

## BAN SAM KHA SCHOOL COMPUTER CENTRE

### Introduction

The inception of Ban Sam Kha School Computer Centre was facilitated by the intense interest of school children in regard to a second-hand computer. It started when a teacher's friend donated a second-hand computer to the school. Students were very excited about it. They lined up to play with the computer during breaks; the teacher had to pose a 5-minute limit for each student. One summer a school graduate came to inform the teacher that the computer was out of order. The teacher was very surprised because the school was closed and the room was locked. The teenager confessed that she and her friends broke into the room through a window and used the computer everyday. This incident inspired the teacher to try to find the way that could help the village young people have more IT opportunities.

The teacher and students consulted the matter with their existing networks. The director and staff of the Northern Regional Centre of Non-formal Education (NFE) located in the capital district of Lumpang agreed to help provide computer training for the youth. In November 2000, the Computer Centre was established. The community had provided one additional computer. At the beginning, it had only a few second-hand computers. Some of its ally organizations such as Suksapatana Foundation and the Siam Cement Group (SCG) had gradually donated second-hand computers to the Computer Centre. At first, only one computer could be connected to the Internet and that increased to four. At the time of field visit, it had around 20 computers and 12 of those could access to the Internet because the rest were too old.

The Internet connection was actually not available until late 2002. Village adults opposed the youth's requests to have Internet access. The village committee held meetings to discuss the issue; the idea did not gain approval due to the adult's fear of children being exposed to inappropriate online content. The young people expressed their frustration through a written complaint; commented that village adults seemed to underrate young people's capacity to make appropriate judgements. As a consequence, village adults re-examined their decision and realized that they probably eliminated a learning opportunity of their children and they should have been more open-minded. At the same time, the young had involved their parents and many village adults in Internet training sessions provided by the Regional NFE Centre. Once went through the training, many village adults had gained a better understanding on the benefit of the Internet. The community approved the idea to have the Internet connected at the Computer Centre, but had set up rules and agreements in regard to the youth's use of the Internet.

### Operation and Management of Ban Sam Kha School Computer Centre

#### *Services and Facilities*

This community-owned computer centre provided services daily from 8am-8pm. It set up some specific yet flexible time periods for different user groups. During school hours, 8am-3pm, the Computer Centre mainly served students in the School. Students could use the computer and Internet to research information free of charge; usually after 3pm the Centre was opened for small children to freely play with the computer such as Micro-World program. It also provided

#### BAN SAM KHA SCHOOL

This K-6 primary school had only 49 students. There were five teachers in total including the principal. The trend was the number of students continued to decline due to fewer children born in the village over years. A topic of discussion among villagers had been whether the school closure should happen, due to the Ministry's new resource allocation policy,. A number of parents supported the closure because their children could have a bigger learning community at other schools while some felt that the School should be kept opened. If the closure occurred, it would affect the continuation of the Computer Centre.

typing training for children. Outside school hours, it provided services to general public and charged a fee. Nonetheless, when villagers used the computer for calculating their monthly expenses and learning to use the technology, the Centre provided services to them for free.

“At first, it was difficult to convince the village adults, they were afraid, didn’t want to come. But once did, they liked it and came everyday. We announced via the loudspeaker, divided people into sessions for training and practices. They liked it, some people also came even though it was not their session – all the computers were full and still didn’t have enough for [everyone],” said a young Computer Centre committee member.



#### FACILITIES AT THE COMPUTER CENTRE

Computer sets:	20 (second hand)
Printer:	1
Internet connection:	Satellite (ThaiCom)
Data transfer:	Limit of 750Mb/month
CD reader:	1 on server computer (out of order)
CD writer:	None
Radio broadcaster:	1 (out of order)
Software used:	Micro World, MS Office, Lanna

All the computers at Computer Centre were connected to a LAN system. Hence, data could be shared among computers. The Computer Centre and villagers had stored their household spending data on the server, but the server had been out of order at the time of field study and the data was unavailable on the LAN system.

The services provided were hourly computer and Internet rental, typing, training and printing. During school break, the operator would provide training on basic computer programs such as MS Word, Excel and typing. However, the president of Youth Group said that they had not provided any training sessions for long time because the villagers had many engagements and were not available, but they would start to provide training again when people were ready. In general, the operator and the young in each shift provided advice on how to use the computer and Internet to clients whenever needed. As a grade-6 student explained,

“If secondary students from other villages come to use, we will advise them only on how to search the information online and how to use the Internet because they mostly know how to use the computer. If it is the villagers, we will help them get familiar with computer, mouse and keyboard first, using typing and Micro World program. Adult villagers and the youth learn together.”

The operator mentioned that children and adults exchanged their knowledge and skills. One over 70-year old villager “was good at [typing] and had no problem using the computer,” according to the operator. He taught *Lanna*, a northern Thai language, to the young and in return the students taught him how to use the computer and type in Lanna. The Lanna teacher accepted that he learned from the young, but because of his age he forgot many functions and keys on the computer and had to relearn often. The keys for Lanna and Thai were identical

on the keyboard; every computer at the Computer Centre was installed with Lanna fonts. Nonetheless, normally many adult villagers had difficulty to work in front of computer because of eyestrain and their unfamiliarity with the new technology.

Many school children also provided research service to adult villagers who did not have the skills. The students used to search information about herbs from the Internet and then broadcast the information through community radio. The Computer Centre was supported the radio equipment which was installed at the computer room. The signal was sent to a receiver at the village chief’s house and then broadcast it through the loudspeaker. Unfortunately, the signal receiver was out of order and had not been repaired. As a result, the community radio project had been discontinued.

### *Staffing*

The operation and management team of the Computer Centre was comprised of a teacher who provided a managerial role, a full-time operator, and a group of committees. The teacher acted as an advisor, coordinator and manager of the Computer Centre. She provided advice and informed the committee members on possible options and pros-and-cons when making decisions. She would consult with the committee when making decisions for the Computer Centre. She coordinated with and sought advice and support from various players and networks on issues such as training, field visits, funding, Internet connection and technical problems. The teacher also looked after the financial situation and the operation plan.

The full-time operator was hired under a one-year contract until the end of 2003. She was a technology college graduate and had obtained some computer skills such as basic MS Office and basic computer assembling skills from her studies. She mentioned, “when studied [at the college], I didn’t know much about the Internet because got only one hour, didn’t use the Internet much. I know how to use it here [the Computer Centre]. Sometimes children know this and that, and then they tell and teach me. Learned the Internet from here.” She learned how to send emails, search information on the Internet and build a web site from school children, who received training from the NFC Centre. The operator and the young were attempting to create a web site for Ban Sam Kha village, but it was not completed yet. The operator also said that she was not good at technical maintenance. She helped with typing and bookkeeping tasks and also took care of the Computer Centre on Monday to Friday from 8am to 4pm.

The committee members took turns looking after the Computer Centre. The committee members were grade-5 and grade-6 students at the School and a number of village young people. These young people were mostly also members of the Village Youth Group and were studying at secondary and post secondary levels. There were around 30 committee members in total. Early in the morning, the upper primary students helped clean up the place. From 4-8pm on weekdays and 8am-8pm on weekends, the school children and a number of youth committees who were organized in-groups of three would look after the Centre by following a schedule of four-hour shift. The last shift of each day had to count and record the daily revenue and had to submit the money to an advisory committee member, who was an adult villager and acted as a treasurer. The treasurer had to create a separate account for her own record. At the end of each month, the operator and treasurer would compare their accounting records; this was one of the triangulation attempts for financial transparency.

### *Financial Management*

The monthly revenue generated from service provision slightly fluctuated. In months that the Internet limit was used up quickly, such as September 2003 when it reached the data transfer limit in six days, the revenue was lower than normal. On average, the service generated 2,000-3,000 baht (USD 51-77) per month. During peak periods such as school break, festival and local holiday when the local young people who studied elsewhere came home and young people from other villages had time to come and use the service, it could make over Bht 4,000 (USD 100) per month. It mainly generated income from Internet and computer rental hours, typing service and printing documents in respective order. An additional income source was from 20% of monthly profit made and donated by Yaowachon.com shop.

#### YAOWACHON.COM

Yaowachon.com (not an e-commerce) was an initiative set up to provide learning opportunity for 5<sup>th</sup> and 6<sup>th</sup> graders to gain hands-on entrepreneur and financial management experiences. The school students had run a shop in the school to sell drinks (pop, water, milk, yogurt), snacks and souvenirs. The teacher obtained a 10,000-baht loan for the young to establish the shop. They used 10% of profit to pay for the shop space and another 10% to pay back the loan. At the time of field research, the loan was paid back and the shop had been generating profits. The young had agreed that 20% of the profits from the shop would go to support the Computer Centre.

The Computer Centre had divided its revenues into portions for different categories of expenses such as electricity, Internet connection, reserving funds and salary. The cost of satellite Internet connection was around Bht 2,800 (USD 70) per month and was supported by NECTEC for up to one year. The Suksapatana Foundation provided 3000 baht (USD 77) per month for the operator's salary for one year (until the end of 2003). The School helped cover most of the electricity cost. The principal mentioned that the electricity cost was over 1000 baht each month, but as a small school, it only received a budget of around 200 baht for infrastructure. The principal had considered obtaining solar cell equipment; however, he did not know whether the government would provide that equipment because normally the equipment was provided to schools in remote areas that electricity was unavailable. The Centre had tried to save some money for the years to come, as a short-term coping mechanism after the withdrawal of financial supports. It had not been able to cover its operating cost by only relying on the revenue generated from providing service on computer and Internet rental hours. The Computer Centre and community would have to find the solution for the financial matter.

### *Technical Problems and Maintenance*

#### Internet Connection Difficulty

Initially the Computer Centre connected to the Internet via dial-up modem. The teacher responsible for the Centre explained that the connection via phone was very unstable and disconnected very often. They used to pay three baht per dial for the cost of local phone call only with free Internet connection. But because the connection terminated often, they ended up paying a huge amount of money for telephone bills. As the village was located at foothills, it was more difficult to connect to both wire and wireless communication technologies. According

#### FREQUENCY AND REGULATION

Once NECTEC had tried to assess the possibility of using wireless Internet connection in Ban Sam Kha aiming to make it as a pilot study. It later found out that all wave frequencies in Thailand were regulated by the Post Department and the Department planned to commercialize the frequency range targeted by NECTEC. Although there had been plans to deregulate certain wave frequencies for local community use, the process had been going on for long time and had not been resolved.

to the teacher, its ally individuals and organizations had cooperated with many ICT teams and experts from different sectors and countries to try to find and test potential solutions on reliable and reasonable Internet access for the Computer Centre. They hoped to find a suitable technology for the Ban Sam Kha community, and then adapted the same technology in many hundreds of other villages that had similar geographical conditions in the country. But after trials, nothing worked well for the site.

The Computer Centre started to connect to the Internet via satellite (ThaiCom) in September 2003. With a limit of 750Mb data transfer, school children searched information on the Internet much less often. In the first month, it reached the limit within six days and for the second month it lasted for more than two weeks. A student commented that when using a dial-

up connection, they could have unlimited access but the service was slow. The satellite connection was faster but with limited data transfer, he added. The Computer Centre had considered increasing the limit up to 1.5Gb, but the connection cost would be double and it would not be able to cover the cost; the reserving funds it had amounted around 20,000 baht could only cover a few month of the connection. Through observation, the Internet speed was quite slow and was not very stable and this could be from either the old equipment or the connection, or both.

#### Hardware and Software Problems

The Computer Centre also experienced some hardware and software problems. Because of second-hand computers, many of them were not compatible with newer applications such as Internet and CD-ROM. Also, dealing with broken computers became a normal phenomenon.

Many young people had acquired basic skills on technical maintenance and repair from the NFE Centre and were able to solve some software and hardware problems by trouble shooting and replacing parts. But often, new equipment and more advanced skills were required. The operator mentioned that the NFC Centre occasionally provided well functioning hardware (i.e., hard disk and monitor) in order to replace the broken ones. The NFE staff and NECTEC personals had often helped repair the computer and at the same time taught the young how to solve those problems. Nonetheless, a visitor who helped fix the server commented that one of the causes of the problem was that no one cleaned up the hard disk space and that the memory was too full. Hence, the lack of routine maintenance also contributed to technical problems in addition to the depreciation of equipment.

## ICT Use and Ban Sam Kha Community

### *The Community*

The village was renown as a strong community with efficient and transparent management practices and with a high level of social capital. Whenever any conflict occurred between people, mediation was practiced. All members trusted each other and they considered the whole village to be one family. The community applied democratic approach in village management and embraced teamwork and diversity of opinions. The management structure of the village comprised of a village chief, a few village chief assistants, village committees, counseling committees and house-division leaders. It sorted all the households into divisions and the elected leader of each division had to look after the development, well being and tasks assigned to the division. The management team had meetings often, once or more per week. Generally, when decisions had to be made, village committees debated to find the pros and cons and possible options for an issue first. Then, they presented those ideas to villagers in a formal village meeting that at least one member of each household should attend. More opinions from villagers were welcomed. Discussions went on until they could narrow down to fewer options. Voting or seeking consensus was used for the final decision.

However, through observation, the majority of villagers especially women rarely expressed their opinions and mostly sat at the back except a few female committee members.

The community valued self-reliance, local wisdom, rapport and community ties. When any of them was down, the whole community would come together and help find the best possible solution. For example, in the past many villagers were deeply in debts and faced bankruptcy and the loss of their properties and homes. Once other community members learned about their problems, the village had set up a group of debt-relief committee to help those facing bankruptcy. The committee helped negotiate with the loaners such as banks, micro-finance groups and individuals to consider those cases as bad loans and to provide an interest break or freeze, so that borrowers could pay back the initial amount without having to worry about the interest. The committee had together guaranteed for the borrowers that they would pay back the loan by a certain period of time. The community used social pressure to ensure that the borrowers would regularly pay back the initial amount as they agreed until they had totally returned the loan.

### BAN SAM KHA: SOME FACTS

Ban Sam Kha was a rural village in Lumpang province located around 15km from the centre of Mae Ta District and 45km from the capital district of Lumpang.

Population	~ 650
Household	~150
Literacy	~98% ( $\geq$ 50% below grade 6)
Main economy	1. Subsistent agriculture (rice, garlic, onion) 2. Handicrafts 3. Commercial farming (cash crops, livestock)
Water	Mountain tap water
Transportation	Personal motorcycle, privately run buses
Electricity	Available village-wide
Public phone	2 payphones (radio wave)
Home phone	None
Cell phone	Available, but few
Loudspeaker	House of village chief
Radio receiver	Most households
TV set	Most households
Computer	$\approx$ 10 households

Through the use of participatory tools, the majority of village committees identified that the following on going problems were their priorities respectively:

1. Not enough water for agriculture during dry seasons

Although the village was located at the foothill area where the mountains surrounded were a fresh water source, the moisture evaporated quickly during dry season and some part of the area experienced wildfires. Villagers had faced water constraint for cultivation during dry seasons and the village had to set up agreements on water use and distribution. As a result, they could cultivate rice only once a year and after harvesting rice they could grow some vegetables, but mainly for within-household consumption. Hence, aside from low agro-produce price, water constraint was a partial cause to insufficient income of villagers.

2. Low incomes vs. high expenses

Since most villagers were in agricultural sector and cultivated mainly for self-consumption rather than for cash, they had to find other sources of income from non-agricultural sectors.

Most villagers had additional jobs and alternatives. Most households were involved in making decorative paper flowers and many were involved in carving wooden handicrafts. Girls and women normally involved in one of the process in making paper flowers and men usually carving wooden animals according to orders. It was common to see many female villagers helping their partners sand and detail the wooden crafts because carving products generated more income than making flowers did.

On average of an efficient day, one could make around Bht 50-100 (USD 1.3-2.6) per day from paper flowers depending on which part of process she involved in and her working speed.

“Carving is the main career after growing rice, incomes from carving is better, I get continuously, but won’t get money in lump sums. ... There are only orders for horses. I like carving, but don’t have any other alternative either because other jobs are dangerous, earn not more than 200 baht, around 130, have to go back-and-forth 35-40km and after subtracting expenses and bus fares, it isn’t viable.”

(Male villager, interview, 9 Oct 2003)

“For making flowers, I do it everyday, adding petals. If work on it whole day, I can make 1000 flowers.... Would be nice to have careers and jobs for [people] to do. Should support other alternatives. Men make [wooden] horses, but women make flowers and earn 5 baht per 100 [flowers], it’s little, not enough for expenses – this is the only one and don’t know what else to do,” complained a female villager.

One could make around 200 baht per day from carving wooden horse if he worked 12 hours or more on that day. Nonetheless, most craftsmen carved small to medium-size horses and the price was usually nonnegotiable because many people both inside and outside the village supplied the product. A couple craftsmen had tried to be more innovative in carving different styles and products and they were quite successful; they were able to price their own products and to earn more income. Many villagers did not take time to learn to carve new things because could not afford their time to forgo one to two weeks of income from producing horses. Also, there was no warranty that they could earn the same amount or more from carving other styles, as it took time before they became proficient and the

#### UNAWARE CONNECTION

A villager-couple who would like their cows grow nicely and quickly recalled that the village used to have a mulberry-tree-planting project for feeding silkworms and producing silk. But it was not successful because when cows grazed into the mulberry tree plots, they ate all the leaves and the trees died. But they did not know that mulberry was a great source of nutrition for livestock – the animals liked it. They said, “maybe that was why.”

This was a cause-and-effect relation that the villagers did not realize. If they had accessed to up-to-date information on agricultural R&D and technology, they might have created appropriate management for both livestock and mulberry tree cultivation.

(See Mulberry for Animal Production, *FAO Animal Production and Health Paper 147*. Available online: [www.fao.org/DOCREP/005/X9895E/X9895E00.HTM](http://www.fao.org/DOCREP/005/X9895E/X9895E00.HTM))

demand could change.

“100 people learned carving horses, less than 50 who actually do it. I'd practiced for 2 years until I could sell all [I made]. At the beginning, I used to supply the chief 10 pairs and got 8 pairs returned. I used to burn [wood for] charcoal for sale, but when compare, carving horses destroys fewer trees...” said one craftsman.

Many villagers also got into groups to create career alternatives. A number of villagers got together to raise swine and cattle. Due to low market prices, both groups were facing a loss. Hand weaving was another example. A group of female villagers wove handmade fabric for sale. Because the work was time consuming and the market was highly competitive, the income from the sale was not worth the time spent on making it and the women had difficulty to find the market. Thus they could not rely on weaving to make a living but considered it as an alternative for generating additional income.

Collecting food and produce such as mushrooms and nuts in the wild for sale was also an option for some villagers. Many villagers had tried to cultivate some of those in a seasonal and at a small-scale basis; mushroom and sticklac were two types of cultivation that villagers did not have to spend much time to take care of. They self-germinated and could provide products for several seasons. Sticklac could especially bring the farmers a good additional income per unit of yield if the demand and price was high. Villagers also took labour jobs outside the community; however, a number of people mentioned that working outside the community involved greater risks and higher expenses.

Villagers were more self-sufficient in terms of staple food items such as vegetable and rice. Most of them had tried to reduce unnecessary spending, but they still had certain expenses that they had to worry about. The community saw education for the young as one of the priorities. Villagers invested a lot of money on schooling for their children, particularly when the young pursued higher levels of education and had to live outside the village.

### 3. Time constraint for developing each individual's own career due to too many visitors

Due to the good reputation as a strong community, the village received several groups of visitors each week. Sometimes, its supportive organizations or government personnel came for a visit, but most of the time, people from other communities contacted and arranged to come for a field study in order to learn from and exchange with the villagers. The villagers had to prepare materials and staff for the reception such as refreshments, meals, tour guides, information persons and so forth. As a result, those who were responsible for taking care of visitors had to devote their time and that meant no income for that day. Therefore, they could hardly find time to further improve their skills, knowledge and techniques for their personal and career development.

Nevertheless, to solve that problem the village committees had decided to charge a fee to visitors who came for a field-visit in order to cover the hospitality cost and the average daily income of villagers who would take care of the visitors throughout their visit. They also agreed to divide the committees and some villagers into smaller groups and to take turns helping with reception tasks. They hoped the solution would work well for both villagers and visitors and would help the villagers obtain visitors that took the visit as an opportunity for learning and exchanging ideas in a serious manner.

### 4. Unsustainable career options

As mentioned above, the career choices they had could not sustain a sufficient livelihood of most villagers. Many villagers were trying to find and search for better alternatives that could allow them to earn sufficient income while working and living in the community. Many organizations had tried to help and promote alternative career choices, but many of the career projects were not successful.

“For career matter, in fact [each person] has to think and come up with his/her own ideas. [One has to know what he/she likes, then does it from heart. Organizations came to promote career choices and they were not successful because it wasn’t coming from people themselves,” as a villager commented.

During the field research, the village had received financial and material supports from the Forestry Department to create a herbal orchard. Villagers had taken turns working in the orchard field, from adjusting ground level, adding nutrients, building walking path, laying water tubes and irrigation system, fencing, planting and so on. Because this was a long-term project, everyone who worked in the orchard would receive pay for the day. They hoped to make a more stable income and sustainable livelihood from herbal related business. At the planning stage, some committee members proposed to grow rare herbs for sale, while some proposed to create a complete herbal business line from growing, producing value-added products, packaging, selling to servicing (i.e. spa, massage centre). However, the herbal project was still at the implementing and experimenting phase. Unstable career and insufficient income was one underlying cause that led many villagers getting into debts.

## 5. Debts

When the society became more industrial, villagers had also more relied on goods and services produced outside the community. The lack of financial management skills, coupling with the influence of materialism, put many villagers into debts. The village had tried to find a sustainable solution to eliminate poverty. A decade ago the villagers tried to reduce external expenses and to increase circulation of money flows within the village by creating more jobs in service and production sectors in the form of groups. There were 39

“Doing Household Accounting helped a lot, reduced unnecessary expenses. For example, reduce and quit playing lottery, drinking. In funeral, villagers agreed to not having any reception.”

groups in total. However, many projects were not successful due to various reasons related to operation, marketing and management practice and indeed created more debts for many villagers.

In 2000, they had started to conduct a debt reduction or poverty solution research by using a participatory and action research method. The Thailand Research Fund (TRF) proposed and supported the idea and although the villagers were at first skeptical, they gave it a try. The community set up a team of research committee to take the responsibility. The research committee had conducted surveys on how much debt each family had (~USD 600,000 in total for the whole village) and had tried to find the underlying cause of being in-debt. They had also collected spending information of each household by using self-report technique over a period of time. As a result of household accounting, many individual villagers were able to reduce a portion of unnecessary expenses and the community as a whole agreed to reduce or eliminate some traditional activities that cost them large spending at once. In this on-going learning process, the committees were showed and had involved the use of computer in assisting in the data collection and analysis. More detail is provided in the later section of this report.

In addition to increasing incomes and creating sustainable careers, village committee recognized that the efficiency in financial planning and management was crucial. A number of ally organizations had offered their supports. With consent of the community, a few projects had been initiated; they were community bank and community convenient store. Those organizations provided resource, advice, mentor and training to the responsible villagers on a regular basis. For example, a commercial bank (Krung Thai Bank) provided initial funding with low interest rate for the community bank to manage and reinvest the business. It provided computers with banking programs installed and mentoring staff who monthly visited the community. A number of villagers were skeptical about this project because firstly they had to

pay back the initial capital plus interests at the end of this three-year project and secondly they already had micro-finance groups within the village and thus there was no need for an additional financial institute. Nevertheless, many thought it was a rare opportunity for villagers to learn and understand hands-on banking system and management. These projects required the use of computer at least for bookkeeping; however, tasks involved computer uses were mostly left for young people who had the skills. Other staff said they would learn how to use it, but they did not have time yet.

### *Local ICT Accesses and Needs*

Since radio and television were widely available, the majority of villagers obtained news, information and entertainment through these two media. They normally listened to the radio during the day while working on handicraft products and watched TV in the evening. Another daily information source was the village loudspeaker. Every morning and evening, the village chief provided information such as new regulation, benefit-scheme for local people, warnings, and announcement about activities of the village. A newspaper-reading place was also located on the main road of the village and was close to the village's temple. Its simple-canopy-like building was well maintained. Through observation, people mostly read newspaper in the afternoon and most readers were young people or men. A few different newspapers were delivered daily and were up-to-date. However, most villagers interviewed mentioned that they did not go and read newspaper every day, they read the paper on occasion.

A village library was located in the Ban Sam Kha Temple. The idea of village library came from monks who were enthusiastic to provide information and knowledge resources for the young and villagers. The library had wide range of books and some documentary and educational CD-ROMs. The Temple had a few computers including one in the library. The computer was for storing library database and for playing the CDs, but unfortunately had been out of order. At the time of this study, only one computer in the temple was working properly and was used for document and administrative work. The monk had tried to maintain the computer in a workable condition and had allowed young people to use it when they needed a computer for schoolwork.

Nevertheless, the main concern was not the technology, but the fact that the library had not been utilized. Very few people came to the library and made use of the resource although it was almost the only library in the village and had much more collections than the bookshelf in the school. The village library was well maintained by a group of female teenagers. Few students from other village came to use the library since most villages surrounded did not have one. "The community library has been set up for 2 years. In fact, the temple would like to involve the community. The youth that go to schools come to do research sometimes, not just from this village, from other villages also come.... But books are old too, depends on donation... We've bought some." It was possible that the villagers were too busy and reading was not a life-long-learning habit for the locals. Activities that helped support and promote reading and using the library for information research might be needed.



Map of Ban Sam Kha drawn by students, near the top-left corner was the School and the bottom right corner was located the village chief office, Temple (yellow) and public health centre (red cross) respectively. The paper flower factory and herbal orchard (formerly sport field) were at the bottom-left corner.

None of the villagers had a home telephone. A number of villagers had a wireless phone for both personal and business purposes; wireless phone under GSM was more accessible than others were. Two public payphones were available within the village: one coin phone was located near the Temple and a card phone was installed in front of the Computer Centre. Because the call number of card phone was provided, people from outside could reach villagers via this payphone. However, due to no operator system in place, most inward calls were for the School or Computer Centre.

The village young also communicated with their friends and relatives residing outside the community via email and chat rooms. A few young interviewees who studied and lived in other cities mentioned that they sometimes got village news from their friends and the younger ones via the Internet. They kept in touch with each other on a regular basis. Their younger peers also sought advice from the older ones. But the young living outside could not involve in many of the activities since they were busy studying. Some of them would help out with some project tasks when they came home during semester breaks.

In terms of information needs, most villagers interviewed mentioned that they normally received news from TV, radio and village chief already and could not think of any particular issue or information for which they needed more information. One villager explained, "Don't have anything that I want to know. Don't have any exciting issue that I have to struggle to get information. Any duties I have, I do. Daily routine, work and find food and stuff for meals and for sale." Nonetheless, several expressed their concerns on how to market their products and how to acquire a more sustainable livelihood and stable career.

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"I'm farming, onions, yields are not good. I'd like to get information on growing onions and groundnuts better. I'd like to work in a job that I can stay home and bring in stable income."

"...fertilizer use, soil preparation, I'd like to know. Some people said using [chemical] fertilizers eroded the soil. I'd like to know how to get the best yield."

"I don't know what to want. It's uncertain in terms of market. There's no market available. If others come to buy from us, the price is on them. We have to sell; otherwise [the crops] get spoiled. I don't follow any information."

"Sometimes I don't get enough [information], I talk to friends and learn from each other. For example, I grow tamarind for 2 years, didn't get any fruit. Caterpillars ate the flowers. I need to find prevention method. Talked to my friend at Don Fai, he told me that I had to use hormone to kill the insects. His got fruits every year. A bunch of black caterpillars came, in 2 days all flowers were gone. I think it might not have residues because it's only flowers, I use natural fertilizers."

"Normally I get information from Tambon's agriculture extension worker, but it didn't work, i.e., our rice got aphides, they suggested me to spray some pesticide, but it didn't work.... I'd like to know if there are other varieties that are better as well..."

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A number of them admitted that they were interested in indigenous herbal knowledge and that they had obtained new herbal information and knowledge through the young who searched the information on the Internet and broadcast it via community radio. Local herbal remedies and practices had regained noticeable recognition from villagers. The two primary reasons were that firstly many medicinal herbs were locally available and mostly free from the ground. In second order, villagers found that modern medicines had many side effects. The local herbal wisdom was the heritage of which villagers felt proud and wanted to preserve. The community consequently initiated a project to collect, translate and revise local herbal medicine scripts.

A portion of interviewees wanted more specific and local information that was mostly related to their careers. For example, one villager needed some detailed technical information on how to repair a specific model of motorcycle because he found that this model was accounted for about

#### LOCAL CONTENT, LOCAL HERITAGE

A few villagers inherited indigenous herbal scripts written on palm-leaf books from their ancestors. The script was all written in Lanna. In order to preserve and revive the knowledge, a group of committee was set up to collect and to translate the script from written Lanna into Thai writing of spoken northern Thai, then into official Thai later. They admitted that the translation had not reached 10% yet and had been slow because “the owner of remedies was the village doctor and wanted to keep the knowledge secret, he wrote in puzzles, [we] have to interpret those. They’re problems that young people don’t know, [we] have to rely on people with experiences.”

The committee planned to categorize and index the remedies. They said that it was not at the stage that needed the computer; there were still tasks in the process before the computerizing phase. They hoped to create a book of herbal remedies. However, they expressed the concerns on copyright and patent issue of the remedies.

80% of all motorcycles used in the village. He had tried to find the information from the Internet, bookstores and his friend working at that motorcycle company, but could not find any information. One villager said she wanted to know how to make cows grow better and faster because the family had had a good life from cow farming and she would like to do even better. The family gained experiences over years and got information mostly from extension workers and veterinarians. Another interviewee mentioned that he wanted to know the price trend of sticklac, so he could plan whether he should stock and sell it when the price peaked. He got information only from middlemen who came to buy the sticklac in the village. None of the media provided such information because the product and demand was relatively local; a processing factory was located in a neighbouring village.

“We didn’t create the village data every year. Sometimes we lack various types of information and data. Didn’t collect much data. Didn’t record

what had been done. We just started to collect data when doing research. [We] consider information being important. [We] get the data and summarize it, and learn together...” (village chief, interview, 8 Oct 2003).

#### *Local Perception towards the Computer and Internet*

“Computer, [I] intend to learn but don’t have any chance and time. Would like to know about web site, have to learn, have to find some time. Would like to get one at home, whenever I’d like to punch [the keyboard] I could. It’s a technology that [one] should know” (senior villager, interview, 13 Oct 2003).

Many villagers said they used to go to the Computer Centre to learn how to use the computer and Internet with the young. But many of them had not gone there for a while because were too busy and had no time. As a female villager described her routine,

“This morning I’d got 2kg of sticklac. After meal, went to catch crabs and got 1.7kg – I sold some to... Then I went to pick some vegetable for food, after done that I’ve been sanding horses. I’ll not let the time pass by without doing any useful things. I think that time is money and gold. I work all the time, [if] can get some money I will do.”

Most of them expressed that the technology was useful and that if took it seriously, they thought it was not difficult to learn. Adult villagers recognized the benefit of computer and Internet for online research. Several mentioned that without the Computer Centre, their children had to go into the city and that cost more time and money, as well as involving more risks.

However, a few parents expressed their concerns of having to cover the operating costs of the Computer Centre after the outside funding withdrawn: would the parents have to support and pay for the cost of running the service? One parent said most families were poor and 20 baht for their children to play the computer and Internet was a lot of money. The parents mentioned

that although the facility was for their children, Neither they thought that the technology would make their children excel in studies nor they saw any difference on their children's progress between having and without the computer and Internet in the school. They thought it was more important that the teachers taught well and provided good foundation for students.

In addition, these parents felt that the Computer Centre did not have a good system to control or manage how the young use the computer and Internet such as setting up a limit for playing games or other entertaining activities that were not related to education and research. They also concerned about inappropriate content on the Internet. However, when I asked that if the Computer Centre had used filtering programs to block the unsuitable content or web site, one parent admitted that he did not know anything about the technology because had never explored it yet.

#### WHAT THE YOUNG SAID?

"I don't go and use the Internet else where because it is 5-10 baht more expensive. If Ban Sam Kha [Computer Centre] increased the price to 15 baht, I still use here, but if it were 20, I wouldn't use."

"When there wasn't the Internet, I felt that my knowledge was dumb, didn't learn well. After having the Internet, better, because [I] got information from other sources as well."

In brief, the perception of many villagers was as this villager who frankly commented,

"The Internet has a lot of information but has little benefit to the community, people don't use it. People think that today they have done their best, don't continue to learn any additional skills, they have little knowledge, not familiar with computer.... I used to use it, but don't have time. I went to use the Internet, email, [I'm] slow. Collecting data, searching for information has little necessity because I'm not doing business but use labour. If go to click information and don't carve [wooden] horses, then [we] will lose income, if use the time for clicking information to make horses, [we] will earn 100-200 a day. The benefit for the young, 'yes', but for adults, I haven't seen."

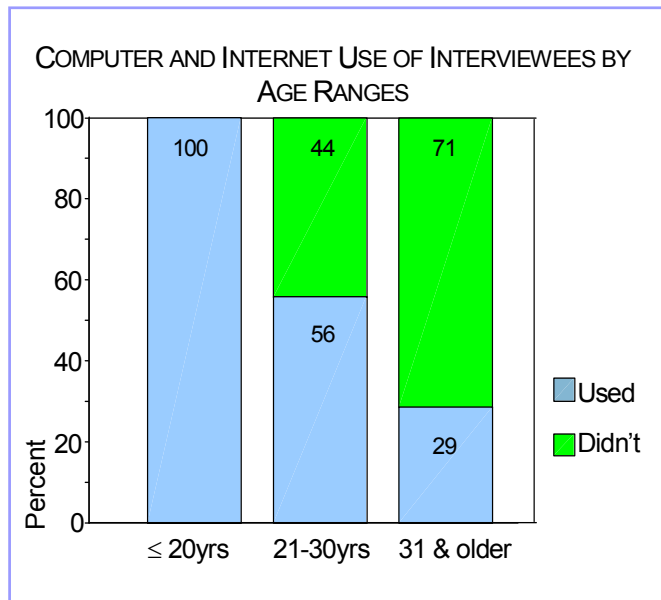
Nonetheless, a major micro-finance and saving group (*Sajja Ormsup*) of the village had planned to use the computer to assist in its accounting tasks. The committees had set up appropriate time to learn to use the computer and accounting program. In the past, an organization helped the group create an accounting program by using MS Access, but the villagers felt it was complicated and experienced difficulty in using and making changes. When the committees compared the balances from different accounts and found the results did not all match, they felt discouraged to use the program because they could not figure out what was the problem and where and how to solve it.

The vital factor that made the committees reconsider using the computer for accounting again was the growing amount of money and number of accounts they had to handle. Especially when they had to manually calculate interests for special saving accounts and annual dividends of all members, it was more error-prone. A NECTEC team member agreed to create a basic accounting program from Excel for them. The program would be a partially completed one in order for the committees to create more suitable components themselves once they had acquired the skills. The plan was to build the structure first and the NECTEC staff would sit down with the group to adjust the program and terms used until it suited the needs.

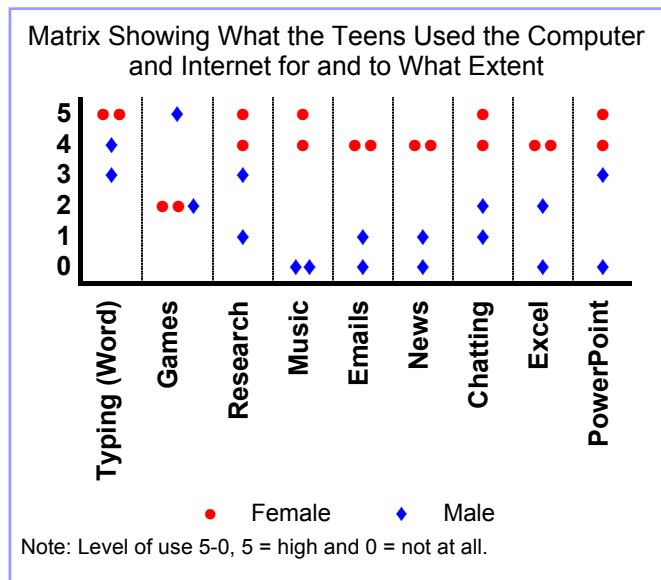
#### *The Use and Benefit of Computer Centre*

The majority of Computer Centre users were young people and only a small portion of adult villagers went to use the service at the Centre. Through interviews of 35 female and 28 male villagers, nearly one-half of both genders (45.7% of female and 46.4% of male) used the computer and/or Internet. Around three-quarters of 29 computer and/or the Internet users had used the service of Computer Centre; the rest mostly used only computer at work or home. One-third of interviewees would like to acquire more knowledge and skills on the computer and Internet; they comprised of both IT users and non-users in an approximate ratio of 1:1.

The young users were mostly from Ban Sam Kha: a small portion was from near-by villages. “Few from other villages, once a while, Ban Tung and Huay Ma Kleua will come [to the Centre]. There are few from other Tambons as well. Around 4-5 people [from other communities] each month come to type report and use the Internet” (Centre committee, conversation, 11 Oct 2004). A number of young people admitted that they sometimes used the service of Internet cafes when they went in town and while they waited for the bus to come back to the village; the service charge was in the range of 10-20 baht. However, one Computer Centre committee commented that the majority of users were the same group of people who came often.



Through interviews, the number one use of the computer and Internet was chatting online. Researching information was the second, usually when students needed information for their assignments. Other uses of computer among the young were games, typing, email and practicing and learning how to use the equipment. Most of them used programs and researched information in Thai.



Interestingly, through a focus group activity, female and male teenagers used the technology in a different way. The matrix followed shows what they used the computer and Internet for at different levels. Female teenagers tended to use computer and the Internet for school assignments, community tasks and entertainment and socialized activities at a higher level, while male teens used the technology for the above mentioned to some extent but at a lower level except games. From observation in the field and focus group conversation, male youngsters were more into playing music instruments such as guitar and sports, as well as many other outdoor activities. As a result, they less likely used the computer and Internet as a past time.

Normally, villagers did not use the computer and Internet directly, but through the young. Nearly 10% of interviewees mentioned that they obtained information through young people who used the technology; one-half of those had gone to the Computer Centre occasionally for computer training but not the Internet yet. Moreover, over 80% of villagers who obtained information and computer services through the young were older generation, over 31 years of age. The young had become information mediators in the village in addition to mentors for computer and Internet knowledge and skills.

## IT AND THE YOUNG

“Use computer for chatting the most and finding news is the second, search from sanook, kapook, google. Search in Thai” (grade-7 male student).

“I’d like to be a tour guide. I chat with foreigners to practice English, but chat in Thai more often.... Mostly chat with Australians” (grade-9 female student).

“I search the Internet in English; don’t know how to search in Thai that well. Mostly go directly into web sites [if for Thai content]. Use google for searching knowledge about English language. If searching other learning subjects such as math, I search in Thai” (grade-9 female student)

“Use Internet for chatting. [Use computer] for typing history of Lanna language, accounting of Brain Bank... typing school reports” (grade-9 female student).

“If there weren’t the Internet, then I didn’t have information for my studies. I use information from the Internet, from both English and Thai articles. Mostly, I got articles in Thai; the English [ones] have been all translated into Thai. I search from google” (university freshman).

Few villagers mentioned that they asked their children to do things or search the information for them at the Computer Centre. For example, they asked children to obtain headlines of news, herbal medicine usage, agricultural technology, and so on.

A villager said, “Used to ask [my daughter] to search for me.... I’d like to know herbs in our village, what they are used for. Previously they searched and broadcast via loudspeaker. Some herbs we have locally, I can use them. Ask my daughter to search often, about livestock, search chicken breeds that people farm. My daughter will tell me which varieties have good prices.”

Some villagers mentioned that they went to the Computer Centre and the children opened the page for them to read on the computer screen. As a villager said,

“Used to read news and herbal information on the Internet – children opened for me.

Some herbs I know some I don’t. Mostly read news because there aren’t many newspapers available. Often read entertainment news because I am fancied about celebrities....”

A few villagers, who were committees of the micro-finance and saving group, accepted that they either went to the Computer Centre or asked their children to look for information on debt and credit situation of people applying for loans. As the village continually conducted poverty and debt reduction research, each household had an account on the server of the Computer Centre showing its loans and expenses situation openly. During the field study, the village research committee had given a pause in collecting all households’ spending information; however, the data collection process still went on in a small voluntary-based scale. Although it was mostly the young who performed the task, a few adult villagers also input the data of their household spending onto the computer at the Computer Centre on a monthly basis. The use of computer in categorizing, calculating and keeping the data overtime had helped provide the research committees and villagers a better system to look at the problem. This computerized process had eased in the analysis and had created a systematic database on villagers’ financial status.

In addition, the village also relied on the Computer Centre on typing tasks. The village committees sometime had necessity to use computer for typing such as village information and profile, funding proposal, research report, lessons learned from experiment projects, etc., and the youth lent their hands for the tasks. The Community Convenient Store and Yaowachon.com Shop used the computer for bookkeeping. However, the Store personnel mentioned that she made the record manually on a paper notebook first and then inputted the information into the computer later. She accepted that keying data into the computer was not a daily routine although the computer was beside the cashier counter.

“I used to go to the computer centre and punched [the keyboard]. Went to search information. Learned with children. Knew that if used [the Internet], what benefit I would get. Right now don’t have time. If [I] want whatever [information], ask children to do it, and then will get the information. Don’t need to do it myself” (village chief, interview, 8 Oct 2003).

“Right now I use the computer to do household accounting, input data into the computer every month. Didn’t use as often as in January though, at the time I used it every other day” (28-year-old female villager, interview, 9 Oct 2003).

## Strengths and Opportunities

### *Community Space and Internet Access Points*

According to village committees, in Ban Sam Kha community, the School, temple, healthcare unit and village worked together in a collaborative manner. The School where the Computer Centre located was one of the multipurpose spaces for villagers. People felt comfortable and free to come into the School. It provided space for diverse activities and hosted a community bank, the Computer Centre and Long-stay – an accommodation facility for visitors. After school hours, the place was still vibrant. Students got into groups to do their homework; secondary students came and provided advice to the younger on their assignments; the Lanna language course for the young was offered here thrice per week; some youngsters came to play music and sing together and some played soccer. Often, village committees took visitors to the School for a visit and it became a meeting facility at the same time. During school break, it provided various activities such as English, Lanna, and Vipassana (meditation) to the young and involved parents by asking them to collaboratively help look after the children and to join some activities. The openness, informality and friendliness of School made local people feel comfortable to come and learn to use the IT facility; it was a part of the community in a true sense.

Nonetheless, as the School was located at almost the north-end of village, many villagers felt the Computer Centre was a bit inconvenient to them to access especially when they were busy. The Computer Centre might consider the possibility to create a community network and share the satellite Internet connection with other access points. One possible option could be the temple or the community library, located at the south-end.

“[We] don’t use the Internet here because don’t have telephone.... I use it at the School around once a month; it’s far, and here, I got works to do. If there were at the temple, it’s close, I’d go to use. Some villagers don’t feel like walking there; they don’t have motorcycles, so they don’t go. It’d be nice to have it here too. The healthcare unit and temple are thinking to connect to the Internet and would like to get telephone line but couldn’t get it.... Nice to have it at the temple because villagers go there often, they come to the temple when there is village meeting. ...Meetings start around 8-8.30pm; they usually come around 7pm. While waiting, they could open and have a look,” mentioned one healthcare staff.

The Computer Centre could explore the potential of increasing the greater quota of data-transfer amount per month and diversifying its services as a node. As the community library became the Tambon (group of villages) library and could possibly obtain some funding from related government departments, it might be able to contribute some funding towards the increasing cost of Internet connection if it became another service point. Also more revenue could be generated to cover the Internet cost if service charge were an option. In addition, healthcare unit could probably match a portion of financial contribution if it considered to be a subscriber user of the Internet service at the temple or to access directly at its office.

The experiment might provide a learning opportunity to villagers and young people. The Computer Centre could try out both wire and wireless technologies and possibly locally made equipment for sharing the Internet access within the community. It might be able to learn some technical experiences from Indonesian grassroots in using inexpensive wireless technology and equipment in creating community networks (see <http://sandbox.bellanet.org/~onno>). Creating a village technical team would be vital in order to maintain and sustain the network without having to rely too much on outside technicians. The Computer Centre could involve young people besides committees of the youth group in this process. Village teenagers who might be interested in technical component could obtain hands-on skills while maintaining and building

the network. It is important to continuously create knowledge and skills transferring and sharing environment among villagers, and between villagers staying locally and village young people who studied and worked outside the community.

### *Combining the Traditional and the New, the Local and the foreign*

The community members realized and felt proud about their own values, local wisdom and capability, but at the same time they accepted that they had limitations and were opened to suggestions and alternatives. They willed to apply and incorporate new ways of doing things into their life styles and beliefs where they saw appropriate.

#### ICT USE AND POTENTIALS

Under the support of its allies, the community was potentially benefited from the use of advanced ICTs. For example,

- GIS and GPS was used by its supportive organizations to:
  - Help explore and identify available resources and appropriate trekking routes for eco-tourism; and
  - Evaluate the water flow and eco-system of the area in order to come up with suitable solution for local water management; and
- Field Server was a small sensing tool that could capture data on, e.g., humidity, temperature, luminance, etc. and had been used in agricultural practices to monitor the best condition for higher yields. The device was installed in the School with the software program installed on the server computer and the students would use it as an experimental tool to collect data on local environment conditions.

“When use information, we have to integrate local wisdom, compare and see which one is good. It has to be old and new combined. If there weren’t the Internet, for learning, sometimes we’re slower than others are; especially we live near the wild.... We know our village’s problems better than others do. When have problems, we all have to help, anything that is beneficial to the village, we have to find the solution together. To wait for [government] departments to help [us], it might not be possible. We have to help ourselves as much as possible. Rely too much on

outside factors, then we are not ourselves. In this village, we have to manage our own resources. If the local wisdom has limitations and we have to rely on outside factors, we will not refuse but have to apply to use. Villagers have to find the solution together. [If] give us funding, we have to manage and do it by ourselves, then it will be our benefit, [the benefit] will be within our village” (village chief).

Some traditional and advanced ICTs could potentially be a part of tools for solving the village’s problems and for serving the information needs. While the Internet was an up-to-date and timely information source, the village loudspeaker and community radio, as well as poster boards, could be information-mediated channels made the information more accessible for the locals. If the Computer Centre considered to provide information and research service to the villagers since most people did not have any computer skills and hard to find time to come and learn to use the equipment, it was crucial to make people realize the existence of the service. It could set up a mechanism that allowed villagers, who did not yet have the skills, to conveniently request for the research of information needed and to have the information delivered in a suitable way. The Computer Centre and the village might collaboratively find the potential of communication tools and technologies and explore the way to assist village members in utilizing them for acquiring information and data for better planning, decision making and management.

### *A Learning and Sharing Community*

Learning by doing was a trait that ingrained in the community members at all age. For example, the young had set up a bank, called Brain Bank, to provide loans with no interest for career investment to villagers. In addition to financial management skills, they also acquired vocational experiences through the borrowers by posing a loan condition that the borrowers had to provide learning opportunities on the business invested to the young if any of them had the interest.

Adult villagers had also gone through many trials-and-errors. They had experienced failures, but the important things seemed to be that they knew why and learned the lessons.

“How to help the villagers acquire the analytical skills and be able to better manage and administer their own families. It may not possible to rush them. We may have to let them learn by themselves. I’d like the villagers to help themselves, to know about themselves first, to learn from others who have already done well and have been successful. Let them learn from the failures and examine why they failed....”

The learning approaches and experiences of both the Ban Sam Kha village and Computer Centre were useful for other communities and for similar initiatives elsewhere when the lessons were shared. The Computer Centre had exchange ideas and experiences with other school computer centres and some community computer centres. Nevertheless, it could possibly reach out and network with more organizations in other sectors that had worked on telecentre (computer centre, community information centre, community Internet centre, community learning centre, etc.) related initiatives. It would be worthwhile for it to explore and discuss the dynamics of technical solutions, service provision and management strategies with others at a regular basis. At the same time, it had a lot to share.

The locals could always share their experiences, knowledge and skills in many areas such as funding management, governance practice, local participation, learning process and thinking system. “Funds that government provided for 20-30 groups, over 10 years now, they still remain, never disappear. The officials admire [us] because the management and administration within the village is good. Legume fund, livestock medicine fund. When people borrow the money for investment, after they sell produces, they pay back, so [funds] are still there.” The village normally shared and exchanged its lessons learned and experiences with others through field visit and through hardcopies of village and project reports. During the field study, a video-production team from Krung Thai Bank was producing a documentary aimed to captured the local knowledge, development projects and experiences of the Ban Sam Kha and would widely distribute the video to other rural communities. The village committees had requested for copies of the documentary in both VHS and CD-ROM formats and would cover the cost of those copies; the village planned to use it as an introductory presentation when people visit and also to sell it to interested visitors.

Besides printing and traditional electronic media, the Internet could provide additional potentials in the practice. Since the Computer Centre committees and the operator were in the middle of creating a web site of Ban Sam Kha, the village and Computer Centre could also use the Internet as another knowledge-sharing medium. The faster and wider audience and networks they could reach, the more local communities and people, including Ban Sam Kha villagers themselves, could benefit from knowledge sharing.

#### SAJJA ORMSUP: A Willing-to-Learn Example

“If use the computer, we’ll greatly save [numbers of] committees and manpower, 2-3 committees would be enough. Right now, each service needs to have 2 committees in helping each other; one person cannot handle. Regular saving isn’t complicated and already has a ceiling rate – everyone has to deposit a minimal amount of saving monthly. But special saving is complicated because each person deposits different [amount], there are many decimal digits, calculate like chequing account.”

“Sajja Group has over 2 million [baht] in circulation, provides loans, saving, welfare funds. It’s complicated when we calculate the year-end dividends because we have to calculate in terms of individual household and person. If used computer, it calculated the percentage for us. ... I think it would be easier.”

“I like computer. It provides us more convenience – don’t have to calculate ourselves. But it has shortfalls that we don’t use [our] thoughts; we also need to be accurate in keying data – no mistake.”

(Group member, interview, 9 Oct 2003)

### *Local Practices, Information, Market and Niche*

“There are insects, diseases and problems with chicken eating the vegetable. We don’t use any chemical because we consume [the crops] ourselves. The village chief and doctor prohibit [pesticide use] as well. In the rice paddy, we don’t use herbicide, each family pull grass in its own field.... It’s better to grow our own, we can’t earn much from selling, but when we buy it is expensive. There is no market if we grow for sale,” said a villager.

The Computer Centre could work together with the village and its allies to try to find out how ICTs could help promote strengths and could market unique products of the community. Many local resources and practices in Ban Sam Kha would be marketable if the linkage for consumers and markets were created.

In-depth, accurate, timely Information on market demands and supplies, market trend analysis and potential niches was what the locals needed aside from locally specific data and information.

“I follow agricultural news, for example, what is good to grow this year and what the market demands. But [they] only say what [we] could grow that the market might want. This year they don’t want us to grow garlic because Chinese garlic will flood into Thailand, ask us not to grow more or reduce, it’s good if we could reduce. This year, there’s China-Thailand free trade [agreement], the agricultural sector said. ... China is cold, better for growing [garlic]. Its variety, we can’t grow here. Ours is Si Chom Poo [pink] variety, tastes stronger, but stores/restaurants choose Chinese variety because it’s cheaper.... When Bangkok people come here, they ask for the Northerner [garlic] more [than other] because it stays [fresh] for long time; [...variety] got spoiled in 3 months, they sprayed a lot of chemical... it comes out before local villagers’. They want it to be dry, so have to spray chemical and can sell it sooner...” explained a villager.

Distributing channels and consumer links would be vital if the locals looked for and marketed niches that the village could provide such as organic produces and locally specific variety.

Skills and knowledge on researching and analyzing information, marketing, and business planning would also benefit the locals on decision-making and management of production and product-distribution. This could be a long process since many local people lack IT skills and it would take some time for them to be acquainted with the technology and could use it on their own. It would be possible when local mediator is in place and is involved in the learning process. Nevertheless, building the capacity is a continual and long-term process while information mediator could be a short-term and medium-term coping-mechanism.

### *Finding the Balance: Community vs Family Responsibility*

Seeing the young as the village’s development manpower in the long run, the village set the opportunity for learning and capacity building of the young to be one of its priorities. Villagers saw the importance of education and benefit of technology for the young and tried to provide support and cooperation as much as they could. For example, “When children went for the Internet training at NFE Centre more than 10 nights, villagers made the food and paid for the accommodation. [Children] had fewer: we stayed to take care of them.... Sometimes, parents went there in the evening, brought them food, came back at mid-night.” The village adults also tried to involve the young in all village projects and tasks as they realized young people’s potentials and skills and would like to provide hands-on learning experiences to the young.

Young villagers were involved in activities of the community bank, community library, revision of herbal remedies, Computer Centre, debt reduction research and so on. In addition, the young had also initiated their own learning projects such as the Brain Bank, Long Stay, and Yaowachon.com Shop. Some projects or tasks might draw and demand greater amount of time, energy and manpower than others. Consequently, few other duties and projects might

receive less attention and might be neglected sometimes. As a parent mentioned, “In the past the young took turns taking care of [the library]. Lately there are many tasks from the Computer Centre, then they rarely go to look after the library.” One community member also observed, “children involve in lots of activities in the School, sometimes late [at night]. This leads to the lack of personal time within the family. Parents complain that [children] do so many things and don’t stay home even on weekends.”

The workload and busy schedule also affected many villagers’ family and personal lives. Many villagers were enthusiastically participated in various village tasks and projects on top of their routine jobs and duties. Many village committees admitted that they felt they did not have enough time for their families and perceived this problem as one of the priorities. Open discussion and better communication among all parties of the village could possibly help the community come up with a suitable distribution of tasks and allocation of human resources, and a better balance between community responsibility and family life.

### **Lessons Learned**

- A powerful champion, either it was one person or a group of individuals, with well-established connections at the decision-making level could help draw various attentions and bring cooperation, as well as resources (human, knowledge, technology, etc.), into the development milieu of a rural community. In this case study, the networking activity was not performed only at the top level, but at the grassroots level as well. The impact of radial networking helped create an expanding well-knitted relationship among networked members. Through its champion, the Ban Sam Kha School Computer Centre initially equipped with only two computers had grown to have 20 computers with Internet connection and to provide supports to other community activities. However, all of these would not happen without the local community’s own initiative and social strength.
- Through a collaborative learning process and under an alliance relationship, grassroots, public, government and private sectors could work hand-in-hand towards a goal of rural community development. In this case, all parties considered themselves a member of alliance. Their perception toward the community was more subjective as they felt proud of the community for its success and tried to lend their hands when it facing stumbling blocks. The community’s allies had coordinately worked on the issue of ICT access and had tried to make the technology and its potential use work for the local people. Beyond the initial founding intention to provide learning opportunity to the young, the allies had assisted the Computer Centre in starting to provide services to various development projects of the community.
- Community’s self-help standpoint and self-awareness on its own strengths and limitations, as well as its openness, were important factors that made it be able to involve organizations and individuals from diverse sectors in its learning and development circle. In the case of Ban Sam Kha community, all the helping hands and supportive resources came from the faith and trust that the supportive parties had for the community and its strengths. They believed that the community could do it.
- The computer and Internet technology could provide opportunities for the whole community, especially children and adults, to learn together and from each other and to accept each individual’s unique capability when the openness was in-place.
- When private and business sectors involved or were involved in rural community development, they could play roles much more than a financial supporter. As in the case of Ban Sam Kha, the private and business sectors had become mentors, demonstrators and counselors on IT and ICT use, retail business, banking and financial management, and so

forth. Their experiences, knowledge and skills had been fed into the learning process of local people and vice versa. The rural community could learn some alternative ways and tools that they might be able to adapt and apply to help solve their problems in their own contexts.