Project no.04/01 LAO

Tadlo.net – The digital gap becomes smaller

What does a computer school need computers for?
- Building up a computer school in rural Laos.

Ban Sane Vang Gnay, Saravane province, Laos

November 2004 – March 2005

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Contents

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What does a computer school need computers for? - Building up a computer school in rural Laos.

Developing countries are lacking access to modern information and communication technologies. Thus a "digital gap" has established between the countries of the south and those of the north. The project "Tadlo.net" tries to overcome this gap and offers access to computer education and the internet to people in a rural area of southern Laos by building up the "Tadlo Computer Education Centre" (TCEC). Providing students with the knowledge to work with computers improves their career perspective and gives them the ability to use the internet as a pool for further education that otherwise would not be accessible for them.

People living in this rural area are mostly dependent on small scale subsistence farming, and the awareness of the importance of education is only limited so far. Soulideth Soumholphakdy, the Lao project partner and director of the TCEC, knows about the importance of education and is very involved in improving the educational situation in the region.
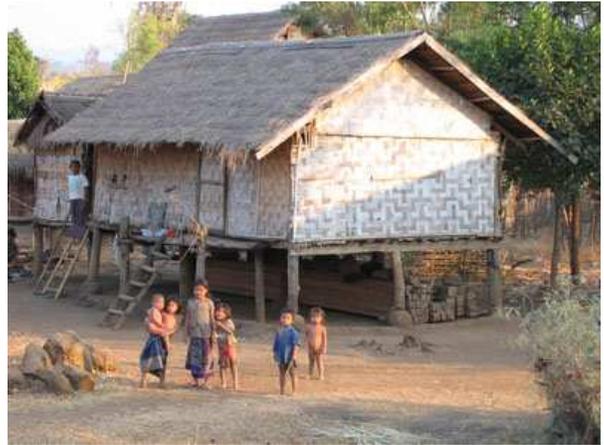
The ASA/GLEN-participant supported the project in the setup of the TCEC. Together with the Lao project partner he introduced the ideas of the TCEC at the local secondary school and that way aroused interest for the new technology and the lessons held in English. The students were interested in both learning English, as there are only very limited possibilities in this area, and getting to know the new technology they never had access to before. One of the tasks of the ASA/GLEN-participant was to prepare the contents of teaching and the daily lessons. As electronic devices are basically unknown and there are only two computers at the TCEC so far, imagination and flexibility were necessary for teaching. Theoretical computer basics, that are needed to understand how computers work, should let the students comprehend the steps of computation and take away the respect for the unknown technology. Together with the Lao project partner the ASA/GLEN-participant taught the daily theoretical lessons at the secondary school as well as the weekly practical lessons where the students had the opportunity to become acquainted with the computer. In a two week holiday course a smaller group of very interested students had the opportunity to acquire more practical skills.

Another task of the ASA/GLEN-participant was to provide the Lao project partner with further training in computer proficiency, especially in the field of the free operating system Linux, and to evaluate the extend of the interest and the motivation of the students.

1. Introduction

This report is the result of a study project realized from November 2004 to March 2005 in Ban Sane Vang Gnay, Saravane province in southern Laos.

Family in Ban Sane Vang Gnay

The project took place within the scope of GLEN, Global Education Network, which is a cooperation of the German ASA program and non-governmental organisations from seven New Member States of the European Union. Young Germans and other Europeans work together as binational tandems in three month work-and-study-stays abroad. During two preparation seminars Ludek Sterba, my Czech tandem partner, and I planned the project stay together. Unfortunately he could not participate in the project for personal reasons.

If this infrastructure exists at all, information – and communication technologies in developing countries are reserved for a small group of people, as it is only affordable for very few. Furthermore, there is a lack of training centres, so most of the population in these countries don't have any possibility to access or profit from the technologies. Hence, the countries of the south become more and more uncoupled from the information society of the countries of the north - a growing "digital gap" has developed. To make people aware of this "digital gap" and to encourage activities to get over this gap are the aims of "Digitale Brücke e.V.", the German NGO cooperating with the Lao initiative TCEC. Their joint venture, Tadlo.net, tackles the mentioned problems and tries to give the people of the Ban Sane Vang Gnay area a new perspective and a basis for social mobility through education. The TCEC is the only institution for computer education in this remote and agriculturally marked region and, therefore, an important opportunity for the young people of the region.

I am very interested in this approach and, as I study computer science, I have some educational background to contribute to the setup of the TCEC.

In the following report I will give an overview of the current educational situation in Laos and particularly in the area of Ban Sane Vang Gnay, of the conception of the project, my activities during my stay and the progress in the project so far, as well as a conclusion and an outlook for the further development.

2. The educational situation in the Ban Sane Vang Gnay area

Laos has a national educational system. The schools are open for everyone and, theoretically, attending school is mandatory. Still about 30% of the Lao people at the age of 15 – 45 cannot read or write. As many parents don't have any education themselves, they don't see the need to send their children to school.

About 3600 people of different ethnic groups live in 11 villages in the area of Ban Sane Vang Gnay. Most of the families live on small scale subsistence farming and

Flag ceremony at Seset secondary school

the children have to help their family on the fields. Many children can only attend classes during dry season, since this time of the year there is not that much work on the fields. As only few pupils would be able to come to school during rainy season when the farmers seed rice, there is a break of three month at school.

The minorities of the different tribal villages in this region sometimes don't speak Lao, and there is little awareness of the importance of education. Only 40% of the children of minorities start school of which about 75% graduate from secondary school.

Since many intellectuals fled after the socialist revolution in 1975, the need for qualified teachers could not be satisfied after the educational reform. In addition, most qualified teachers try to find a job at one of the better-paid private schools, as a teacher in a rural public school only earns about 30 $. It is exceptionally difficult to find a qualified English teacher.

The village communities have to pay the teachers themselves, so not every village can afford to run its own school. Therefore, pupils often have to cover quite a distance to get to school. There are at least four primary schools in the area of Ban Sane Vang Gnay, so the conditions for basic education and the distance to get to primary school are not too bad. For students graduating from the fifth grade there is the Seset secondary school, where they can attend another three years of classes. Families, who can afford to provide their children with two more years of school, have to send them at least twenty kilometres to the town of Laongam. Since the public transportation is very bad, these families additionally would have to equip their children with a scooter to get to school and back in the evening.

There are no official school fees in Laos. Still, pupils have to wear a school uniform and the families have to buy books and ball-pens. This sounds quite usual, but many families are not in the financial position to provide all of their children with these supplies. Because of financial problems parents often send only one child to school or their children have to quit school after a few years. The educational situation could be improved if the pupils were able to use the possibilities of the internet as a pool for learning. A vast amount of information and learning contents adaptable to different needs would be accessible without the need of travelling big distances. So far there hasn't been a computer training centre or any infrastructure of information and communication technology in the region.

Through the construction of the Tadlo Computer Education Centre (TCEC) the region obtains new perspectives in education. Also, there are no financial burdens involved, since one of the aims of the Tadlo.net - project is to offer free computer education to pupils of the area. At the TCEC students don't have to wear school uniforms and the centre is open to everybody.

3. Conception of the project and the working plan before departure

Tadlo.net is a privately initiated, international joint venture project carried by the German association Digitale Brücke e.V. and the Lao initiative Tadlo Computer Education Centre (TCEC). Digitale Brücke e.V. is an initiative that wants to contribute to the prevention of further disconnection of the developing world from the global information society. Furthermore, it sees the use of information and communication technology as an instrument to improve the development cooperation.

Meeting of the project partners in Ban Sane Vang Gnay

TCEC is an initiative of the mayor and dedicated inhabitants from Ban Sane Vang Gnay, those who are anxious to improve the career perspectives of the teenagers in the surrounding villages, as well as providing internet access to the community.

The TCEC is supposed to have an own school building including a computer pool with 16 computers and a small library. The construction of this building will be coordinated by the Lao project partner. The transportation of the donated computers from Germany as well as the construction of the centre should be finished when the ASA/GLEN – participants arrive.

After their arrival they are supposed to start with the construction of the TCEC computer network. The computers will be installed with the operating system Linux in a server-client architecture. The client computers are connected with the server and this intranet will additionally be provided with an internet connection. After the testing phase of the network, the ASA/GLEN – participants will set up the computer pool to be used as an internet café as well.

Further tasks are the preparation of a curriculum with the contents of teaching, further training of the Lao project partner, giving lessons in English and project works with the students. The ASA/GLEN – participants will, furthermore, write a progress report and a final report about their stay and the project.

4. Activities in the project during the stay

4.1 Situation at arrival

Since my Czech tandem partner Ludek could not participate in the project for personal reasons and things did not exactly work out as planned, I found a totally different situation on the spot than expected when I arrived. Due to a financing problem the construction of the TCEC building could not take place and the transport of the computers was stopped for bureaucratic reasons. When I arrived in Laos, I did not know what to expect and was very eager to meet the Lao project partner Soulideth Soumholphakdy. He welcomed me very warmly and offered me to stay in a room in his house. We talked about the present situation and tried to figure out how to start the project without computers and no school building.

We came up with the idea to ask the director of the Seset secondary school if we could use a classroom in his school for our lessons as well. In the lessons we wanted to start with theoretical basics until the computers would arrive.

Full of expectations we went to the school the next day and talked to the director and the teachers. We asked the teachers to inform their pupils about our idea to give daily computer lessons in English. The director agreed with our proposal and offered us to use a classroom after the regular lessons between four and five in the afternoon. It was not possible to teach longer as the students had to walk home after school and had to be at home before dusk at six o'clock.

The next day about 80 pupils came to the first meeting where we introduced ourselves and the ideas of the TCEC. The kids were very excited about having a foreign teacher and very interested in learning totally new topics.

4.2   Teaching at Seset secondary school

A few days after my arrival in Ban Sane Vang Gnay we started our daily lessons at Seset secondary school with a very big class of about 80 pupils. They were from different classes from both the close primary school as well as the three classes of the Seset secondary school. The youngest students were 9 years old, while the oldest were 15 years old.

First class of TCEC, Minh Phan and the Lao project partner Soulideth Soumholphakdy

The students' English skills were as diverse as their age, but as we could only teach one lesson per day it was not possible to split the class into two groups. The only alternative would have been to have lessons only every second day for each group which we considered not very practical for the kids. As we had only one English lesson per day, we did not have enough time to start with the English language from scratch. Mr. Soumholphakdy and I discussed the procedure of teaching, and we decided not to teach English basics like fundamental vocabulary and grammar but to concentrate on the topic of computers from the beginning and answer questions about words and grammar when they occur. As one of the aims of TCEC is to also teach the students English, we decided that I would first introduce the topic and explain the new words in English. I always explained the words in the context of the word family and tried to make connections to known words. I figured that it was easier for the pupils to understand the words when I explained figuratively, so I drew pictures on the blackboard, brought objects, gesticulated and tried to find metaphors of their daily life. Still it was hard for the students to understand, as

their knowledge in English was partly very limited and the concept of electronic devices was more or less unknown to them.

> „A computer is like a tuk-tuk
> – the tuk-tuk itself is the hardware and the driver is the operating system that you need to use the tuk-tuk."

Very young tuk-tuk driver

Mr. Soumholphakdy explained the contents again in Lao to make sure that all students really understood. In the beginning the translation was essential, later the students got more and more used to the explanation in English and made great progress in understanding.

There was no curriculum so far, so I had to make up the content of teaching. I created a curriculum that, I thought, covered the basics and made sense chronologically. I designed posters with the contents for the lessons in advance and wrote further explanations on the blackboard.

As the computers had not arrived from Germany yet, we concentrated on the theory to create a profound understanding of the different parts of computers. This was also important to show the students that a computer is not a magic black box that produces unpredictable output. Once a week on Saturdays we brought Mr. Soumholphakdy's personal computer to school to show the pupils what we were actually dealing with. We showed them the different parts of the computer and explained their function again. The class got to know the new device in groups of five students and very shyly made their first attempts with the mouse and the keyboard. We had to encourage the children many times as they were very cautious and did not dare to really touch the mouse but only moved it with one finger. From week to week the operation became more and more confident and the students developed an understanding for the effects of inputs. With more computers we could have concentrated much more on practical lessons, and the students would have made much faster progress, but we had to use the only resources that we had and make the most of the situation.

The kids were very shy in the beginning and did not dare to answer questions because they did not feel safe with their English skills. I came up with the idea to motivate them by giving them little prizes for answering questions. We started the lesson with a quiz, in which I asked for words

from the last lessons. The pupils were supposed to guess the word from the given definition, drawing or gesture, pronounce it and finally try to write it on the blackboard. In return they earned one TCEC knowledge point which they collected and could then trade in for little prizes like books, ball pens, class pictures or calendars. It showed that this approach was a very strong motivation for the students and helped them a lot to learn the vocabularies and play with words. It also compensated the initial differences between girls and boys, as the girls realized that they could also stand up and show their knowledge and even earn prizes this way.

Within a few weeks the information about our free computer classes had spread and several teenagers from the next town asked if they could join our class as well. These students at the age of 17 and 18 years had already graduated from secondary school and were more advanced in English. One important requirement for the sustainability of the TCEC is that there are local teachers and tutors to give the lessons. We encouraged the older and more ambitious students to help their classmates, provided them with more background information and answered all their questions to create a deeper understanding.

4.3   Teaching at TIM's restaurant

The Lao project partner Mr. Soumholphakdy runs the local tourist information and is the owner of TIM's restaurant and guesthouse, a small cosy place for tourists. After some weeks we got a donation of another laptop and had the possibility to borrow a monitor to use it with a laptop with a broken screen and thus had three working systems. It was not very practical to bring all the hardware to school, set it up for some hours before bringing it back again. Furthermore, we wanted to accustom the students to the TCEC as a different educational centre than the secondary school so we decided to have the practical lessons at TIM's restaurant. The restaurant is situated on the other side of the street where the building of the TCEC will be build, so the students already got used to the location.

Like before we still went to Seset secondary school for theoretical lessons during the week. As there were no regular lessons on Saturdays, the students did not have to go to school but came to TIM's restaurant instead. For Mr. Soumholphakdy it was now possible to let the children work independently with the computers and

Students at TIM's restaurant

run his business in the meantime and the children could practice with the computers as long as they wanted to.

Only the very interested students came to the lessons on Saturdays, and since there were only about 25 to 30 of them, it was possible for all of them to actually use one of the few computers. Moving the practical lessons to TIM's restaurant turned out to be very productive and the students could practice the whole day instead of only three hours, so they made great progress in using the computer and also gained self-confidence.

During a holiday break of two and a half weeks without regular lessons we offered a more practical oriented holiday course for the interested. About 15 to 20 students, interestingly mostly girls, attended the lessons from 9 to 12 in the morning. The course had a curriculum that more or less corresponded to what computer lessons at the TCEC could be like with the needed infrastructure of a school building and a computer pool. The combination of theoretical explanations and the following practical exercises to apply the theory makes learning easier and creates a deeper understanding. The students got familiar with the Linux file system, user rights, the handling of application windows and basic operations on files. At the end of this course each one of the students was able to login, open an application, create a file and save this file in a specified personal directory on the hard drive.

On the last day of the course the students had to pass a practical test to show their proficiency in the learned topics. They were very nervous in the beginning because of this official exam but then they realized that we only wanted them to apply the learned skills and every single student passed the exam. In the afternoon we handed them over a personal certificate for the successful participation at the holiday course and a book as a present.

Mr. Soumholphakdy hands over the certificate to a young student

The kids were very proud and immediately went home to show their family what they had achieved during their holidays.

When we went back to Seset secondary school to normal lessons after the holiday course, we repeated the covered topics again for the other students. Many students of our former class did not come to the lessons any more and the class shrunk to a size that was easier to teach. In the beginning the class was so big that I could not remember every face and name and four pupils

had to sit on one bench. Now it was a class of about 30 to 35 interested students and quantitative teaching changed to qualitative teaching.

4.4   Cooperation with the project partner

As the Lao project partner, Mr. Soumholphakdy, was the only active member of the TCEC, he was the most important person in the project for me. He welcomed me very warmly and offered me to stay in his house. I felt very close to Mr. Soumholphakdy and we had many interesting discussions about the project, the Lao society and the world in general. He had lived in Australia for many years and decided to come back to Laos again, so he knew about the western approach but then again he grew up with Lao traditions and points of view.

He introduced me to many Lao traditions and helped me to develop an intercultural understanding. I really admire Mr. Soumholphakdy for his ambition to improve the situation of the people in his village. He supports several projects in Ban Sane Vang Gnay such as the reparation of a bridge or the construction of a Buddha statue in the temple. We cooperated greatly

as a team and he was very open to my suggestions and new methods of teaching. I am happy that I had the opportunity to collaborate with Mr. Soumholphakdy and give him new impulses for his further commitment. He helped me to realize how even little things can make changes for people.

His whole family was also very nice and friendly and I soon felt like an almost equal member of the family. I would like to thank Mr. Soumholphakdy and his family for everything they did to make my stay a wonderful and unforgettable experience for me.

Minh Phan, Mr. Soumholphakdy and his family

5. Summary of the progresses in the project

Unfortunately things had not worked out as planned before my arrival in Laos, so that I was confronted with a totally different situation than expected. The financing of the education centre is still unclear and the transportation of the computer hardware could not take place so far

because an official toll-free paper of the Lao government is necessary to bring the computers into the country. It is a very tedious and bureaucratic process to obtain this paper. One of the first efforts we made after I arrived was to improve the situation and to advance the transportation. Several local, regional and state departments are involved in such an educational project and knowing people is important to accelerate the process. My major task was to set up the computer network as no local project partner has the knowledge to do it. Therefore, I extended my stay for another month and we hoped to realize the transportation with an official paper we received from the regional government. Unfortunately we were not successful to accomplish the transport during my stay so this is still the most urgent problem to be tackled. Another important task is the financing for the construction of the building for the TCEC.

We were successful to establish the TCEC and to raise interest and motivation in the community. Only ideas and plans had existed so far, but no realization of the TCEC had actually taken place. I also issued a first curriculum for the lessons and documented the teaching for teachers in the future. An evaluation at the end of my stay emphasised that the requirements were not too high, and that the students understood the topics quite well.

Mr. Soumholphakdy obtained skills which will make it easier for him to run the TCEC, and we found students who potentially could be tutors in the future to help providing sustainability of the project. There is a great potential and interest in the community that should be fostered in the future. Considering our possibilities I would say that we made the best of the situation and that we pushed the project for further development.

We made the project known to tourists as well as to locals. The travel guide "Lonely planet" for example mentions it, which might have some further impacts in the future, since many people travelling through Laos will read about the project.

6. Conclusion

I think that the approach of the Tadlo.net project is very helpful to the community, and the students showed me that there is the need and interest in the services offered by the TCEC. In discussions with the older students I became aware that they don't have many educational perspectives in this rural area, because there are no educational facilities after the secondary school. Further education is only accessible if they move to the next bigger city about 85 km away and if they have the funds to cover the costs. These students were exceptionally motivated

and they realized the chances of the TCEC's free computer education. With the internet as a source of education and information, they have the opportunity to obtain knowledge they would never be able to get without the knowledge of how to use computers.

These students pushed me to advance the project in the future and to commit to the further development of the TCEC. Small things like the donation of old unused computers in our western society might help to support potentials in societies where this technology is not available to most of the people. The TCEC will give the young generation new perspectives and can be a basis for social mobility through education. In the future the TCEC will also be sustainable when the internet café and computer courses with costs for adults will cover the expenses and local teachers will teach the next generation of students.

I for myself made important and enriching experiences and learned a lot about the realization of projects. I learned to live in a non-western society and Mr. Soumholphakdy helped me to develop an understanding for different points of view and ways of life. I taught for the first time in my life and realized how challenging but also wonderful this kind of work can be. I gained motivation myself seeing all these young kids that were so eager to learn, came to the lessons in their free time and were so thankful, while in Germany education still is taken for granted. I certainly want to contribute to the further development of the TCEC and maybe bring this approach to other places as well. I am exceedingly grateful for having had this opportunity and feel indebted to many people who contributed to my great experiences.