

Some Considerations on Training ETD Teams in Developing Countries

Ana M. B. Pavani

Departamento de Engenharia Elétrica, Pontifícia Universidade Católica do Rio de Janeiro

apavani@lambda.ele.puc-rio.br

Rua Marquês de São Vicente 225, Prédio Leme, sala 415, Rio de Janeiro, RJ, 22453-900, Brazil

www.maxwell.lambda.ele.puc-rio.br/

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Abstract

An ETD project requires various skills besides the interaction of different groups in the university.

Among the various skills, a very important one is the knowledge about digital libraries - from metadata element sets to the capture, storage and preservation of digital objects. Most universities in developing countries do not have staff with such qualification. In some cases they are not aware of all the tasks to be performed and how to write a project or to model a workflow. Issues of digital preservation, authors rights on the Internet and others must also be brought to discussion.

Another important aspect is the multidisciplinary nature of an ETD project. It requires the active participation of the Graduate Programs and of the ICT Team, besides the Library Staff. Last but not least, graduate students play a key role and must be included in the process.

This work addresses some characteristics of the training that will help all parts interested in starting an ETD project in a developing nation. It is based on the fact that, in developing countries, infrastructure, training and access to information are not in the same levels of the first world. Besides that, there may exist very sharp differences among regions in the same country.

This work also addresses the need of team development during the training sessions, so that all parts work together in a cooperative manner.

Introduction

Developing nations differ from their developed counterparts in the quality of life. This shows up in many different ways: life expectancy, literacy rates, access to health care, etc. At the same time, some developing nations have regions that are very different from each other in terms of the same indicators.

Consider two countries: Belgium and Brazil. There is no doubt that Belgium is a developed European nation while Brazil is a developing country in Latin America. Three very usual attributes in the analysis of the quality of life are: life expectancy, infant mortality and literacy. The following table shows these numbers in Belgium and in Brazil.

Table 1: Comparison between Belgium and Brazil

	Belgium	Brazil
Life expectancy at birth in years	78.13 [1]	68.4 [2]
Infant mortality per 1,000 live births	5.3 [3]	34.7 [2]
Literacy in % of adult population	98 [3]	86.7 [4]

It is quite clear that there is a sharp difference in the indicators of Belgium and Brazil.

At the same time, Brazil is a large country and there are significant variations in the indicators among regions of the country. The following table presents the numbers for the southern and northeastern regions - the first has the highest quality of life in the country while the other is the opposite.

Table 2: Comparison between SO and NE Brazil

	BR-SO	BR-NE
Life expectancy at birth in years [2]	70.8	65.5
Infant mortality per 1,000 live births [2]	22.75	52.6
Literacy in % of adult population [4]	92.2	73.4

The differences between the two regions show that the levels of development are not the same. This is also true in other areas of living, including access to education and to information. There are variations even in the same region - a percentage of the population lives in situations that are very similar to those of developed nations while other parts are in underdeveloped situations.

Also, there may be very distinct levels of faculty qualification and infrastructure in the universities, meaning that ETD Projects are not to be homogeneous.

These facts are important in the implementation of training teams for ETD Projects in developing countries.

At the same time, there has been an evolution in the infrastructure and in the basic knowledge of ICT (Information and Communication Technology) tools in the last three years. This evolution is discussed in section 3.

This work presents some results of ETD training activities in Latin America. They have been developed as a sequence of courses - the first was held in August 2000 and the last in May 2003. There are 2 more scheduled - June

and July, both in Brazil. A third and a fourth are under discussion for August and September, both in Brazil too. This is due to the growing interest in the topic and to some support from UNESCO (United Nations Education, Science and Culture Organization) [5, 6], ISTEAC (Iberoamerican Science and Technology Education Consortium) [7] and the Brazilian Government, through IBICT (Instituto Brasileiro de Informação em Ciência e Tecnologia) [8].

The ETD Courses in Latin America

In September 1999, UNESCO held a meeting to discuss ETD's; it was in its headquarters in Paris. This was the first meeting where there were representatives from Latin America.

In August 2000, the UNESCO Regional Office for Science and Technology in Latin America and the Caribbean started an ETD training program. This program has had developments which are not under the auspices of UNESCO but that have been fulfilling regional needs. The highlights of the chronology of the activities are presented in the following subsection.

Highlights of the Chronology of the Training Activities

Although UNESCO started the training activities, ISTEAC has supported and encouraged them. Many training sessions have been held in joint activities. Currently, Brazilian universities are sponsoring sessions in order to have more opportunities to train their staffs. There have been many sessions of the ETD course but the syllabus has changed since the first session.

The following sessions were held:

- Cartagena de Indias, Colombia (August, 2000) - sponsored by UNESCO with support from ISTEAC. It was held at the same time of an important ISTEAC digital library event and the two had a joint activity. There were 9 attendees.
- Montevideo, Uruguay (December, 2000) - sponsored by UNESCO. There were 16 attendees.
- Recife, Brazil (April, 2001) - sponsored by UNESCO. There were 24 attendees.
- Montevideo, Uruguay (November, 2001) - sponsored by UNESCO with support from ISTEAC. It was held at the same time of an important ISTEAC event on Information Management on the XXI Century. There were 16 attendees.
- Panama City, Panama (November, 2002) - sponsored by ISTEAC. It was held during an ISTEAC IT Challenge and as a part of the Library Linkages activities. Other sessions in different ISTEAC activities were simultaneous. There were over 20 attendees.

- Natal, Brazil (May, 2003) - sponsored by the Federal University of Rio Grande do Norte. There were 65 attendees.

Considering all the sessions, the attendees were from: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, Mexico, Panama, Uruguay and Venezuela.

The following sessions are planned:

- Fortaleza, Brazil (June, 2003) - sponsored by UNESCO.
- Belo Horizonte, Brazil (July, 2003) - sponsored by the Federal University of Minas Gerais.

The following sessions are under discussion:

- Brasília, Brazil (August, 2003) - local sponsoring.
- Rio de Janeiro, Brazil (September, 2003) - local sponsoring.

The growing interest in Brazil is due to the activities of IBICT which will be addressed later on.

The Profile of the Groups

An ETD Project does not belong to a single group in the university. It must count on the joint and cooperative work of the library staff, the ICT team and the graduate programs. These three groups are of paramount importance for the project to start. Graduate students become active members as soon as the activities are under way.

It is very interesting that the first four sessions had representatives of the four groups, although library and ICT personnel accounted for more than half of the attendees. In the May, 2003 session besides the four usual groups, there were faculty of the Library Sciences Course, undergraduate students and librarians from public libraries, whose main interest was on digital libraries.

The Course Objectives and Syllabus

As it was mentioned in the previous subsection, the groups are quite heterogeneous. ICT staff are familiar and proficient with the technological topics while librarians are experts on cataloging, preservation, etc in traditional environments. Graduate programs officers are a surprise - they can come from different areas of the university.

The course has the following objectives:

- To establish a minimum common level of knowledge on the information and technological topics required to develop a joint project in the university.
- To present the basic concepts of digital information, digital libraries, digital library processes, ETD's, metadata, etc.
- To develop the idea of team work among the different areas of the university.
- To identify the important aspects and steps of an ETD Project.
- To guide the students in writing a pre-project to be taken back to their institutions and help them analyze the local situations, needs, priorities, etc.

In order to fulfill the objectives, the course is divided in sections that can be grouped in the following areas:

- Information, digital information, ICT and digital libraries.
- Standards, metadata and the OAI-PMH.
- The ETD Project - processes, intellectual property, basic definitions for new T&D's and retrospective capture.
- The ETD Project in the national and international environments.
- The ETD Pre-project - writing one to take back home.

In general, the course is taught in 16 - 20 hours.

Evolution of the Course

The courses have been under constant change and enhancement since the first session in August, 2000. This has happened because:

- The knowledge about the Internet, its functions and ICT tools and concepts has increased. The first sessions contained some topics on these subjects and attendees wanted them to be taught. Currently, these topics are not necessary anymore. The course starts with information, digital information, ICT and digital libraries.
- Many institutions have solved the infrastructure problems of traditional online catalogs and of campus networks. Connections to the Internet have become a lot faster too.
- ETD's are becoming more popular and more institutions are interested on them. In Brazil, this phenomenon has been motivated by creation of BDTD (Biblioteca Digital de Teses e Dissertações), the Brazilian Union Catalog. BDTD was established by IBICT and all universities with graduate programs were invited to attend some meetings where the subject was presented and discussed. Three universities with traditional graduate programs and digital library activity are members of the steering committee.
- IBICT has prepared a kit based on free & open software and the Virginia Tech (Virginia Polytechnic Institute and State University) [9] solution. This kit has been passed to three institutions, along with a training session on how to use it. The kit has the OAI-PMH data provider applications. These institutions are serving as pilot users. It is planned to start the implementation in other institutions during July, after the pilot experience is evaluated and eventual problems corrected.

- The motivation to implement ETD Projects has stimulated the institutions to seek funding for the training sessions. In the beginning, when an ETD Project seemed to be far away, the universities used the opportunities presented by UNESCO and ISTEAC. When joining BDTD became a motivation, the institutions decided to train their staff. Currently, there are courses funded by the universities. Though they are open to other institutions, since they are in-house, many staff members, faculty and students can attend. This trend of local funding can be seen from the activities in 2003, presented in section 2 - only one of the course sessions is to be sponsored by UNESCO.

The shift in commitment from using an opportunity offered by others to using their own funding shows a real decision to start an ETD Project.

Forecasting

The situation in Brazil is under a positive evolution. At the moment, there are seven institutions with ETD Projects under operation and five that are beginning theirs. Altogether there are:

- ETD's available from servers - 5,617
- ETD's waiting to be cataloged and uploaded - 2,226

The map in figure 1 shows the geographic distribution of the ETD Projects in Brazil. It is clear that there is a concentration in the SO and SE regions.

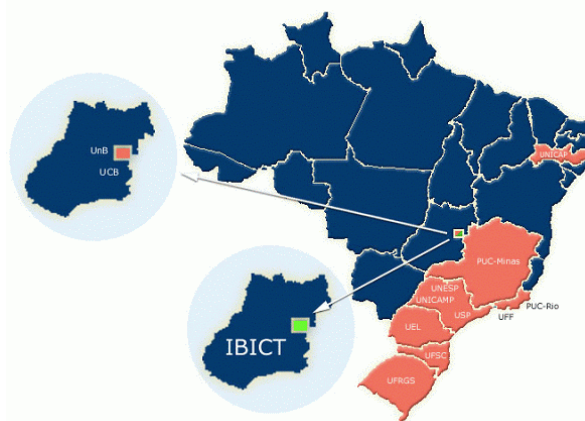


Figure 1: Geographic distribution of ETD Projects in Brazil

At the same time, it is interesting and important to remark that the session held in May was in the NE, as well as the one scheduled for June. This is an indication that other regions of the country will start projects and join the union catalog.

Comments

ETD Projects seem to be a reality in Brazil. IBICT has a database of 130,000 records of T&D's - they are the result of 40 - 50 years of graduate programs in the country. The forecast is the the number of ETD's will grow fast.

At the moment, two institutions have implemented the OAI-PMH as data providers and IBICT as service provider. Metadata harvesting is under way.

When more institutions implement IBICT's kit, the harvesting will reach more institutions and the union catalog will grow faster.

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