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## **Indigenous Knowledge and the Role of Information Literacy Education**

**Dan Dorner and G.E. Gorman**

Victoria University  
Wellington, New Zealand

E-mail: [Dan.Dorner@vuw.ac.nz](mailto:Dan.Dorner@vuw.ac.nz)

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### **Meeting:**

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*(This paper includes many of the PowerPoint slides from the presentation at the conference in Québec City. The content here is the same as presented, but when the content of a PowerPoint slide used in the oral presentation essentially repeats what is in the text of the presentation, the PowerPoint has not been included.)*

### **Abstract**

*In a previous paper the authors argued that effective information literacy education (ILE) must consider the indigenous cultural context of a country and tailor programmes according to this context. In this paper the discussion is carried further, with Laos as a case study of how culture and indigenous knowledge affect planning for ILE that is culturally and contextually appropriate. Based on interviews with 14 teachers in four Lao schools, the authors conclude that Hofstede's cultural dimensions are a valid means of understanding local cultural norms, and that these norms clearly affect how information literacy programmes should be planned and delivered. The authors also conclude that anyone involved in developing or promoting culturally and contextually appropriate ILE programmes should call upon the teachers' own indigenous knowledge of the local educational context and their own ways of incorporating indigenous knowledge from their community as a teaching resource. Finally, suggestions are offered regarding how culturally sensitive ILE can contribute to global understanding by incorporating learning contexts that demonstrate the value of various forms of indigenous knowledge, such as the knowledge and experience of community elders or local ethnic groups and cultures..*

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### **About the Authors**

Dr Daniel G Dorner is a Senior Lecturer in the School of Information Management at Victoria University of Wellington in New Zealand. He has considerable experience in library education and information literacy education in Southeast Asia, particularly Vietnam, Laos, Cambodia and Thailand. His current research interests include information literacy education in developing countries, education in library and information management, and digitization and related issues. He and Professor Gorman have been professional colleagues for some years, and have collaborated on information literacy projects and research in several Asian countries. Email: dan.dorner@vuw.ac.nz.

Professor G E Gorman FCLIP FRSA AALIA is Professor of Information Management in the School of Information Management at Victoria University of Wellington in New Zealand. His special interest is in information services development and infrastructures in Asian countries, and also the education of information professionals in Asia. He is Editor of *Online Information Review* (Emerald) and Associate Editor, Reviews Editor and Board Member of 10 other journals. He is also active in IFLA as a corresponding member of RSCAO, committee member of CLM and of the Information Literacy Section. Email: gary.gorman@vuw.ac.nz.

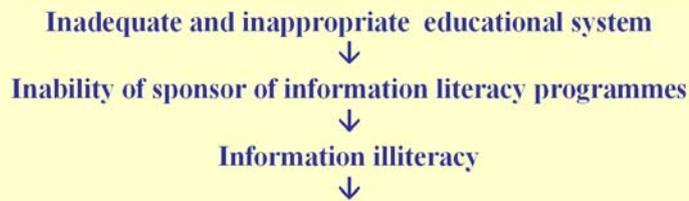
Good afternoon everyone, my name is Daniel Dorner and I am a Senior Lecturer in the School of Information Management at Victoria University of Wellington in New Zealand. I am the primary author of this paper which also has had input from Professor Gary Gorman, who was not able to attend the IFLA Conference.

In this paper we shall focus on

- Importance of information literacy education in developing countries
- Key definitions
- The Lao education system
- Cultural dimensions and Lao education
- Indigenous knowledge of and in Lao education
- The role of ILE in Laos

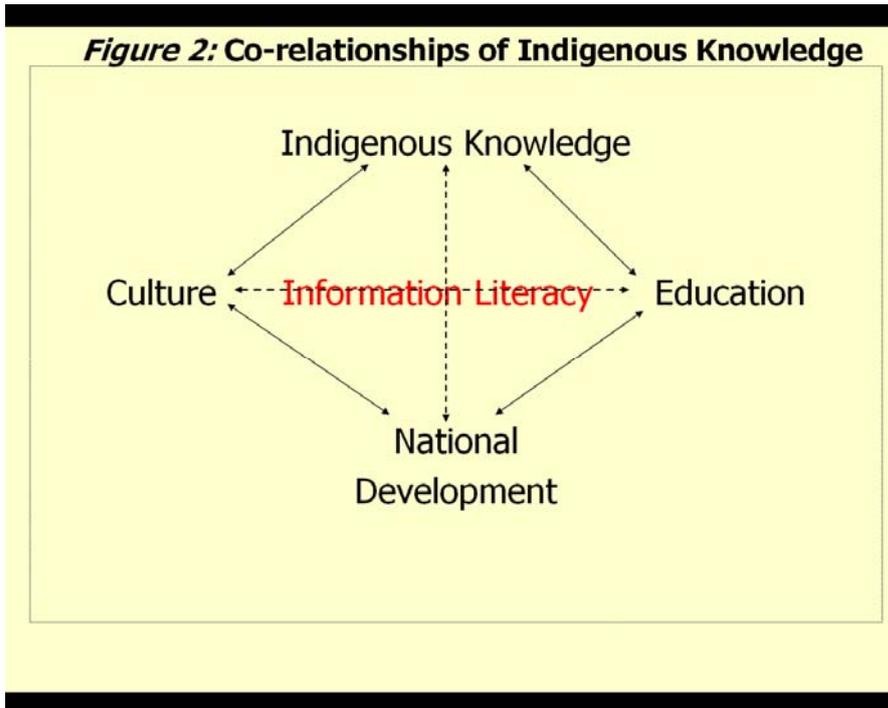
It has long been recognised that literacy, and a literate population, are keys not only to economic development but also to personal achievement and social well-being everywhere. Many commentators and researchers have addressed this issue for last past half-century or more, but only recently have we begun to understand the importance of 'beyond literacy' developments such as information literacy, digital literacy and complementary literacies. Figure 1 extends the literacy issue into the realms of information literacy and information literacy education.

**Figure 1: Information Illiteracy Constraints to Development**



- Fosters:*
- Lack of knowledge**
  - Lack of skills**
  - Lack of awareness**
  - Lack of self-confidence**
  - Lack of innovation**
  - Dependency thinking**

Figure 1 (after Burkey 1993, p. 15) suggests that poor overall education lies at the root of information illiteracy, but increasingly even such poor nations as Laos are able to provide at least basic education for their citizens, more so in urban areas than remote rural areas. Nevertheless, as the IL training funded by SIDA through the International Federation of Library Associations and Institutions (IFLA) Advancement of Development through Libraries (ALP) programme has shown, even in these situations where basic education is available - information literacy is still, as one participant in Laos stated recently, 'a new concept to us'. The lack of knowledge and lack of awareness brought on in part by continuing information illiteracy affect all aspects of society, including such basic needs as health and nutrition, housing, clean water, a fair income, and so on.



In our own efforts to support the development of information literacy education in Laos, we have been attempting to use the indigenous knowledge of local teachers and librarians to inform the development of contextually appropriate ILE programmes. In fact, we have come to see many co-relationships between indigenous knowledge, culture, education and national development that flow through information literacy education.

To clarify what we mean in this paper by “Information Literacy” and “Indigenous Knowledge” we now provide our definitions of those two terms.

In an earlier paper (see Dorner and Gorman, 2006) we took a critical view of Western or the developed world’s definitions of IL because they are skills-based and assume a high availability of information resources. We emphasised that these definitions and models may not be operational in the developing world. Since this paper deals with information literacy education in Laos, one of the least developed countries in Southeast Asia, our operational definition of information literacy remains useful.

We define information literacy as the ability of individuals or groups

- to be aware of why, how and by whom information is created, communicated and controlled, and how it contributes to the construction of knowledge
- to understand when information can be used to improve their daily living or to contribute to the resolution of needs related to specific situations, such as at work or school
- to know how to locate information and to critique its relevance and appropriateness to their context

- to understand how to integrate relevant and appropriate information with what they already know to new construct knowledge that increases their capacity to improve their daily living or to resolve needs related to specific situations that have arisen. (Dorner and Gorman, 2006, p. 284)

For our definition of indigenous knowledge (IK) we have consulted two agencies concerned with indigenous knowledge. The first is the International Development Research Centre (IDRC) of Canada, which in an online guidebook to assist people who are doing development-related research defines *indigenous knowledge* as “the unique, traditional, local knowledge existing within and developed around the specific conditions of women and men indigenous to a particular geographic area’ (Greiner, 1998). Put more simply, indigenous knowledge refers to the unique local contextual knowledge that originates from the people who are native to a particular place.

The second definition, which is from the Office of the National Education Commission of Thailand, which says that indigenous knowledge in the context of Thailand is ‘the body of knowledge, abilities, and skills of Thai people accumulated through many years of experience, learning, development, and transmission’ (Thailand, ONEC, n.d.). This definition is used as the basis for the definition in this paper. We define indigenous knowledge as *the unique body of knowledge, abilities and skills of local people accumulated through many years of experience, learning, development, and transmission*.

The CIA World Factbook Website (2008) provides the following relevant data about Laos:

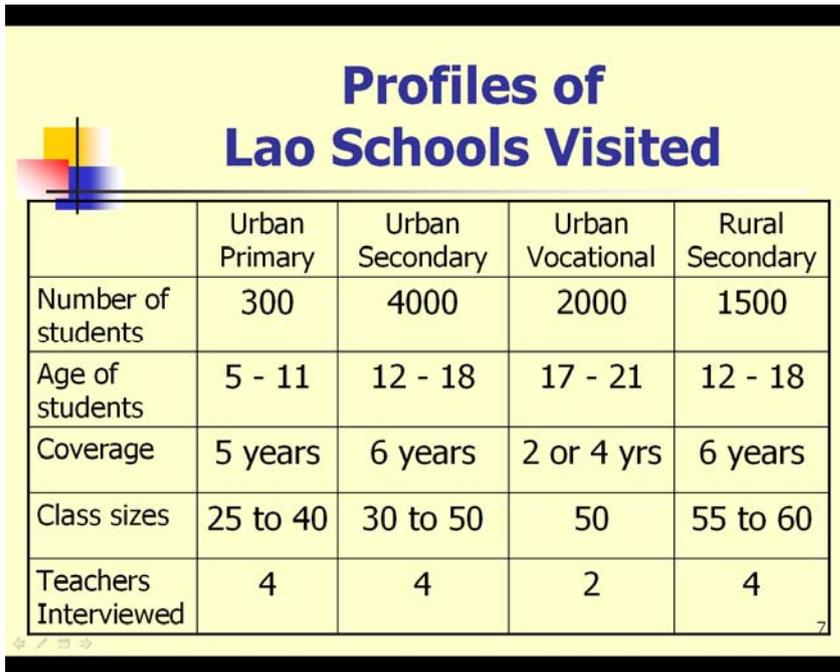
- **Population:** 6,667,534 with 41% under 15 years old, 55.9% between 15 and 64 years old, and only 3.1% being 65 years and older.
- **Ethnic Groups:** more than 30, with the Lao group approximately 60%
- **Main religions:** Buddhist 65%, animist 32.9%, Christian 1.3%, other and unspecified 0.8%.
- **Literacy rates:** 77% of adult males and 60.9% of adult females, or 68.7% of the total adult population, are considered literate.
- **Education System** – Policy and Programming comes under the Ministry of Education

The Visiting Arts website identifies some fundamental issues facing the Laos education system. Visiting Arts is a not-for-profit British organisation that works with the British Council among others ... It states:

Only 71 per cent of primary school aged children are in school. Net enrolment rates drop to 15 per cent at lower secondary level, and two per cent at upper secondary level. Another serious issue is the wide difference of enrolment rates between boys and girls, and between the different ethnic groups. The higher the level of schooling, the relatively worse the attendance of girls and ethnic minorities. (Visiting Arts)

### Participating Schools

In preparation for Information literacy education workshops that we held earlier this year in Laos, we made a visit to Laos in 2006 and interviewed 14 teachers at four different schools.



	Urban Primary	Urban Secondary	Urban Vocational	Rural Secondary
Number of students	300	4000	2000	1500
Age of students	5 - 11	12 - 18	17 - 21	12 - 18
Coverage	5 years	6 years	2 or 4 yrs	6 years
Class sizes	25 to 40	30 to 50	50	55 to 60
Teachers Interviewed	4	4	2	4

Note the size of schools and class sizes in the chart.

The school's buildings seemed to be well maintained and it has pleasant grounds. However, we soon realised that appearances can be deceptive. A teacher of students in year 5 said that the teaching resources provided by Ministry of Education are insufficient and that he has to create additional teaching and learning resources. A year 1 teacher commented that she has to create all of her own teaching resources because none are provided to her.

## One of the Buildings at the Urban Primary School



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This school does have a small library but it has no budget to operate it. The school principal commented that the library is available for use by outside students, so in a way it acts as a public library for local children.

In the urban secondary school we visited, we found that there were too few resources available to the teachers and the students. The teachers spoke of receiving their teaching resources from the French embassy. There were so few text books available in one class that the teacher had chosen to give his textbook to one of the students. The urban secondary school has a small library but the geography teacher said she no longer uses it because the information she needs, such as statistics, is out of date. The library does not appear to have a budget to add new resources. There is no computer in the library, but interestingly the school does have a “Gifted children’s room” that has a video player and a computer available only to “gifted children.” There is also a computer laboratory with 10 computers for students, but this is in a school with 4000 students. And though the computers are connected to the Internet, only the teachers are allowed to use the Internet, and they must pay for their own Internet use by credit card. The Mathematics teacher at the school commented that Internet access was slow and expensive.

## A View of the Urban Primary School's Library



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As we expected, the rural secondary school was the most poorly equipped of the four schools we visited. We were aware that our visit occurred in the last week of the school holidays, so there were only a few students and teachers around. From the exterior the school buildings and the grounds looked somewhat neglected and there were goats roaming around the outside of the classrooms. The teachers there told us of class sizes of 55 to 60 students. Only one teacher, a teacher of Mathematics to first year students, said he has enough textbooks for his class. The other three teachers talked about the extremely low level of resources provided by the Ministry of Education. The Geography teacher, for example, said that the only resource provided to him is a text book and he has to find supplementary material himself. The teacher of Lao Language and Literature told us that he is not even provided with a copy of the curriculum so he follows the content of the student textbook. In fact, we were told that the School recently changed from teaching some subjects in the French Language to teaching them in English because the school was now receiving far more resources from an American donor agency, the San Francisco Foundation.

## One of the Buildings at the Rural Secondary School



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The vocational school has approximately 2000 students. It seems to be well maintained though again we found the level and quality of resources for teaching and learning appear to vary. A teacher of secretarial subjects commented that the teaching resources provided to her are out of date whereas a teacher of Accounting and Business Administration told us that her resources are updated year by year. However, we were also told that there are two library rooms at the school but the resources in them are old, no new resources are being added and it has no computers. The vocational school does have computer laboratories for teachers to use with their classes, and for students to use for “word processing and doing calculations”. However, there is no internet access in the computer laboratories so the students use Internet cafes when needed, and the teachers tend to use their home computers for preparing their classes.

### **Dimensions of Culture**

In an earlier IFLA paper (See Dorner and Gorman, 2006) we discussed Gert Hofstede’s dimensions of culture, and we used these dimensions as a way to understand how culture might affect learning and teaching contexts for Information Literacy Education. We again have found Hofstede’s Dimensions of Culture to be valuable, this time as a means of using the Indigenous Knowledge of local teachers to understand how cultural dimensions within Laos may affect considerations for IL programme development.

In the mid-1970s, Hofstede, a Flemish academic, identified four dimensions of culture which have proven to be strong indicators both of cultural differences and of how the

culture of a country (or region or sub-group) affects the behaviour (for example, how teachers teach and students learn) and the values (for example, respect for tradition) of its people. (At a later point in time, Hofstede added a fifth dimension of culture called Long Term Orientation, but we feel this dimension to be less relevant to our focus on ILE.) Geert Hofstede's son now works closely with him, and they define a *dimension* as "an aspect of a culture that can be measured relative other cultures" (p. 23).

Power Distance (PD) refers to the degree of equality, or inequality, between people in a society. It is the extent to which the less powerful members of organisations and institutions (for example, the family) accept that power is distributed unequally.

Individualism (IDV) – with its opposite, collectivism – refers to the degree to which a society reinforces individual or collective achievement and interpersonal relationships. Individualism addresses the degree to which individuals are integrated into groups.

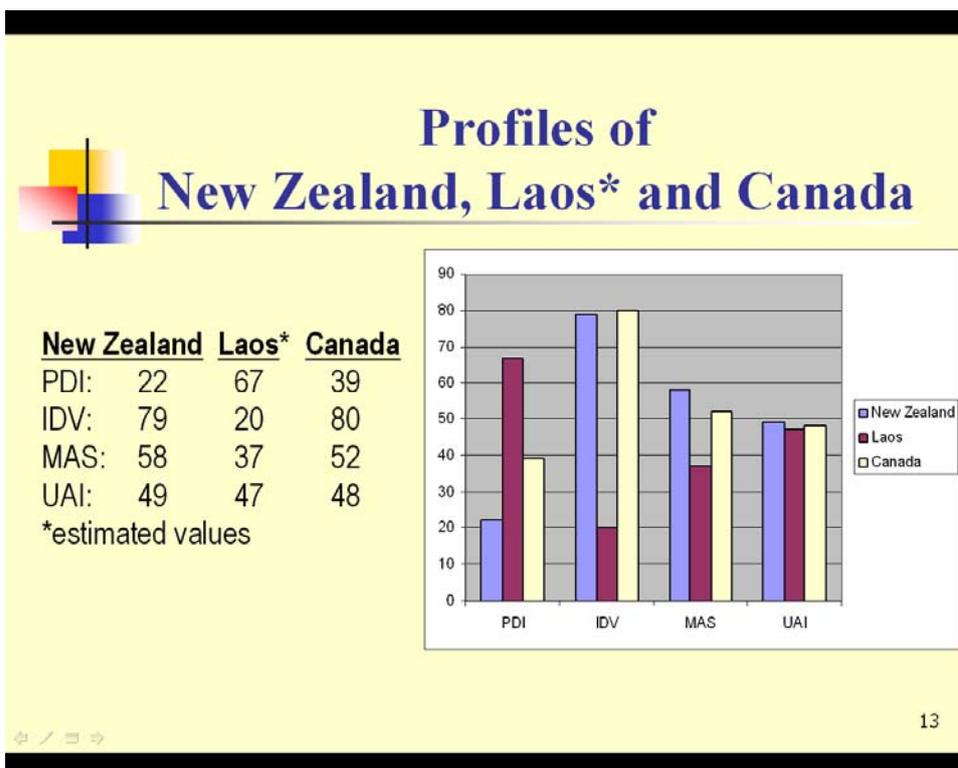
*Masculinity* (MAS) focuses on the degree to which society reinforces the traditional masculine role model of male achievement, competitiveness, control and power – in comparison to femininity which focuses on caring for others rather than on the self, and on building and maintaining relationships.

*Uncertainty Avoidance* (UA, or UAI for Uncertainty Avoidance Index) addresses a society's tolerance for uncertainty and ambiguity, and indicates to what extent a culture programmes its members to feel either uncomfortable or comfortable in unstructured situations.

Finally, *Long Term Orientation* (LTO), according to Hofstede, deals with 'Virtue regardless of Truth'. Values associated with Long Term Orientation are thrift and perseverance; We have found LTO to be a difficult dimension to apply to the contexts we have studied, so we have not included them in our study.

Hofstede determined scores for the dimensions of culture against 74 countries and the scores are available online. However, Laos is not one of the countries that he measured. Therefore we estimated scores for Laos by averaging the scores of its neighbouring countries, Thailand and Vietnam.

The graph (below) provides a comparison between Laos and two western countries, New Zealand and Canada. It shows that New Zealand and Canada are relatively similar with their greatest difference occurring in the Power Distance Indicator. The chart also shows the main differences between Laos and the two developed countries are in the Power Distance Indicator and the Individuality Indicator, whereas the Masculinity Indicator is relatively similar for all three nations and the Uncertainty Avoidance Indicator is almost identical.



Because of the limited time in this session we will focus our discussion only on the two dimensions – Power Distance and Individualism for which Laos scores show the most difference compared to those of the two Western Countries.

### **Power-Distance Indicator (PDI)**

- Student-teacher relationships
- Expectations for good teachers and students
- Shift to student-centred teaching & learning

One indicator of high PD is in the student-teacher relationships. Nearly all of the teachers said that their students call them “Ajarn,” the local word for “Teacher.” A teacher in one of the lower grades in the primary school said students call her “Teacher Mother” or “Teacher Auntie.” These terms reflect high respect for the teachers. We were also told that students show more respect for older teachers than for younger teachers.

One young female teacher asked students to address her by her name rather than “Teacher”. However, she had to revert back to requiring the students to call her “Teacher” when some male students started to behave in a slightly informal manner to her which is inappropriate in their context. In this instance trying to break with tradition led to misunderstandings because of the meanings behind established relationships within the education system.

Another indicator of high PD in Laos is the type of expectations that exist about good students and teachers. Teachers in general said that they expect good students to be polite, to be punctual, and to behave properly both inside and outside of the classroom. Interestingly teachers overall did not expect good students to be studious or to be knowledgeable. The teachers said that students expect good teachers to be knowledgeable, to act properly and to demonstrate good citizenship – to be models of good behaviour - again an indication of high PD.

An important signal of change we found out from teachers is the introduction of student-centred teaching. The presence of student-centred teaching and learning is generally an indication of low power distance within a society. The Ministry of Education in Laos has officially endorsed a change to student-centred teaching in the school system and there is strong evidence that many teachers are adopting this method. We shall talk about this point shortly.

### **Individualism Indicator (IDV)**

#### **Students' preferred learning activities**

According to Hofstede and Hofstede, countries with high Power Distance are likely to have low Individualism. This appears to hold true for Laos. We asked teachers several questions we hoped would reflect the strength of Individualism in society.

The first question probed for the types of learning activities the students like best. Hofstede and Hofstede contend that in an educational context, IDV becomes apparent in the level of comfort felt by students with respect to types of classroom activities. Many of the teachers said their students enjoy working in small groups to answer questions or do projects. A teacher at the vocational school commented that students not only enjoy working in small groups, they like competitive group activities when their group can compete against other groups in their class. Another teacher said that a student is more comfortable providing the group's answer to the class when providing rather than his or her own. In a society with high collectivism and low individuality, people feel more comfortable in doing things in group contexts and in looking after group needs.

#### **Teachers' perceptions of the role of education**

The second question was about the purpose of education within the broader society. Many of the teachers answered that its purpose is to develop the country's human resources and raise the people's standard of living. A young teacher from the vocational school commented on the role of education in relation to the family and community: "The role of education is very important - important for the family and community. Having a good education forms the student, forms the person. Education can turn the country into a healthy developed country." This perspective suggests a society with low Individualism. In a culture with a high IDV score, people are likely to believe the purpose of education is to prepare the individual for a place in a society of other individuals, and learning how to learn is more important than learning how to do. In contrast, in a collectivist society, "there is a stress on adaptation to the skills and virtues necessary to be an acceptable group member" (p. 98).

As we demonstrated in our earlier paper, these cultural factors need to be considered when planning ILE programmes in a developing country such as Laos.

### **Indigenous Knowledge – the Local Educational Context**

#### **Change to student-centred teaching and learning**

In our analysis of the interview data we found that the current students in Laos are coming through an education system in which the change is occurring but not uniformly.

We found some teachers have adopted the change whereas others have not. At first, we thought it might be related to the teachers' age. Our analysis of what the teachers told us pointed to two reasons for this situation.

First, younger teachers have been educated in student-centred teaching methods in their training at the teachers colleges, a factor which explains why these teachers all talked about or provided examples of student-centred methods of teaching. One young teacher, explained very clearly the benefits of this method for her students: "If I help students to learn, not only learn by memorizing but also learn from practice or from real activities, they will learn deeply."

The second reason is that the Ministry has begun a professional development programme to educate teachers about student-centred teaching and learning. This programme has started with teachers at the primary level, which clarifies why the interviewed primary school teachers, all of whom started their teaching careers between 18 and 30 years ago, are familiar with and are using student-centred methods, while the vast majority of older teachers in the secondary schools did not provide examples of student-centred teaching.

The lack of educational resources and the large number of students in classes, especially in the rural areas, also arose as an issue. As the Geography teacher in the rural secondary school pointed out, with no resources and with 60 students in his class, he has no choice but to use a teacher-centred teaching style:

"Students only listen, they have no material, and no activity. That is why I use the teacher centred style and prefer to talk."

These contextual factors need to be considered along with the issues related to the gradual change across the education system when developing ILE programmes.

#### **Urban/rural educational divide**

We found that teachers in the rural schools talked about the dire lack of educational resources in the rural areas, especially in comparison to the cities. And while urban teachers also talked about the inadequacy of the teaching and learning resources, they nonetheless spoke about how they and their students could access information resources in libraries and services such as the National Library of Laos, the French Learning Centre and the Libraries at the National University of Laos.

Another issue relates to family responsibilities of the rural students and how they affect the time and energy these students have available for their learning. We were told that many rural students work on the farm. Then after farming they come to school, but are very tired, and not very able to focus on learning. This issue also affects students outside the classroom. The English teacher at the rural secondary school said that the students have no time to do homework so she only gives them in-class work.

In Laos there are many ethnic minorities groups such as the Hmong hill tribe people. We were told that some ethnic minorities do not believe in secondary school education for their girls because the girls are much more valuable at home, tending to the needs of the family whether it be for farming, or looking after younger children.

One teacher pointed out that the rural educational conditions resulted in much lower educational expectations among rural students in comparison to urban students.

### **Application of indigenous knowledge in teaching and learning contexts**

The teachers also provided us with examples of how they use indigenous knowledge in teaching and learning contexts.

The Geography teacher at the rural school said he incorporates topics such as forest conservation into his classes so the “students can learn from rural people ... The students can ask the elder people in the village how to conserve the forest.”

The teacher of Lao Language and Literature, as mentioned earlier, said that he does not even have access to a curriculum so he bases his teaching on the textbook and then finds local resources. He said:

I base my teaching on the students’ textbook and then I use the technique of teaching by collecting knowledge or information from the newspaper, from others, from the oral tradition, from the persons who know about the culture. And then I bring this kind of information to the class.

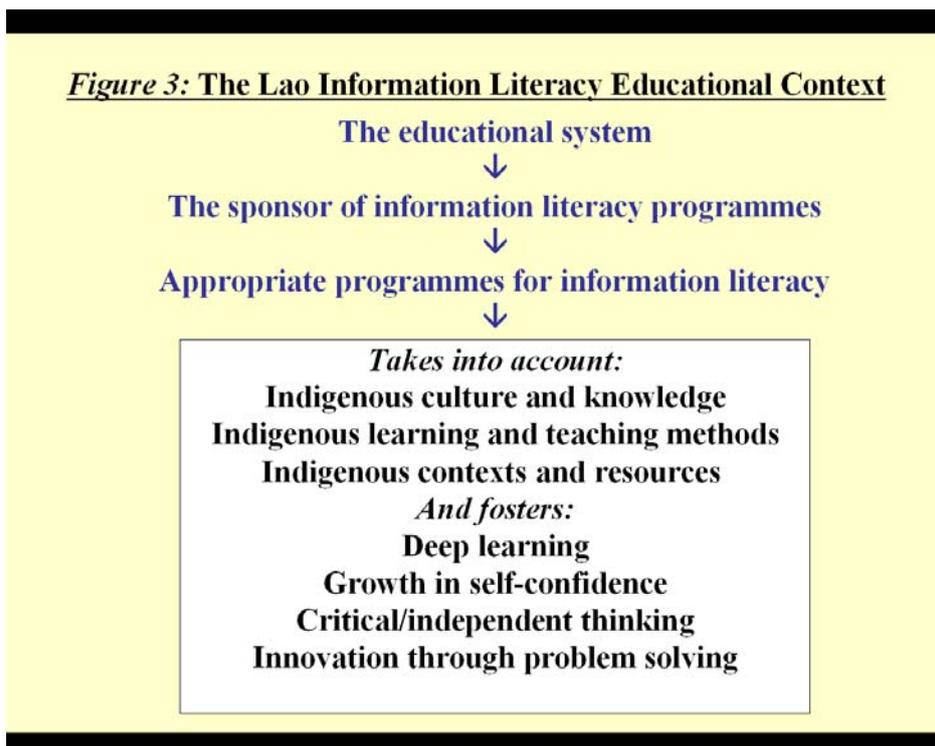
Teachers in the urban primary school and the teacher of Lao Language and Literature talked about the importance of teaching students about the traditional moral behaviour. For example, one of the primary school teachers said that learning about traditional culture “can help students to act in the right way and respect things. Students can learn to respect teachers, also teachers to respect students.” The other primary teacher said that learning about Lao culture “gives students a chance to learn. And learn about morality.” He added that at the moment, it is important to teach students about traditional culture such as Lao music “because now there are not a lot of people interested in traditional culture.”

The most eloquent and heartfelt quote about the importance of teaching traditional culture came from the teacher of Lao Language and Literature in the rural secondary school.

The students are quite poor with the Lao language. They are now learning in a foreign language - mainly English. ... If we put the more value on learning English than the Lao language maybe one day we will forget the Laos language. The students would learn better in the Laos language than in a foreign language. The Lao culture teaches us to understand how to be ourselves. Sometimes Lao people need to learn the Buddhist doctrine, to teach the young people to know how to be themselves and how to be ... When the Western culture comes in, the Lao people forget their very good traditional culture.

### Conclusion

Our experience thus has brought into clear focus the need to work closely with the local people when assisting them in understanding IL and developing ILE. In order to provide effective support to Lao educators and librarians in the development of ILE in Laos, we have come to realise the vital importance of understanding the local context.



As Figure 3 demonstrates, the local context encompasses the educational system, which extends from the Lao Ministry of Education and its policy makers, to the teacher training colleges, the schools at all levels, the curricula and resources for those schools, the teachers and the students, and indeed into informal settings within the home, the temples, the workplace and so on.

The sponsor of IL/ILE programmes might be an external agency such as IFLA ALP or a local body such as a teacher training college or the Library of the National University of Laos. The sponsor must realise that, for an ILE programme to be successful in Laos, it cannot simply adopt what has been implemented in other countries. Rather for the ILE programme to be appropriate for the local context, it must take into consideration and use indigenous culture and knowledge, indigenous teaching and learning methods, indigenous contexts for genuine learning.

The ILE programme will then lead to growth in the self-confidence of both the teachers and the learners ... and the benefits will become apparent – students' self-confidence will grow, and increased critical thinking will lead to independent thinking. Innovation will increase through improved problem solving, which will lead to national development and improved living conditions for individuals and the country as a whole.

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