of Plan

List of Evaluation	High	Average	Low	No change	No answer
1. The training and the participation in the activity were beneficial	55.5	28.3	2.8	-	13.4
2. The knowledge can be used in real life	48.6	34.1	3.8	-	13.5
3. Have confident in using skills for learning	42.8	38.9	4.4	-	13.9
4. The ability in using computer were the results from the participation in the training and the participation in the activity	45.8	34.5	6.2	-	13.5
5. Make a request to PLAN to organize this kind of project more.	55.8	26.8	3.5	-	13.9

Transportability Evaluation

The successful transportability of the project becomes the success model in term of the planning, objective setting, clarity of the logical framework success indicators for each stage of the project, the use of resources efficiently and the good management. The ICT project of rural schools of PLAN Thailand aims at being a model project and transporting the knowledge to other communities by specifying five pilot schools to maximize the effectiveness of the Project.

However, the transportability was unsatisfied due to the limitations of the success factors in terms of the principle of the project namely, paradigm in knowledge searching and the acceptance of the change of the teacher and the old generations. The elderly cannot change. They are familiar with their old life style, which they think was good enough and there was no reason for them to change. Another obstacle to the success of the transportability was the success factor in terms of technology, namely, electrical power, communication system, the correctness of English use about ICT and the timeframe of the projects. However, the format of project management of PLAN can be used as a model if it was adapted to conform to the administration.

Part 2 The factor analysis that affect the success of the project.

In analyzing of the factors affecting the success or the failure of this project, the evaluation team close to use two approaches of evaluation, namely, rational approach and technical approach by considering the condition, limitation and constrain and the basic assumption relating to the level of the accomplishment of each objective of the project.

The data used in the analysis were taken from the observation, interview, and questionnaire of people involved in the project such as teachers, students, the community, community leaders, PLAN's coordinator, coordinators from universities and lecturers. The results of the analysis are presented below.

Objective number 1

To strengthen the ability in using ICT to search for knowledge of people in the communities, improve learning skills, improve the quality of education and life by using school as the base for the improvement toward the community.

Indicators for the accomplishment of the objective

1. People in the community can use ICT to search for knowledge, improve learning skills and improve the quality of education and life
2. Schools were the base of learning for the community.

Conditions

People in the community (at least teachers and students) have knowledge and ICT skills.

Schools have ICT equipments. They also have database to exchange and search for knowledge to be used to improve learning skills and the quality of education and life.

Limitation and Constrain

Selected communities and schools in the project were not ready for the ICT according to the conditions.

Plan Thailand had limited numbers of staff but had to be responsible for all the projects in 7 provinces and 52 schools in the north and northwestern regions.

Basic Assumption

The conditions and situations can be improved by activities and methods that PLAN used and organized.

If the improvement of the people succeeds, it will lead to the improvement of schools and communities.

Project Description

The project aims to strengthen the ability in using ICT to search for knowledge of people in the communities, improve learning skills and the quality of education and life of staff in school as the priority at the start of the project. The administration of the project work through the coordination with related working units and the cooperation in organizing as well as monitoring the project according to the logical framework. Each activity of the logical framework determined the expected output for the benefit of the monitoring.

According to 2004 annual, three desired outputs for objective number 1 were accomplished as expected. The output that PLAN Thailand wanted were the output in terms of the readiness of hardware and personnel by considering the number that had chances to be improved without considering the level of the ability. Therefore, the evaluation of the project indicated the unsatisfactory in the use of ICT to search for knowledge, to improve learning skills and the quality of education and life of teachers and students.

The operation of the project

PLAN Thailand included four administrators and one coordinator to work in the project starting from the selection of the 52 schools in the north and northeastern regions. There was a MOU between Plan, Office of Basic Education Commission, and the Education Service area in each province to improve the potential in using ICT of rural schools. There was also the cooperation from local universities to improve staff of the schools and communities.

PLAN Thailand used the objectives of the PLAN as the determinant to design the activity. Therefore, it was clear that the activities supported the accomplishment of the objectives. There was an appointment for people responsible for the project, the coordinator, and the participants in each activity. There was a ranking of the importance and continuity. Moreover, the progress of each activity was always compared with the accomplishment of the objectives through to the implementation of the project. There were reports on the problems and obstacles that made the implementation not complete within the timeframe such as the delay of the budget for each activity.

The logical framework of PLAN's project emphasized on the coordination with all strategic partners, who are the stakeholder of the project. PLAN Head Quarter sponsored the project. There are many factors contributing to the success of the project, namely the ability to select good partners, trust, and goodwill to the project and the target group as well as budget for the coordination, the implementation of the project and the monitoring of each activity of the project.

It can be seen from the analysis that this kind of administration was transparent. It increased the chance of participation and responsibility for the administrator and partners, and there was a use of outside sources. The project was administered according to the logical framework involving the analysis of the conformation of the activities and the objective of the project. There was risk analysis of the success periodically according to the output identified in the evaluation reports. These were the strong points of the administration of this project. However, if we consider in details, there were several problems in rational approach that PLAN did not put into consideration while planning such as social factors including psycho-social factor and social-economic factor. The psycho-social factor includes value and paradigm toward the knowledge and the process in searching for the knowledge, the acceptance of the change as well as psycho learning. This was due to the fact that ICT project was innovation for the community. If communities have little value in accepting the change, chances for success of the project would, then, be difficult. The paradigm in accepting the changes in knowledge and development was also very important to the success of the project. Moreover, there are varieties in the target group such as age, experience, and interest. These were the factors to put into consideration for the success of the program.

The specification of the expected output that did not cover the real success of the project reflected the illusion of the success. Therefore, there was no modification of

the project in terms of the objectives and the activities. This illusion of success created the problems. For example, the training course organized by the participating universities were designed for the participants who did not have much different background of computer but in the real context, this could not be applied to all target schools due to the limitation of number of staffs. Thus, the same participants were recruited to attend almost every activity.

Objective number 2

To build efficient supporting system for the improvement of ICT by cooperating with school, community, government agency and other private sectors.

Indicator 3 for the accomplishment of the objective

1. There is a supporting system from universities, Education Service Area to efficiently improve the use of ICT for schools at the policymaking and operational level.
2. There is cooperation between schools, community, government agency and private sectors to use ICT efficiently

Conditions

There was MOU on the supports from several government agencies such as MOE, local universities and TOT to help the schools ready for ICT use.

Schools and other working units coordinated through the coordinate of PLAN Thailand.

Limitations and Constrains

Selected communities and schools were in the position to accept the service rather than coordinating with other working units.

PLAN Thailand must be responsible for every working unit in the project. PLAN needs expertise from the coordinating units rather than the knowledge from PLAN.

The selected communities and schools did not have efficient communication system in using IT.

Basic Assumption

The coordinating system and the support to schools was operated according to the MOU.

The operation of the project

PLAN Thailand operated the project according to the logical framework by the MOU with other working units, to encourage the target schools to have hardware and communication system that has enough potential for ICT usage. PLAN also supports the use of licensed software and the software that each school has. There was also MOU with local universities to improve the potential of the staff in the target group.

In organizing for a supporting system and the assistance from the universities and Education Service Area to improve the use of ICT in schools, PLAN Thailand used improvement system, coordinating system and monitoring system to operate the project. PLAN was the center for all decision-making. Thus schools did not have much participation and accountability in activities. This resulted in the lack of self-reliance system in schools. Normally schools operated according to PLAN.

Local universities have supporting roles for schools to develop the training and activities related to the use of ICT skills. The initial coordination with PLAN was formal but the actual operation with the target schools was not formal. The relationship was kind of personal relations, and students teachers relationship.

The development of each training course was knowledge base rather than competency base. Therefore, the content of the training was more emphasized than the practice. Participants reported felt that the practice time was not enough to improve their skills. The courses focus on the use of computer in the office rather than the use of computer for ICT. The computer and the program were used as learning media rather than to improve the quality of learning such as using Word Check from Word program, creating database from Access program, producing the learning material from Power Point or creating calculation program form Excel program.

Schools participated in the project were well prepared in terms of the equipments necessary for ICT use. They had communication system that supports the search for knowledge from the Internet according to the need of schools and communities. The project expected that almost every school could be the base for knowledge searching of teachers, students, and communities. However, according to the field study, the output from the use of the Internet was not satisfied because it was

difficult to connect. There were many technical problems. This indicated the inefficient use of ICT. However, even though there were problems in using Internet, staff can applied Internet skills to use in Intranet because almost every school already have LAN system, at least until the communication system is ready for the efficient use of Internet.

The coordination system between schools, PLAN Thailand, Education Service Area, and universities were in the response to the determinant of working unit mode rather than participation and accountability for the project. The school lack initiation and did not reveal their needs, which make the project operated with motivation. There was no coordination with people in the local areas for the transportability and sustainability of the project.

The important factor for the accomplishment of objective number 2 was problem in rational approach, psych-social, psycho-learning and technical approach in terms of the management by building the vision with schools to be have school-based management.

Objective number 3

To build network with community and be a model for learning system through the pilot project that benefit from the use ICT in school as well as widely promote the interest in the community.

Indicators for the accomplishment of the objective

1. There were pilot schools that used ICT efficiently for the benefit of the learning and the quality of life of people in the community.
2. There was cooperation between schools and communities, government agencies, and private sectors in the communities in using ICT to manage the knowledge to benefit the community.

Conditions

Pilot schools must be ready to use ICT in terms of hardware, software, and personnel as well as having communication system which support hi speed Internet.

Communities know the meaning and are aware of the importance and benefits of ICT in daily life and livelihood.

Schools and communities have good relationship.

Limitations and Constraints

Most of the selected communities and schools did have communication system, which support hi-speed Internet.

Basic assumptions

Schools and communities have good relationship.

The implementation of the project

In implementing the project to accomplish objectives, PLAN Thailand selected four schools in the northeastern region and one school in the northern region that were ready and have potential in using ICT in terms of hard ware, software, and personnel as pilot schools for the learning of ICT in schools and transport to the community.

The observation and the field interview of the evaluation team showed that the pilot schools in the northern region has quite good cooperative roles with the community in terms of giving the knowledge to the community. Schools were also supported by the District Administration Council in terms of equipments. Moreover, the communication system was supportive to the efficient use of IT. The pilot schools in the northeastern region were also ready in term of the equipments but the communication system was not good. For some schools, students had to use the service of the private Internet providers in the city because it was faster and more efficient that the Internet at schools.

In order for schools to be a model of learning system through pilot project that use ICT as well as promote the interest in ICT in the communities, schools must have school-base management which aims for the community to have participation, and accountability in the learning. It needs to be decentralized and empowered and the cultural gap must be reduced. It also needs to be the learning center of the community.

Recommendations

According to the factors affecting the success of the project, the evaluation team have some suggestions for the stakeholders for the implementation of the projects or the new project as follow.

Recommendations for PLAN Thailand

Preparation before the operation of the project

1. The selection of target group

Regarding the selection of target group including schools, communities, or staffs, PLAN must have clear and realistic information. There should be a field survey in order to build up confidence in the readiness and potential of the target group according to the real status. The database of target group should be done systematically for the benefit of informing the change at the end of the project.

The selection and method of public relations to give information and news to target population must be completed and fast.

2. Staff improvement course

The staff improvement course must be at the medium standard but varies according to the areas and base of target group.

Each course must be developed systematically using rational approach. It should emphasize on the capacity or skills for the improvement rather than on academic intensity. In one particular content and still, there should be two types of courses, one aiming develop the target group with no background in such field and the other aiming to tune up the target with some background or skills.

The importance of the development is the real practice, aiming for the consciousness, the attitude, and morality with the knowledge content and skills.

3. Program and time table for the development

The development program must be ready-made before the operation. There should be an analysis for the continuation of the working stages, content, and skills to be improved. The time must be suitable and enough. There must not be a rush in the operation, which will maximize the benefit of the output.

The project must be controlled and administered according to the plan. The change of activity may affect the continuation of the importance of the work.

4. Trainers

The determination of the structure, type, and qualification of the lecturers of each activity is necessary.

The coordination, the convenience, and the dissemination of the information about the activity in terms of the objective, format, target group and the expectation were necessary and important to the output of the activity.

The administration of the project

1. Administration system

The administration must be clear in terms of the structure of the administrative committee, the number, the scope of the responsibility and the duty of each person.

It must have clear determination for the mechanism of the administration. The administration must be efficient, transparent and can be examined. Everybody can participate and work at their own will, rather than being assigned to work.

Reference documents of the secretary or administrative section should be at the standard level and convenient for searching and referencing.

Financial system must be flexible and efficient.

The disclosure for information about the administration of the project must be presented in every level and at every stage.

The operation of the project must be network-coordinating system

2. During the operation of the project

It should have a monitoring system according to the framework of each activity, time, budget and working team. There will be a conclusion of the operation of the project including problems, success, and ways to modify the activity daily for the special activity or small activities and follow up with the target when these small activities ended. The mechanism in solving the problems should use brainstorming system.

3. The end of the project

There should be a conclusion of the results of the project for the target group so that the participant know the result immediately at the end of each activity. If it is possible, a report for the community to publicize the project should be produced.

The making of database about the activity and staffs network related to each activity and the revision of the result whether it is effective or not is necessary.

Recommendations for universities

Universities must be aware and accept their role as strategic partners that have relationship with Plan Thailand, schools, and community. They need to push forward the project to accomplish the objectives all levels of the project in order to effectively accomplish Objective number 2 and maintain its sustainability.

Universities may organize academic service related to the use of ICT by cooperating with Plan Thailand in designing courses and assisting in terms of the lecturers and the source of knowledge. Moreover, they may run the project to turn schools to be training place for university students. University students can help teacher in schools to set a system and maintain ICT equipments.

Recommendations for schools

Schools should be aware and accept their role not only as the receiver of the service, but also the role in building the relationship with community in order to improve the life style of people in the community. They also should be a model of learning to accomplish the objective of transportability to the community.

School administrators must manage the schools to be the base for learning and change the attitude of school as consumers or the receiver for the service to be the working unit that involves accountability in administrating the project leading to its sustainability and helps improve community.

Schools need to have variety of public relations apart from publicizing only through parents and schools committee.

Schools should be ready to become the center of learning by making database of community in terms of jobs, income, numbers of population, local knowledge, tradition, need, demand and supply of community. This database can be done with the cooperation among teachers. They may ask for financial support from government agency in the local area to solve the poverty in the community.

There should be activities to publicize ICT work of schools, teachers, and students and report the progress of the project to the community. This will build the confidence of the use of ICT to improve the quality of learning and life of people in the community.

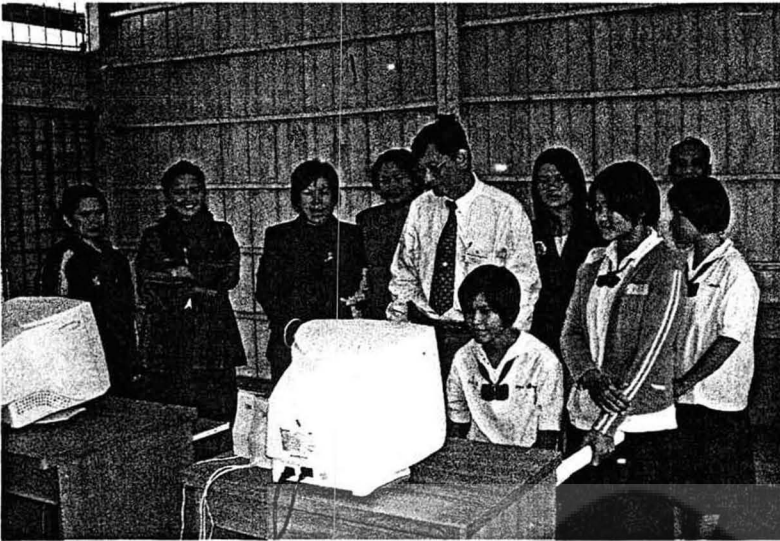
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Appendix



Data Gathering

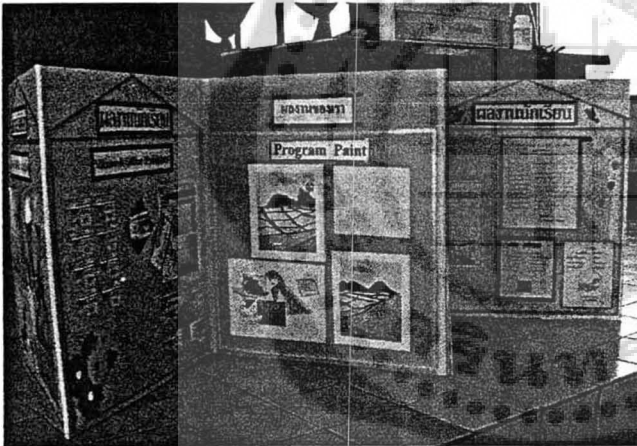
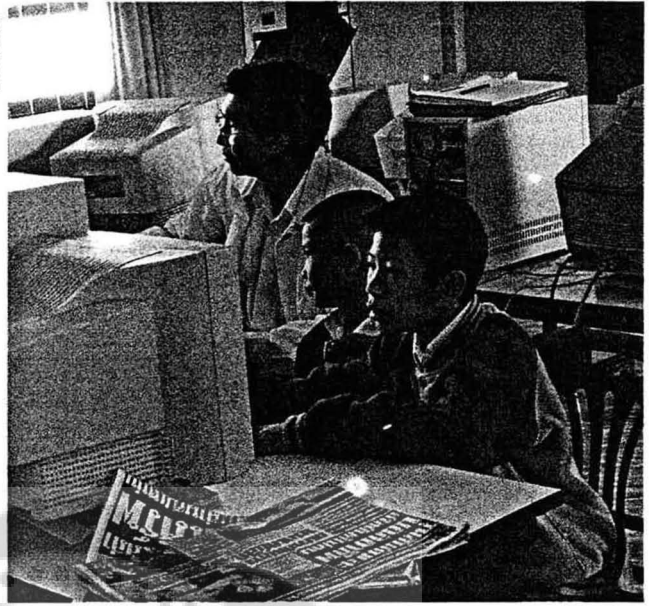


A group of students demonstrated their portfolios
by computer programs



Focus Group

The students are using the internet



Student's portfolios

Focus Group





The condition of computer classroom

