

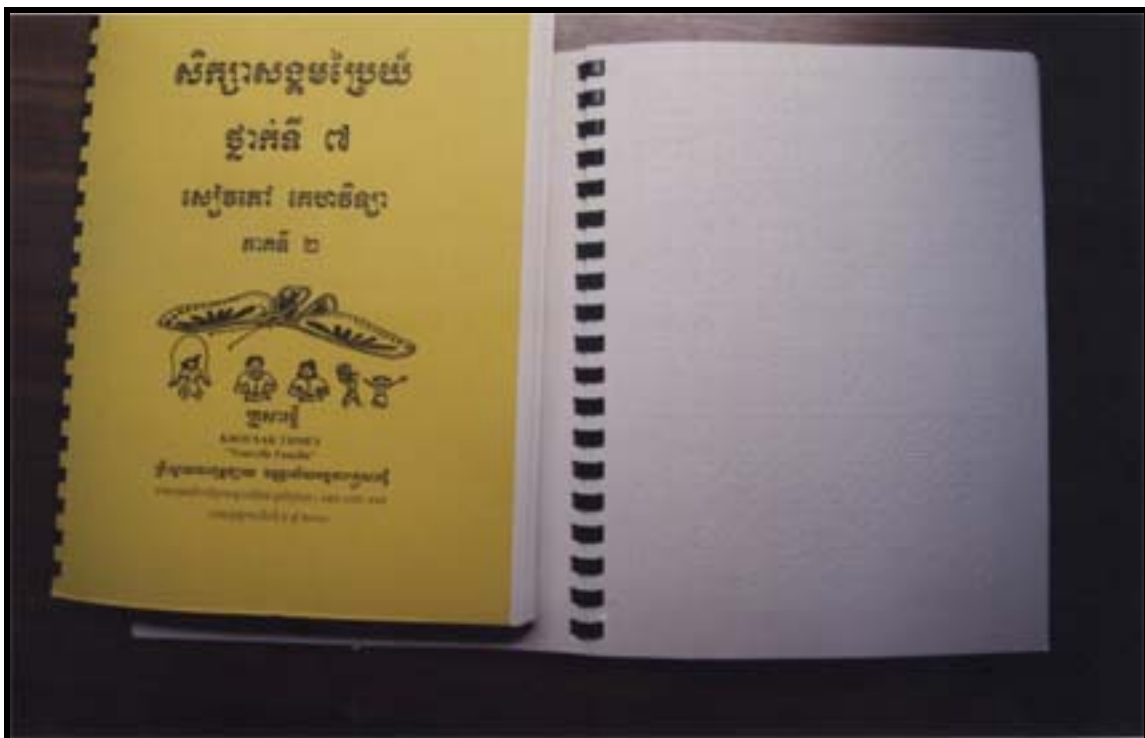


KROUSAR THMEY - NEW FAMILY
first Cambodian foundation
assisting deprived children

Krousar Thmey
គ្រួសារថ្មី

Braille Bookmaking Workshop in Battambang

Semestrial report : july 2003 / december 2003



Report written by Yann ROGER.

January 2004

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Krousar Thmey is recognised as a charity in France, Switzerland and the United Kingdom

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INTRODUCTION

The education of handicapped children in countries like Cambodia is a main concern. A report written in 2002 by the NGO "Save the Children" mentions that less than 10% of Asian handicapped children attend school...

That is why Krousar Thmey decided in 1994 to react and be the first Cambodian organisation to offer blind and deaf children a way to come out of their isolation by opening the first school for blind in Chba Ampeou right on the outskirts of Phnom Penh. The first school for deaf opened in 1997 just next to the one for blind.

To make it possible Krousar Thmey had to adapt the schooling to the disabilities of the children. The first step was to build tools to enable blind children to read and write. Therefore Krousar Thmey developed the Khmer Braille and opened the first Braille bookmaking workshop in Chba Ampeou.

Since 1994 three more schools for blind children opened in three different provinces: Battambang, Siem Reap and Kampong Cham. Moreover Krousar Thmey opened this year the first integrated class for blind children within a public school in Sihanoukville. We would like to open more classes like this one over the years to come.

In October 2003 a total of 158 blind children received adapted schooling. To face this increasing number of blind pupils a second Braille bookmaking workshop opened in Battambang in 2001.

In those schools children learn to read and write Braille. The bookmaking workshops translate all the scholar handbooks from the Ministry of Education and provide the four schools as well as the integrated class with the requested Braille books. With these books the blind can follow the official curriculum and even be integrated in public schools. Children are thus independent in their schooling and this contributes to reversing the negative mentality towards the handicapped in the Cambodian society.

This report sums up the activities of the Braille Bookmaking Workshop in Battambang during the semester July 2003 - December 2003. It will besides keep you updated with today's Krousar Thmey programs.

Please feel free to contact us for any other information.

Σ krousar-thmey@bigfoot.com

I. The story of an alphabet : the Khmer Braille

1.1. Braille history reminder

Braille has been an effective way of communication for blind people since 1829 when it was invented in Paris by Louis Braille. Louis Braille lost his sight at the age of three as a result of an eye injury. As a young boy at school he became frustrated with the large and bulky raised letter alphabet used to learn reading and writing skills. Later in his life a French artillery officer named Charles Barbier de la Serre gave him the idea of reading by a tactile code. After many years of experimenting Louis Braille developed a successful reading and writing system that today is used worldwide.

1.2. Braille system description reminder

Braille is a tactile system of raised dots representing letters of the alphabet. To read Braille the fingers gently glide over paper that has been embossed with the Braille code.

For note taking a pointed instrument is used to punch out the dots on paper held in a metal frame. The readable raised dots appear on the other side of the paper. In other words the letters must be written in reverse so that when the students turn the page they are able to feel the bumps in the right direction.

The basis of the Braille system is known as a Braille cell. The rectangular cell is comprised of six dots numbered in a specific order. Each dot or combination of dots represents a letter of the alphabet. A single cell can be used to represent an alphabet letter, number, punctuation mark, or even a whole word. Sixty-four combinations are possible using one or more of these six dots.

1.3. The early stages of the Khmer Braille

In 1994 when Krousar Thmey decided to open the first school for blind children in Cambodia no tools existed for the specialised education towards those children. A very basic Khmer Braille had been developed in the Cambodian refugee camps based on the Thai Braille. Krousar Thmey started on what already existed and developed this language.

The first step was to find a Braille equivalent for all the Khmer letters. As there are 33 consonants and 26 vowels in the Khmer alphabet, this was quite a long job. It was done on the basis of what had been created in the refugee camps. Some letters are translated by 2 or 3 cells of six dots. Moreover some Khmer letters are written under or on the others. For example, the vowel "i" is always written on a consonant. To write "mi", you write an "m" and above it an "i". But you can not reproduce this in Braille and that is why other systems of representation had to be found.

For numbers Krousar Thmey use the same signs as in any other countries. But when we write there is not only letters they are a lot of other signs !! Punctuation, accent, symbols (ex : ?, <, =, \$, ...) So step by step we have to find equivalent for every sign.

1.4. Development of this system

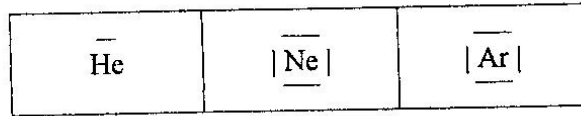
The education for the blind in Cambodia is still in evolution as it started only ten years ago. Indeed each year we open a new grade : in 1994 we only opened one grade 1 and in October 2003 we had to open one grade 10 for the children who are here since the beginning. For them we need to translate each year new signs especially in scientific topics. For example, the children in grade 10 will start studying this year molecular chemistry so all the molecular formulas need to be translated in Braille.

To produce all the required mathematics symbols, physics notations and chemistry formulas a small group of people working with the blind gather together each summer in Phnom Penh (*see press articles part*). In Battambang school a research group also meet every saturday to work on new Braille signs.

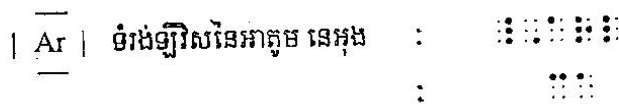
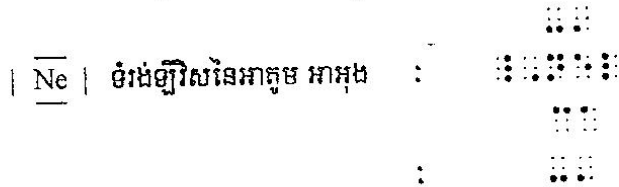
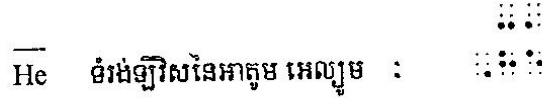
For mathematics they use an American Braille book but they do not have the equivalent for chemistry and physics so they really have to invent the symbols. We tried to investigate in France for existing books on the subject but nothing seems to be available. Maybe you could have a look to see what is available in your country.

You can see an example of those signs on the next page. It is very difficult to represent all the small signs that we use as every sign must be written with one or more groups of six dots. Especially in chemistry the writing is not linear anymore and for blind it is one more difficulty to discover where the signs are located on the paper!

3/-



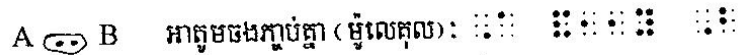
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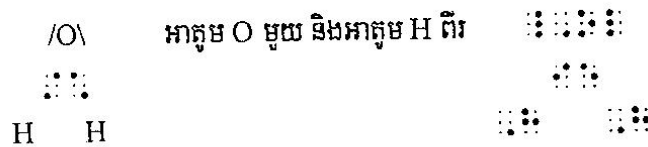
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7/-



ចំនុចសញ្ញាគណិតវិទ្យា ថ្នាក់ទី១០

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|---|------------------------|---|----------------------------|
| R | ចំនួនពិត | : | ⠠⠗⠠⠗ |
| N | ចំនួនគត់ | : | ⠠⠒⠠⠒ |
| Z | សំណុំចំនួនគត់វិទ្យាទីប | : | ⠠⠵⠠⠵ |
| Z ⁺ | ចំនួនសនិទាន | : | ⠠⠵⠠⠵⠠⠗ |
| Q | ចំនួនសនិទាន | : | ⠠⠵⠠⠵ |
| F | សំណុំប្រភាគ | : | ⠠⠠⠠⠠⠠⠠⠠⠠ |
| [a,b] | ចន្លោះបិទ a,b | : | ⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠ |
|]a,b[| ចន្លោះបើក a;b | : | ⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠ |
| | ស្មើគ្នា, សមមូល | : | ⠠⠠⠠⠠⠠⠠⠠⠠ |
| <u>C</u> | ដែលមាននៅក្នុង | : | ⠠⠠⠠⠠⠠⠠⠠⠠ |
| ! | Factorial Sign | : | ⠠⠠⠠ |
| √ | រឹសការេ | : | ⠠⠠⠠⠠⠠⠠⠠⠠ |
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|]...] | ចន្លោះបិទត្រង់ | : | ⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠ |
| $\widehat{A}B$ | រង្វាស់ធ្នូ(មានទិសដៅ) | : | ⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠ |
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| * សំគាល់ : ចំពោះសញ្ញាភ័ក្ត្រ ត្រូវយកចំនុច | | | ⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠⠠ |
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2. The making of a book

In this part we will describe how printed books from the Ministry of Education become Braille books used by blind students in their classes.

As we provide a formal education to all the blind children we need to give them adapted tools to follow the national curriculum. This is why we translate all the scholar handbooks from the Ministry of Education into Braille. We are lucky that in Cambodia all the teachers use the same methods and thus the same books. For example in primary school children study only four topics (Khmer, mathematics, social sciences and natural sciences) and therefore it only exists four books for each grade.

2.1. Typing and translating the text into Braille

In Battambang only one staff works in the workshop: Miss Em Sochinda. She is helped by the school director M. Sokpheak and also one staff from Chba Ampeou workshop to whom she notifies any problem or asks questions over the phone.

Since there is another Braille bookmaking workshop in Chba Ampeou the staff split the work between the two workshops. In Battambang are typed and corrected mainly mathematics and chemistry books. This to account for staff resources and also help available on site by M. Sokpheak as he used to be a chemistry teacher and is competent for maths issues. He can therefore correct or explain any problem related to those subjects.

They can use two different computer softwares to carry out this job :

- DBT (Duxbury Braille Translator). With this software you need to know Braille very well. While using this program one uses only six keys : each one corresponds to a dot in Braille. So for every letter or every symbol the equivalent is typed in Braille. Translating a book is quite a long process with this software but as the typist can see the result straight away on the screen there are very few mistakes.
- KBT (Khmer Braille Translator). With this program you can type in Khmer and then press the button "translation". The software automatically translates the text into Braille. This software is more performing than DBT but the problem is that you can only type text with this software. So for all the scientific topics it is not possible to use it as they are too many symbols...

2.2. Reading through the book and correcting

Once the book is totally translated in Braille and saved onto the computer a copy is printed in Braille.

Miss Em Sochinda then reads through the book and corrects any mistake.



Miss Em Sochinda at work.

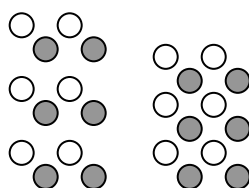
2.3. Printing all the required books with a modern technology

In the bookmaking workshop there is one embosser available. We call "embosser" a machine which produces the Braille script.

It uses a very modern technology and **print Braille on both sides of the paper!!** This process is really economical because paper for Braille is very expensive and it now enables the use of only half the quantity of the paper required by the old process.

To print on both sides of a page the embosser punches marks on one side of the paper and punches marks moved from half-a-space on the right and half-a-space down on the other side. By doing so no space is wasted.

We can represent it like that :



- boss : those marks are read on the recto of the page.
- gap : those marks are read on the verso of the page.

Depending on number of children in the class for which they edit a book we print one book per child. For instance this year three students started to learn in grade 10. So before the beginning of the school year we had to translate all the books required for grade 10 and print 3 copies of each.

We also edit books for the school of Kampong Cham and the school of Siem Reap. And each year we have to print new books for the children in Chba Ampeou as each year they are more and more : for instance last year there were 43 blind pupils studying in this school and since October 2003 there are 55 ones.

2.4. Bending the books

Each book is binded at the very end before being used by children. Different colours are used for the front page for the staff to distinguish the subject but also the grade.

2.5. Use by the pupils

At the beginning of each school year every class is provided with as many books as there are children in. So every child can have his own book and follow the lesson on it. When they go to the public school the pupils bring the required books with them. They can thus study like any the other children. The teacher can ask them to read a paragraph or to do an exercise and the child can do it normally. As the teachers are trained to Braille language by Krousar Thmey it helps them correcting the exercises.

However the children are not allowed to bring the books at home as they may forget them, lose them or spoil them.

2.6. The end of books lives

Depending on the quality of the paper used a book can last between 2 to 5 years. After that the dots become flat and it starts getting difficult to read properly. In that case a new book is printed to replace the old one.

Regularly the books have to be replaced because the Ministry of Education updates its program or the teaching methods. To take into account this change new handbooks have to be translated and thus it all starts again.



Books stored on shelves inside the workshop.

3. The workshop

3.1. Workshop routine

The workshop in Battambang produces books in close cooperation with the second braille bookmaking workshop located in the School for blind children of Chba Ampeou.

Thus the battambang workshop edits book of chemistry and mathematics whereas the workshop from Chba Ampeou edits books of sciences, history, physics, house work, Khmer language, geography, earth, moral of culture, population learning, social learning, house work, etc...

By editing should be understood typing and correcting the braille books on a computer. Once a book has been edited it can then be exchanged by floppy disk between the 2 workshops for further printing.

3.2. Books production

The table below presents a summary of the number of books printed in the workshop during the year 2003.

| Subject | Grade / Number of books | Number of books printedF |
|---------------------|--|-------------------------------------|
| History & Geography | 7/b1 & b2 | 18 |
| History & Geography | 8/b1 & b2 | 18 |
| Geography | 7/b1 | 10 |
| Geography | 8/b1 & b2 | 18 |
| Geography | 8/b1 | 9 |
| Social learning | 3/b2 | 6 |
| Social learning | 2/b1 & b2 | 21 |
| Khmer language | 7/b1, b2, b3, b4, b5, b6 & b7 | 35 |
| Khmer language | 2/b1 | 4 |
| Khmer language | 8/b1, b2 4/b1 | 22 |
| Chemestry | 7/b1 | 9 |
| Chemestry | 8b1 & b2 | 18 |
| Mathematics | 7/b2, b3 & b4 | 27 |
| Mathematics | 8/b1 | 9 |
| Mathematics | 8/b1 & b2 | 18 |
| Moral of culture | 7/b1 & b2 | 18 |
| House work | 7/b1 & b2 | 18 |
| House work | 8/b1 & b2 | 18 |
| Population learning | 8/b1 & b2 | 18 |
| Physics | 8/b1 & b2 | 18 |
| Sciences | 8/b1 & b2 | 18 |
| | TOTAL | 350 |

Since braille translated books get thicker than the books from public school we sometimes make up to 7 braille books out of one « normal » book (*see Khmer language*) !

Because books are being reused every year and passed over from one pupil to another we don't always need to print new versions.

4. News about our handicapped program

4.1. Speech language therapy project

This year 2003/2004 will be very special as a new program started concerning teachers for deaf children. Indeed a French volunteer, professional speech language therapist, arrived in July 2003 to work with Krousar Thmey during 1 year. She will help the teachers in each school for deaf children and will introduce them various technics to improve communication with their pupils. She started by giving general knowledge about speech language therapy during the annual training and is now spending 2 months in each of the 4 schools. She just came back from Siem Reap school where she set up new groups ; for example a group of children learning how to read on the lips and another workshop on sounds.

This is a complementary job to the action taken by the organization « Enfants sourds du Cambodge » where a team of hearing aid specialists come every 6 months in our schools to follow up, equiped children and provide new comers with hearing aid.

4.2. Cooperation with various NGO

Krousar Thmey attends monthly meetings with other NGO working with blind children such as ABC (Association for the Blind Cambodians), HKI (Helen Keller International), IRIS (International Resources for the Improvement of Sight), CARITAS, Medicam, DAC, CAO (Cambodian Optometry Association), etc... One of the results of those meetings is for instance the new English lessons that will start this year in two of our schools (Kampong Cham and Chba Ampeou) ; next year should start English lessons in the 2 schools of Battambang and Siem Reap.

4.3. Press articles

2003 Human rights Prize

Year 2003 finished with a great piece of news as Krousar Thmey was awarded the 2003 Human Rights Prize by the French Republic. Together with 4 other international NGO Miss Cheam Kosal, director of Krousar Thmey in Cambodia, received the prize from the hands of the French Prime Minister M. Jean-Pierre Raffarin in Paris on 11th December 2003. We received a donation of 15000EUR.

This decision was made to recognize the work that we have been carrying out since 1996 in the town of Poipet at the Khmer-Thai border. Krousar Thmey opened a village made of 20 small wooden houses which welcomes single mothers with very low income and each house is surrounded by a small garden where they can grow fruits and vegetables. They don't need to pay any rent and Krousar Thmey even helps some of the poorest families : the only condition for them being to send their children to school.

Today 20 mothers and 81 children benefit from this program.



Article released in the daily Khmer English Newspaper « Kampuchea Thmey Daily » on 8/01/04.

Annual training

As every summer teachers from Krousar Thmey and also teachers from public schools gathered in Phnom Penh to receive training during 2 months (*see press article below... unfortunately in French !*). Various sessions were organized in different subjects : mathematics, sign language and of course braille !

The two bookmaking workshops staff also organized special meetings during that time. They indeed form a research group of 7 people - 3 from Battambang school, 2 from Chba Ampeou and 2 from Kampong Cham) to think about new braille signs that could solve some problems reported by children. It is especially in high grades mathematics and chemistry subjects that most of the difficulties appear. Those sessions took place between 1/08/03 and 18/09/03, 7h/day, 5 to 6 days/week.

This annual training is always a good opportunity to exchange experiences and get new ideas from other colleagues. Miss Em Sochinda enjoyed going back to Chba Ampeou wokshop as this is where she had her 9 months training before starting in Battambang workshop.

Cambodge

□ *Education*

Des instituteurs retournent à l'école pour enseigner aux sourds et aveugles

Trente-trois enseignants se trouvent actuellement à l'école pour enfants sourds de Krousar Thmey, situé dans le quartier de Chbar Ampeuv, où ils ont entamé une formation intensive de deux mois au langage des signes. A quelques pas de cette école, est érigée celle pour enfants aveugles. Là, vingt-trois stagiaires participent à une formation au Braille. Chaque année, les professeurs des classes spécialisées mises en place par l'ONG sont réunis pendant les mois d'août et septembre pour apprendre ces nouvelles techniques ou les simplement les parfaire. "Pour la rentrée 2003-2004, seize nouvelles classes vont ouvrir leurs portes à des enfants sourds ou aveugles et s'ajouteront aux douze existantes", explique M^{me} Neang Phalla, coordinatrice du programme Enfants aveugles et sourds.

Sea Sivutha, 23 ans, enseignante à l'école Prek Sdey, est la seule enseignante de la province de Kandal à suivre cette formation et ce, pour la deuxième année consécutive. L'après-midi, après avoir fait cours à une classe normale, elle s'occupe de sept élèves malentendants. "Il n'y a aucune raison qu'ils n'aient pas accès à l'éducation, lance-t-elle. Ils rencontrent, il est vrai, davantage de difficultés. L'apprentissage du langage des signes est long, ce qui les oblige à passer deux ans à chaque niveau." L'institutrice

aime travailler avec ces enfants, souvent plus sages que leurs camarades et plus attentifs à ses explications.

Si l'enseignement aux petits sourds ou aveugles demande de fait davantage d'efforts, les instituteurs l'acceptent généralement sans réticence, disant éprouver de la compassion pour ces enfants. "Je suis fier de pouvoir prendre part à ce programme, commente Pheung Yom, 21 ans, en poste à l'école de Prey Tayon, à Svay Rieng. Avant, notre pays ne possédait pas ce genre de structures. Désormais, les enfants sourds et aveugles ont une chance de ne plus être complètement abandonnés." Ces efforts sont en outre récompensés par une prime mensuelle de 30 dollars qui arrondit les maigres revenus de ces fonctionnaires.

Krousar Thmey a mis en place ce type de classes dans huit provinces. "A terme, nous aimerions pouvoir en implanter un peu partout, affirme M^{me} Neang Phalla. Nous travaillons avec le ministère de l'Education nationale. Si on nous avertit que, dans tel endroit, il y a de nombreux élèves souffrant de surdité, nous nous rendons sur place, demandons l'autorisation à leurs parents et dispensons une formation à l'instituteur." Une école de Prey Veng est ainsi récemment entrée en contact avec l'ONG.

A Phnom Penh, Krousar

Thmey a franchi une étape supplémentaire. Dans l'école de Russey Srok, les enfants sourds s'assoient sur les mêmes bancs que les élèves normaux. Ce qui constitue déjà un premier succès selon Neang Phalla. "Au départ, il est en effet plus difficile de travailler avec les malentendants parce qu'ils lisent facilement le mépris que les autres leur témoignent et se braquent. Heureusement, petit à petit ils recommencent à communiquer avec des gestes", explique Neang Phalla.

Une fois en classe, l'enseignant conduit son cours comme il l'a toujours fait. A ses côtés, un interprète traduit en langage des signes l'ensemble de ses explications à l'adresse de quelques élèves pas tout à fait comme les autres. "Pour les leçons de mathématiques, on peut s'en dispenser", relève Yuos Sunthea, un des interprètes dans une classe de 6^e. En trois ans d'existence, ces classes ont profité à 53 enfants sourds. Ils peuvent généralement les intégrer à partir de la 4^e, c'est-à-dire à un stade où leur maîtrise du langage des signes est quasi courante. L'apprentissage ne semble malgré tout jamais fini. Et l'après-midi, pendant que les autres profiteront de leur temps libre, les petits sourds repartiront vers le centre de Krousar Thmey, à deux pas de là, y suivre des enseignements complémentaires.

Ung Chansophea

Charme et Sérénité

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VERY MUCH !!!**