

PONG TELECENTRE

Introduction

Pong Telecentre was located at the Non-Formal Education Centre (NFE) of Pong District, Phayao province in northern Thailand. Initially, it was one of six pilot telecentres of the Thailand-Canada Telecentre Project (TCTP)¹, aimed at testing and demonstrating financially self-sufficient models of telecentres in Thai context. The implementing team conducted two community needs assessment workshops with community stakeholders. In addition, it conducted individual and business ICT needs surveys. The representatives were enthusiastic to set up a telecentre. The director of NFE Pong had had an idea to provide IT services to the communities. This coupled with its friendliness, high level of coordination and available human resources, convinced the community representatives to set up a telecentre under the management of NFE Pong. NFE Pong invited the community's representatives to sit on the telecentre's steering committees.

TCTP agreed to provide a one-time investment, including two sets of computers, software, two sets of tables, two additional phone lines, a fax machine, and one modem, for the establishment of the telecentre. It also supported the cost of dial-up Internet connection for the first year and later provided two more computers. The Pong Municipality matched the first investment with three more computer sets and the funding for renovating a one-story building for hosting the telecentre. In addition, the president of Provincial Administrative Organization Phayao also helped provide two more telephone lines. In March 2003, after one year of operation, TCTP withdrew and NFE Pong took full ownership of the telecentre.

Operation and Management

Services

Pong Telecentre focused largely on computer and Internet training and supported information and knowledge acquisition and learning activities, as it was owned by an organization providing adult education. It provided free computer and Internet training for staff of government and local organizations such as novice monks, students, TAO (Tambon² Administrative Organization) staff and teachers. The Telecentre had tried to follow the government's IT policies and projects. For example, it provided free training for the TAO staff after the government implemented the Internet Tambon project. Another reason for providing free service to local and government

PONG DISTRICT

Pong district was the biggest among seven districts in Phayao province, covering about one-third of the total geographical area. It comprised seven *Tambons* (group of villages). The total population (2003) was around 53,000, about 10% of the whole province.⁺ The available basic infrastructure was: *

- Electricity, except many highland areas;
- Tap water, and mountain tap water system in highland areas;
- Paved road, in most lowland and some highland areas;
- Landline home phone in municipalities only and public phone booth in most rural villages; and
- Wireless phone signal (rooftop antenna required in many non-municipality areas).

From observation and interview, TV and Radio was widely available in most households except in mountainous areas where electricity (from cable, battery and solar power) was scarce and only few households had a TV.

+ Obtained from Pong District Office and www.dopa.go.th.

* From observation and interview

¹ The telecentre project was financially supported by CIDA and was implemented by a Thai telecommunication conglomerate (Loxley Public Co., Ltd.) and two Canadian development consultant firms (Hickling Corporation and TeleCommon Development Group).

² A *Tambon* is comprised of a group of villages.

organizations was due to the close coordination and interdependent relationship between NFE Pong and those organizations.

The Telecentre charged a reasonable fee, perceived by the trainees, for training service offered to the public. The staff normally reserved around three hours in the evening for training; however, some sessions were in the morning or afternoon depending on learners' availability. The operator continually planned and scheduled training sessions 1-2 months in advance for diverse groups either for a fee or for free. It offered training from 30 hours and up for each course and at the end of the course it provided each trainee a certificate. From interviewing a group of seven MS Word trainees, two had the skills already and only wanted to obtain the certificate for career advancement and salary promotion. The rest wanted both skills and certificates for the same reasons. However, the courses provided were not standardized or certified by the industry, Ministry of Education, academic or IT institutes.

"Kids, students in the formal system, hire me to search information for them every week. Subjects I search for are [such as] history of communication, solar power, tourist attractions, making herbal beverages. I find [information] every time, use google and sanook. I search in Thai, and search English web sites sometimes such as governing system of Laos."

(A NFE teacher, personal conversation, 15 Sep 2003)

The computer and Internet service was aimed to mainly support research, communication and document tasks. Research supports were offered through different ways. The first was rental of Internet access time: users searched or surfed the Internet to find information on their own. The second was information research done by the telecentre staff, who then printed hardcopies out or saved it in a diskette for clients. Some NFE teachers also took orders from people, usually students living farther away, and helped research information they wanted by charging a fee. However, the operator said that the Telecentre never set up a price for research-by-staff service. She charged those clients for a fee based on her own discretion although sometimes the service charge was not sufficient for the value of time forgone that she could work on other regular duties.

Communication services offered were long distance phone call, fax, email and synchronous communication (chat). The long distance phone service rarely had any users because of the competitive prices of phone services provided by private vendors who owned a personal wireless phone. Occasionally, people came to use the fax service. One male customer mentioned that he used to keep in touch with his wife who worked and lived in USA via fax and email at the Telecentre on a weekly basis until he got a computer and Internet connection at home. NFE also used the fax service sometimes. Email and chat were part of the Internet-hour-rental service. The Telecentre staff provided advice on how to use the program, but did not act as a mediator in receiving or writing messages for the users partly because they had not received any requests for this service.

Besides renting computers by the hour for document-processing tasks, the Telecentre also provided document and layout related services such as typing, making PowerPoint presentations,



Pong Telecentre was open seven days per week except national holidays. The stated business hours were 8.30am-8pm; however, from observation, it was usually opened 9am-7.15pm depending on the level of business. It used to open until 9pm, but changed due to the concern that parents might complain about the young staying outside too late at night, and also of the staff's personal and family life.

and designing business cards and product labels. It used to provide binding and photocopying services at the beginning, but stopped because of high rental and maintenance costs of such equipment and small market share. NFE Pong had long used research, typing and printing services for producing leaflets, information sheets, digital photographing and reports, etc. from the Telecentre. As NFE subsidized the utility cost and provided other resources, the Telecentre provided services free of charge to its owner organization.

Staffing

Pong Telecentre employed staff on a part-time basis in order to keep the operating cost low. All of them were NFE Pong's staff. The arrangement made among the NFE Pong staff was that the registrar staff took most responsibility of the Telecentre such as training, operating and bookkeeping and looked after the Telecentre on weekdays, and another 4-5 NFE teachers took turns in taking care of it on weekends. Most training was offered during weekdays by the registrar staff. On weekends, was up to each individual NFE teacher to decide whether to provide any. Occasionally, the Telecentre invited outside trainers to provide specific training sessions. As a result, the registrar staff had her office set up at the Telecentre and acted as a full-time operator although it was supposed to be a part-time position. The director of NFE Pong acted as the Telecentre manager: helping coordinate with other organizations at the decision making level, market Telecentre services, seek additional funding and oversee the direction of the Telecentre.

Technical Maintenance

The telecentre operator usually took care of the maintenance matters by herself first; however, when the technical problems exceeded her capacity, more skilful individuals in the area were consulted. After the withdrawal of TCTP and one-year maintenance support from Loxley, Pong Telecentre obtained maintenance service on more serious problems from a local entrepreneur who owned an Internet café in a farther district (70-80km away). He dealt with both software and hardware problems on the server and network and often charged for a reasonable fee. In addition, two NFE teachers who co-owned a computer shop with their friend had gained a certain level of troubleshooting and hardware repairing skills through operating their business. As NFE staff they sometimes helped solve some problems without charging a fee; and supplied

new parts and equipment at a break-even price for the Telecentre.

TELECENTRE FACILITIES

- Computer stations: 7 (Celeron/Pentium) with speakers, excluding one server (with CD writer)
- Printer: 1 inkjet
- Scanner: 1
- Digital Camera: 1 (2Mpxl)
- Telephone lines: 2
- Fax/phone: 1
- Software: Windows 98, MS Office, Starfish Office (local OSS – unutilized), etc.
- Internet connection: services from 2 ISPs (CS+Loxinfo; TOT) through dial-up modem via regular landline phone
- Thai web site directories (hardcopies)
- Others: Switch (1); UPS (2)

Air-conditioning, comfortable waiting area (with armchairs and couch), and drinking water was available. Snacks (banana chips) and handicrafts made by women's groups were available for sale.

(Observation in September 2003)

Problems experienced by the Telecentre were usually related to deterioration of equipment, viruses, malfunction of software and Internet connection. A sign asking users to scan for viruses or to consult with staff before using a floppy disk on any computer station was posted on the wall, but through observation none of the users did that and the staff were not very serious in taking any action. One Telecentre staff member accepted that there might have been fewer problems if at the end of each day they could clean up the unnecessary files and folders from all computers as a routine maintenance task. However, due to long hours at work and personal engagements, it was not yet put into practice. As all computer terminals were connected to the server as one LAN, it was possible to perform this

task from the server either daily during low traffic periods or weekly.

Although equipment malfunction occasionally caused a slow Internet connection, disconnection or out-of-connection, the connection problem was mainly related to the local phone and ISPs used. From observation, the Telecentre was only once out-of-connection due to the maintenance of the local telephone line done by TOT (one of the landline phone providers), the rest was from ISP choices. More explanation on the latter is provided next, Financing Management.

Financial Management

Pong Telecentre operated and provided services to local people with a not-for-profit approach. “The telecentre and library have the same role, to be a learning source. The telecentre administration has to have some business elements in order for it to keep running... but not focusing on the business side, not for profit. We emphasize on being a learning source for the community. We don’t want to take advantage of the community which is already at an opportunity disadvantage.”³ Since it had to balance between financial self-sufficiency and affordable services, it charged the service at either reasonable and market prices or for free while NFE Pong subsidized part of its expenses and resources such as utilities, business space, staff, and others.

BASIC SERVICE CHARGES

<u>Services</u>	<u>Baht (≈USD)</u>
Computer rental/hour	15 (0.38)
Training (30hrs +)	300+ (7.6)
Printing (B&W)/page	5 (0.13)
Printing (colour)/page	8+ (0.20+)
Typing/page	10 (0.25)
Phone/Fax	varied
Digital picture/photo	20 (0.50)
Others (e.g. designs)	varied

The computer and Internet hourly rental service was the major income generator. It was five baht less than other computer and Internet shops in the areas. The busy hours were usually in the afternoon and on weekends. The average daily revenue was around 170 baht (≈USD 4.30) if service was fully operation. When the Internet connection was out or equipment was broken, the revenue dropped since online activities were the major usage. Unlike many Internet cafes that mainly drew revenues from games, Pong Telecentre limited the use of computer and Internet for games although it did not totally prohibit them. It also sold snacks (banana chips) and handicrafts made by local women’s groups, which was aimed to provide additional markets for those groups.

REFERRING INTERNET USERS

“I went to another Internet shop. They told me to come here [Pong Telecentre]; I don’t know why.” said a male Internet user.

Many Internet cafes paid about the same price for the Internet connection. All of them had fewer computers and it was not very profitable for them to provide Internet service for one customer, unlike typing and games on LAN. Some also had to pay rent and therefore, they had higher overhead.

“The most profitable is typing service,” mentioned by a co-owner of near-by Internet café.

A co-owner of computer shop located in downtown said, “we emphasize on repairs and maintenance.”

Since the electricity cost and some other costs were subsidized by NFE Pong, the major expenses of the Telecentre were staff salary, Internet connection and maintenance. The training honorarium (100baht/3hrs) for the operator in 2003 was from project funding obtained by the public library. Hence, the Telecentre could provide free training sessions for local organizations and departments. However, the manager did not know whether that fund would be continually provided or they had to find alternatives. The staff helping on weekends got a 100-baht compensation per day from the revenue made on that day.

For the Internet connection, the Telecentre staff usually tried to use the free Internet hour provided by TOT for its landline telephone clients before

³ In a personal interview with the Director of NFE Pong on 21 September 2003

using the commercial one. It paid 3-baht for a local phone call for each connection and had to redial every two hours. However, the Internet connection from TOT was often slow and self-terminated before two hours. When the free connection was not very efficient, the staff would use a commercial Internet connection, which was more stable. It cost 12-15 baht per hour plus 3 baht for a local phone call. Hence, the Telecentre would about break-even if it used the commercial Internet service with only one customer.

Pong Telecentre, as mentioned earlier, had to pay maintenance fees only when it used services from individuals outside NFE Pong. Due to having a well-established relationship with the technical service provider, the Telecentre was usually charged for a reasonable price, 300-600 baht, per service. Apparently, it called for the service once or twice every two months. For an overview of monthly balance, the operator kept track on daily revenue and expenses.

Each month, the operator made a book to keep records on the daily usage of the Telecentre services. The information recorded was simple, mainly on type of users (public, student, bureaucrat), time in and out, whether using Internet or computer, time length and service charge. At the beginning, TCTP asked the operator to keep detailed records on usage and user such as information sought, web site, and so on. However, it was undoable because the operator had to perform many other tasks of NFE Pong and was not able to observe how people used the Internet and computer. At the end of every month, she made a summary of income and expenses of the Telecentre. Nevertheless, multitasking and heavy workload sometimes reduced the capacity of the operator and delayed the completion of monthly financial report, as well as some other tasks perceived as having lower priority.

PR & Marketing

Pong Telecentre had done some public relations and marketing on its activities through diverse channels and at different levels, as explained in the following:

- At the decision-making level, the director of NFE Pong (Telecentre manager) had continued to make local organizations aware of facilities and services available at the Telecentre through a 2-day monthly meeting participated in by all chief officers of local organizations, as well as village and Tambon chiefs. They became promoting channels for the Telecentre within their units. Some of those units then contacted the Telecentre to provide training and to lend its skills, which they did not have.
- Through PR letters, Pong Telecentre sent out formal letters to some targeted local departments and organizations such as TAOs, schools and so forth to promote its services.

MORE THAN A GOOD PRICE

14.30 – No computer is available, so she [Orn] waits for a computer. Mink [a grade-5 girl] asked her why she didn't go to another Internet shop. She said it was more expensive, 20 baht. Mink said there was another one which was close by. She said she never used the service of that Internet café.

15.00 – Talk to Orn, who is trying to log onto www.narak.com, a chatting web site. She uses the computer and Internet in school as well. ... She said in school there were 40 computers for students at both lower and upper secondary levels, 20 for each level. Students can use them to do anything they want: typing, learning, playing the Internet (games, chat, surf web sites). For her, researching online is not playing the Internet. In addition, the school has another 8 computers for students to use for research only.

Orn comes here because the service charge is cheaper than other Internet shops in the area. Other Internet cafés usually charge 20 baht per hour. She said if there was another Internet café that was cheaper, she would go as well. She complains that the Internet is slow today and often disconnected, especially on weekends. She said at school, the Internet was even slower because more computers were connected.

16.50 – Khun Jit [Telecentre staff] asks two teenage girls, Orn and her friend, to quit chatting because they had been doing that for almost two hours already and asks them to come back tomorrow instead.

(Journal of Field Study at Pong Telecentre, 6 Sep. 2003)

- Through clients, the Telecentre staff informed and introduced new activities to its clients and used this channel to spread the word.
- Through NFE programs and staff, NFE teachers assigned at each community learning centre had invited their students and community members to come and try. A number of teachers had mentioned to their students that they would teach the students how to use the technology at a mutually convenient time. The teachers also searched for information online for villagers when they asked for help.
- The Telecentre promoted its services through local radio once in a while.
- At the beginning, the Telecentre offered membership with preferential price for the service as the start-up marketing strategy. Also, it used to provide a free-to-use day in the first year.

However, the PR and marketing strategy seemed to be less proactive and consistent in the second year. A number of staff at near-by government departments did not know much about the service offered although most expressed their interests in using and getting training on computer and the Internet. One local novice-monk school was not a targeted client, but there turned out to be enough interest in the technology among novices. More exploration on this issue is provided later in this report. The Telecentre had never carried out any needs assessment of community members and of local organizations in the areas. Although a survey was in the plan, the staff never had a chance to do that due to workload. This could have effects on the PR and marketing plan and direction of the Telecentre.

Communities and ICTs

Information Access and Communication Pattern

Generally, local people received information and news from more traditional media such as TV, radio and newspapers, and from people around them. When asking what sources they received information from the most, around 62% of 35 respondents said TV. Twenty percent received news and information mostly from family and friends, followed by radio (5.7%) and print media (5.7%). More than 85% of respondents received entertainment and daily news from those sources. Locals also received information from other sources. Loudspeakers and village or tambon chiefs were also major sources for news and information within their community and announcements from government departments although a few people mentioned that their houses were farther out and the loudspeaker could not reach them. Some people mentioned co-ops were places they got information on agriculture practices, prices and loans. A small number said they used home phones and public phones due to the scarcity of the infrastructure.

Nevertheless, more advanced ICTs were also the complement sources of information and means for communication and their uses were under particular contexts or within more specific groups. A few people said they received news messages through wireless phones. Several mentioned that they used cell phones to keep in touch with family members and friends. A small portion used it for business purposes. An owner of a food-stand, who sold grilled-fish at a small local market, mentioned that she used her cell phone to call her supplier every day to check the fish prices and place the order. One women's group that made and sold sausages had included the cell phone number of the group leader on the label for marketing purposes, so its customers or distributors in other areas could call to place orders. Nonetheless, due to the

NFE PONG & INFORMATION SERVICES

- A public library (NFE Pong head office) with collections of hardcopies and videos, using computerized data management (barcode system);
- Village newspapers delivered by NFE teachers or postmen through NFE Tambon Learning Centres or local government units, and village representatives;
- Pong Telecentre at the NFE Pong head office;
- Adult education program (literacy & secondary courses) and training through NFE teachers.

high competition, they sold their products mostly at nearby local markets within the tambon. So they checked the sale and collected the money from the distributors by weekly visits.

KARAOKE, COMPUTER, & LOCAL CULTURE

“What do you use the computer for?” I asked.

“Not much, I’m not fluent in using computer. Mostly play karaoke and type sometimes. ... Many village youngsters come to the learning centre and watch karaoke and TV in the evening. They learn how to write in Hmong through karaoke. One of the teachers, who is Hmong, provides Hmong lessons to those young people every evening.”

A TV and computer were available at this NFE’s highland community learning centre, located in a Hmong (hill tribe) community. The village youth went to watch TV and karaoke almost everyday. Hmong does not have its own written language, only spoken dialect. Western missionaries invented the written form by using roman alphabets. Songs of hill-tribe ethnic minorities and Karaoke video-CDs from China were widely available at the border and was popular among many hill-tribe groups. It became a learning and cultural preservation tool in this case.

(From an interview with one NFE highland teacher)

In the highland area, the phenomenon was much different; the density of households with television sets was much less than in lowland communities due to the limitation of related infrastructure. Nonetheless, a wireless signal was available with rooftop antenna although limited. Similar to lowlanders, highlanders used cell phones for business and personal communication. A secretary of highland women’s group making stitched-handicraft mentioned that she saved money and time by calling the suppliers for prices of fabric and thread. Many young people worked in cities and some overseas. People without a cell phone would rely on the ones who did for both incoming and outbound calls. The service charge was 10-20 baht for inward calls. Public telephones were available where a satellite dish was installed. Hence, the highlanders rarely had a chance to use the computer and Internet except the young who went to schools in the lowland areas.

For more specific information, local people normally obtained from related local government units, public library and the Internet (young people mostly). From interviewing some public library users, most of them were satisfied with materials available at the library. They mentioned that they could mostly get what they wanted. Although it did not provide any computer for the public to use for research, it provided multimedia materials on videos and CD-ROMs. A few library users, as well as the majority of interviewees who did their research online at the Telecentre, said that they usually researched in libraries first and went online after they did not get enough of what they wanted from libraries.

From interviews of 86 people, almost 68% used the computer and/or Internet, 18% did not use either and the rest did not respond. The following tables show some demographic facts on the computer and/or Internet users. Students and government employees were the groups that

used the computer and Internet most. When looking into the data within each group, it appeared that around 93% of students interviewed and 87% of public and government employees used the technology. People in career groups such as

farmers and daily labourers who earned lower incomes, required more labour and worked in the field without many document-related-tasks were less likely to use this technology. Often, many farmers also worked as daily workers when available. Due to seasonal and local circumstances, the majority of interviewees were female; hence, the gender aspect was not analysed under this question in order to avoid misleading conclusions.

Table 1: Percentage of respondents using the computer and/or Internet within age groups.

Age group	Percent
Under 20 (Teenager)	78.6
21-30	76.5
Over 31	45.8

Table 2: Career of respondents using the computer and/or Internet.

Occupation	Percent
Student (formal)	47.5
Public/Government	33.9
Not working	8.5
Others	10.1

Fifty-five interviewees said they used services of Pong Telecentre and/or computer shops before. Nine out of 48 Telecentre users interviewed went to other Internet cafes. More than two-thirds of Telecentre users were at the age of 15-19 and the majority were students in formal setting. Unlike many Internet cafes, the Telecentre had more female users (60%) than male.

Information and Communication Needs

Local people had great need of telephone. Although wireless phones were available in most areas, many non-municipal residents I interviewed complained that they had applied to get a home phone quite a few times over years, but the telephone companies said they did not have any numbers left. All the main lines were used up. They mentioned that service charges of landline phones were more reasonable than those of wireless. One highland NFE teacher said,

“Villagers sometimes use mine [cell phone] to call their children. I let them use it, but don’t know how to charge them. They have great needs for using telephone. When crops are ready to harvest, they have to call and arrange for the middlemen to come; otherwise, villagers have to go down to Pang Ka, 15km away.”

A number of people who owned a computer explained that they did not have Internet connection at home due to having no home telephone.

Unsurprisingly, from interviews most people were interested in information and news that related to their careers. For example, many government employees mentioned that they were interested in checking out the web sites of departments and ministries they worked for in order to keep up with changes, new policies, and urgent commands from the headquarters. This allowed them to respond and take actions quickly. A few police officers mentioned that it was too slow to wait for the official letter to arrive. TAO staff checked out products and economies of other tambons in order to compare and learn from others. Besides staying updated on official changes, NFE staff also looked for information on potential additional careers and alternative products in order to transfer the information and knowledge to villagers. “I’d like to search information on bamboo worm from Kasetsas University and University of Chiang Mai – is able to cultivate them. I’d like to know how to do it. If it were interesting, ... I’ll study the possibility. If I could sell them, then I’d support villagers to do it”, said a lowland NFE teacher.

Young students mostly sought information on continuing education and topics relating to learning subjects for their assignments. Those who were looking for jobs or in the workforce were interested in obtaining more information on labour laws, welfare regulation, and employment opportunities. One interviewee obtained job and employment information from biweekly periodicals from the public library. She commented that it was not enough and should have had those more frequently. A couple of people mentioned that job vacancies from government units should have been announced more openly and broadly. A hairdresser mentioned that she obtained information on new styles and techniques.

A number of respondents were in the agricultural sector, which was the major economy of the district. Many of them expressed the need for information on produce prices, markets, agricultural techniques (for preparing plot, better yield, etc), additional and optional careers between and during growing seasons, and loan and interest breaks. They obtained most of the agricultural information from middlemen and a few other sources (e.g., village chiefs and books). Information on IT training, health, land regulation, community development news and so on were also mentioned. Some mentioned that they had to get the information

SHORT DISTANCE – LONG WAY

“My house is in Santisuk village, around 25km [from the town]. I spend around one-and-a-half to two hours to commute one way by motorcycle. The way is winding. Difficult! Especially in the rainy season, the road is muddy.”

(An NFE Pong Student, personal conversation, 21 Sep. 2003)

at government units that were mostly located in town. Interestingly, a portion of respondents was not able to tell or think of what information they needed or wanted.

The following provides some examples of comments on information needs of both highland and lowland farmers interviewed.

“I’d like to know more about the acidic and alkaline soil. If the measuring machine is provided...”

“I’d like to contact and have communication via phone when chicken have problems related to diseases. I’d like to get advice on chicken farming or if there would be handbooks for additional knowledge.”

“When village chief get information, s/he should announce right away, shouldn’t wait or collect many before making an announcement.”

“Provide and deliver information faster.”

“If I didn’t go and visit [government units], I wouldn’t get [information]. There is no new information.”

“About additional career, I don’t have much information; live in the hill; don’t come down often especially in rainy season; don’t have time.”

“Take care of my kids and help them be able to obtain good education. [I want] knowledge on growing field crops and rice, I’d like to have knowledge on how to maintain a good family.”

“Trading and business, rearing and taking care of first born baby till grown up.”

“... I’d like to get advice; this rainy season, the chicken got diarrhea, didn’t have any solution except future prevention only. The impact is [that I’m] facing loss, no profit or invested capital gain.”

“Information and content match [our] needs – growing corn, corn prices which are not from the middlemen.”

“Markets that take [our] rice.”

“Would like to know from people that could provide advice.”

Local Awareness and Perception

Most local people, who were aware of the use and benefit of computer and Internet and used services of the Telecentre or computer shops, worked within formal institutions or had working-relationship with those institutions. These people were students in formal settings, teachers, employees of private enterprises, TAO staff, staff of some government units, village and tambon chiefs and representatives, local group leaders, and NFE students. One new university graduate mentioned that having the Internet kept him updated on events and he could check news when he felt like knowing something. A novice monk said that he and his friend would like to learn how to use the Internet because they were about to graduate from grade 12 and they were afraid that they did not know how to use it and could not catch up with others at the university level.

The younger generation more than the older generation, perceived computer and Internet use, IT skills and training certificates as being necessary for their career advancement. One young man, who came to learn how to use the Internet, said learning to use the Internet might be an advantage when applying for a job. He could count this as computer skills and include it in his resume. If any job required computer and Internet skills, he could say he knew how to use it. He also mentioned that email could be used for communicating with others, as well as the Internet for searching information. A group of Telecentre trainees accepted that they wanted the certificate to get promotions on salary raises and better positions; two of them mentioned the future opportunity in getting alternative jobs.

Although many rural residents and adults viewed that it was important to obtain updated news and information at a fast speed and the Internet could provide them a lot of information, they usually had no time to obtain the basic skills and to come into the town. A number of interviewees stated that they would like to get some computer and Internet training, including repairing and troubleshooting, but most of them did not know that the Telecentre provided training service and they also did not have time.

“Internet, ... NFE teachers said if I would like to learn, I can contact them, but I don't have time,” said one NFE student who lived in a mountainous community.

“I think there are recipes on the Net, but don't have time. When I went there, only children and teenagers, and I don't know how to use, so I think better let them use. Sometimes there are many people and the computers were occupied. I think I better find the information from other sources, from books and etc,” comment of a leader of women's group.

In terms of Telecentre services, more than three-fourths of respondents realized the existing of Pong Telecentre as they called it 'computer and Internet shop of NFE'. However, a big portion of people who were aware of the Telecentre's existence did not use the service. Many of those did not know what and how the services were provided. Also, being owned and operated by a government organization, Pong Telecentre was perceived as providing services like normal government departments and operated during official hours, 8.30am-4.30pm, only. For example, a local group leader commented that he knew about the Telecentre, but never used the service before because the Telecentre was part of government units, which were generally open only during official hours and were closed on weekends unlike private business. He said that he came to the Telecentre as he was unable to get all the services he required at another computer shop.

Telecentre Use

The major use of the Internet at the Telecentre was for entertainment and research. Entertainment such as chatting online was the most common use of the Internet at the Telecentre. Typing, surfing the Net and playing games were next in popularity. Most female users usually chatted only, but some of them would also, surf, and search all at one time. A teenager, who came to the Telecentre for online chatting almost every day and came to the public library once a week to return and borrow new books said if there was not the telecentre here she would have had nothing to do and just stayed home. She said it was fun to use the Internet. Male users often played games, but also had mixed use among surfing, chatting and playing games. The length of one- or two-hour use was about the norm for entertainment.

While chatting online was a routine use of Telecentre, researching on the Internet depended on

CHAT FOR ENGLISH SKILLS

What a surprise! Seeing a local young woman chat quite fluently online in English was uncommon. I figured that out on one weekend while a group of young people from a rural village came to learn how to use the Internet at the Pong Telecentre.

“In the past, my English was not good, but I wanted to be good at it. I chatted with my friends from different countries. I learned English through chatting. Right now I am quite fluent in reading and writing. ... I asked my friends to chat with my students so they could practice using English. And assigned one friend for each student. I don't want them to chat in Thai.” A teacher of NFE Pong explained.

A female teenager in the group was very keen on learning English. She had a notebook full of English expressions and vocabulary. She got them from teaching-English TV programs and books. She chatted with one of the teacher's friends. “I have the notes beside me when chatting in English. Whenever I stuck and don't know how to respond, I look it up in my notes.”

whether students were assigned any report or research task. However, when using the Internet for research and the computer for doing assignments, they often spent a bit more time at the station. Cutting and pasting the needed content from web pages and saving the content into a document format on diskette was commonly practised. In a few extreme occasions, clients spent a whole day or around eight hours at the Telecentre doing research for their reports and presentations. As one grade-10 student said, whenever she had to write a report if she had access to the Internet, she would research online first because it was more convenient. She could save it on a disk or print it out; then edit and pull the information together easily. Also the Internet had more information than the school library

did. Her school was relatively new and so did not have many books available.

Most Telecentre users (72%) only visited Thai web sites and searched in Thai. The rest 28% mentioned searched both in Thai and English, but Thai was the main language used. The web sites and/or search-engines used most by them were sanook.com, kapook.com, and google.co.th. Other web sites that were also used were such as hunsa.com, dekdee.com, thaimail.com, chaiyo.com, etc. About one-third of the interviewees mentioned always found information they needed and one-half said that they usually got information they wanted with occasional exceptions that the information was not enough, could not open the web page, or the content was not updated and uploaded onto the Internet. As a male Telecentre user commented,

“Today I plan to come and check the exam schedule and location at Ram[kamhaeng University]. [I] know the exam date but don't know the place.... I couldn't open the web page, it took long time to load. It was like this too when I opened it in Bangkok. Usually in the evening, many people try to get onto the page.”

One female grade-12 student searched for information on hormones for her biology assignment. Two of her friends had finished the assignment by searching for information from the school library. The girl who searched the Internet said she could not find the information in the school library and she got it from sanook.com by looking at the topic on diseases. She said she was satisfied with the information obtained because it was better than that in books and had more details. She came twice a week. All of them were waiting for another student who could not find information on tenses in English and had asked the operator to search for her.

The Telecentre operator provided advice and helped the clients in research when they could not find the information because either they did not know how to search or did not use the proper key words and search at the right place. “Last year we'd like to have a field trip visit in Chiang Rai, but didn't know where to go. Asked the [Telecentre] staff to search on the Internet for us and we went to see how they made wine. After we came back, we made [wine]” (a women group leader, personal conversation, 23 Sep 2003).

The operator mentioned that there were some up and down periods on Telecentre use depending on seasons. It was usually busier during school break and weekends and less busy during some local holidays because the Telecentre was also closed and when the Internet was unavailable. It also had greater traffic during the end of fiscal year and promotional-and-performance review periods because civil servants and government employees were more interested in checking out their promotional status from government web sites.

Although the majority of the Telecentre users resided and/or worked near-by the Telecentre, a number of users who lived farther around 10-20 km away also came for the services by mostly motorcycle. However, most of them were young. Since the goal of the Telecentre was to promote the equality on information access, it did plan to provide information from the Internet through other channels or media to local people such as farmers. The Telecentre manager stated that they had planned to put up a price board in front of the Telecentre in order to get daily information on agricultural produce prices to the local farmers, but the plan had never materialised due to time, staff and budget constraints. NFE Pong also planned to expand its IT service to other more remote tambons by setting up computer centres at its community learning centres with the facility of one or two computers. It aimed to provide computer training first and would provide Internet service once landline phone was available in those areas.

Strengths and Opportunities

In-house Services and Further Integration

The role of NFE Pong was to build local capacity through training and life long learning programs and it considered Telecentre and library services had an identical function that was providing knowledge and information to the public. The library had been using computer and library software to store its material records and barcode system in managing library loans. The community also recognized that the library had diverse collections; it was awarded by the NFE Office on its excellent service. NFE Pong had tried to make use of these existing services to support its work. Nevertheless, as the Telecentre was still relatively new for the community, it had not yet provided much benefit to people outside the formal educational setting. NFE Pong could possibly integrate this service more into its adult education program and library service, as well as including other communication means in its information service.

- The Telecentre and library

The Telecentre and public library appeared to be more separate entities although both used to be more integrated in terms of knowledge and information provision at the beginning due to the librarian's personal talent and expertise in coordinating and organizing the integrative activities for children and the young. For example, she had provided training sessions on research both in the library and Internet; however, since she had left the Centre, NFE had not been able to obtain any replacement and those activities had been discontinued. In this case, NFE Pong had truly relied on personal attributes of its staff. Setting up mechanisms for the continuation of those activities and creating an informal knowledge sharing system among staff might help each of them learn skills and gain additional specialty from each other and maintain better linkage between the two services.

- Adult education programs and the Telecentre

As the local community had high demand on computer and Internet training, the NFE could possibly integrate training provided by the Telecentre more into its adult education courses and curricula. The Telecentre could upgrade some of its training courses and certificates to the standardized level certified by credible institutions. It could also provide supports if NFE Pong offered any computer courses as vocational training.

- Community learning centre and information provision by the Telecentre

Community learning centre located in each tambon could be an available facility for the Telecentre in providing information needed by community members such as produce prices. Since most NFE teachers had a cell phone and receiving inward calls would not have any cost to them. Walkie-talkies were available at a few community learning centres in the highland area. Pong Telecentre could make use of this facility at the head office in providing information to people in the mountainous communities.

A Strong Team of Staff as Two-way Information Mediator

In the district, NFE Pong was almost the only organization that had its staff often in the field and worked closely with local communities and the staff worked together as a team and helped each other when any of them experienced difficulty. Many teachers had origins or settled in the district and surrounding areas were also enthusiastic to help solve local problems and to contribute to community development. Community members sought advice from most teachers and some teachers also helped obtain and search information when villagers requested. Many of the teachers collected basic data from communities they served. Hence, the Telecentre might consider coordinating with NFE teachers in conducting communities' ICT needs assessment; diversify its service; and provide information to the communities through the teachers either for free and/or for a fee depending on the nature of services and demanding level of tasks.

Staff Capacity and Changing Demands

The staff of NFE Pong was life long learners. They had specific personal interests and skills and most of them expressed the willingness to take additional training in order to learn new hands-on skills and knowledge. A number of them were enthusiastic to acquire a higher level of IT skills. Through interviews, a few government units mentioned they all required some training for their staff at their offices and the kinds of training needed went beyond the general basic level of MS Word, Excel and research online; they would need to manage local databases, networks, web sites, and so on. As NFE Pong had lent its staff to the Telecentre activities, continually improving capacity and competency of staff would be vital for keeping up and matching on-going changes of demand if the Telecentre continued to focus on training. In order to meet specific niches, it could also expand the training service by acting as a mediator and obtaining outside IT instructors in the unfamiliar areas as it had already done on occasion.

Pleasant Environment vs Technical disruption

Friendly, helpful, clean and comfortable atmosphere with air conditioning and reasonable price were the positive qualities of Pong Telecentre cited by many users. However, there were also complaints on crashed and frozen computer, frequent disconnecting of the Internet, other broken equipment, not enough chairs and computers, and an earlier closing hour than stated. Making a new sign and clarifying what could be expected would help reduce the higher expectation of clients. Frequent and consistent pause of service or inconvenience in the use could create annoyance and make clients walk away. When people experience technical problems, taking immediate action to fix them might help in the short-run. Reaching out to other similar projects and finding alternative and suitable technologies might help solve the problem in the long run.

An Important Local Coordinating Point and Greater Local Participation

NFE Pong perceived itself and acted as the local coordinating point among organizations, communities and departments. It had been a local unit that others came to seek cooperation, data, skills and helps. In return, it also gained trust, cooperation and various forms of support from its networks. NFE Pong and the Telecentre might be able to use this strength to further facilitate local co-investment and participation in information diffusion. They could:

- Include the local young and NFE students, who were in an employment-waiting period, as part-time staff or volunteers in searching and delivering both online and offline information needed by community members. Different communication tools such as pamphlet, radio, loudspeaker, wireless, etc could be used for the delivering tasks.
- Provide information to distance and remote communities through networks of tambon and village chiefs and/or leaders of local career groups (e.g., women's groups, micro-finance groups, co-ops and so forth), especially village chiefs and loudspeakers were one of the sufficient means through which villagers obtained news and information. They could coordinate with other local organizations (TAOs, public healthcare units, agricultural extension staff, and World Vision units) which worked with the communities.
- Provide community more detailed information on how the telecentre work through different PR tools and media, in order to make a clear and shared understanding.
 - For example, what services it provided, how it provided these services, and what its clients could expect such as advice on how to use equipment, flexible training hours with learner-centred approaches, and full research service.
 - It could continually promote up-coming activities or training sessions offered to both its target groups and the general public; they could do so easily by sending out invitations to other organizations and putting up a standing board for PR and marketing purposes in front of the Telecentre.

- It could help communities realize that the Telecentre was not-for-profit and an integral part of the library, aiming to support the learning of community members. It could provide the community about information including its performance, operation and management, supports obtained, successes, failures, and necessary improvements.
- Seek financial support or co-investment from other organizations since they had gained the trust of local stakeholders and good a reputation in the area. A couple of local organizations such as PAO (provincial administration office) of Phayao and the Municipality of Pong had been willing to support the Telecentre. Due to some bureaucratic rules in the spending budget, the Municipality was reluctant to provide additional financial support because the Telecentre belonged to another government department. Nevertheless, the Municipality was willing to invest in some facilities that could facilitate knowledge and information provision services for local communities and would face less bureaucratic complications if the facilities were under its ownership but under NFE's operational assistance. This could be an opportunity for further negotiation and co-investment between Pong Telecentre (NFE Pong) and the Municipality, as well as others.

Lessons Learned

- The quality staff of the owner organization (NFE Pong) and their personal relationships with others could contribute to interdependent relationships at the organizational level and among public, private and government sectors. A strong leadership and service oriented approach of the director and staff at NFE Pong had shaped a give-and-take relationship with other local organizations over years. At the time of establishment and expansion of the Telecentre, other organizations had provided support in return. Private individuals had also provided reliable and reasonable maintenance service, as well as supplies and clients to the Telecentre regularly.
- Creating a unique service focus, supporting the learning and information research of local communities, helped the Telecentre differentiate itself from other similar businesses. That helped it better market its main services while other services were complements for revenue purposes.
- Part-time staff borrowed from NFE Pong, helped to save the Telecentre operating costs, but multitasking divided the staff's attention and did not allow them to dedicate energy and time on the Telecentre. Telecentre work became a second priority or sideline. Nonetheless, a flexible management approach of the leader helped sustain the dedication of the staff although it might not yet help them to achieve a balance between work and family life.
- Besides reasonable price, friendliness, familiarity and comfortable environment provided by the Telecentre and its staff helped establish loyalty of customers.
- Computer equipment and online applications such as karaoke and chat programs, which were widely used for personal entertainment by young generations, could be used for educational purposes, but this was solely relying on the creativity of individuals.
- Noticeably, the control of game playing at the Telecentre helped it gain and encourage more female users. However, with mostly young users also discouraged older adult generations especially having no computer skills to use the computer and Internet service.
- The majority of community members, except the young, were not aware of the services provided by the Telecentre and the benefit the technology could provide them until they experienced it themselves. However, using computer and the Internet for acquiring information required a certain level of skills that most of them did not have. Without an information and communication mediator or champion, they could hardly receive any benefit

offered by the technology and Telecentre. In a number of cases, the information people acquired from the Telecentre or Internet might not provide any immediate or direct impacts on their lives, but rather a set of database at the back of their mind that would help them make decisions or give them options later on; and this was hard to notice.

- Adapting partial business and partial subsidy strategy in the management and operation could sustain the activities of telecentre in providing reasonable information and communication services to rural and low-income communities on a not-for-profit basis. In this case it was owned by a government unit, which it might have to work on people's perception towards the stereotype of bureaucratic services and official working hours.