# Starting New ETD Projects: Sharing Systems, Training and Remote Support, a.k.a. Incubating an ETD Project

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## **Abstract**

Starting an ETD Project requires a lot more than technology. There must be a firm decision of University Administration that is implemented by the Graduate School staff, the Library team and the Information Technology professionals. Their partners are the faculty and the graduate students. Technology may be a temporary problem to be solved but should not be a show stopper. This paper presents a case study of incubation of an ETD Project while the technology solution is addressed.

## I. Introduction

ETD projects are based on teamwork. Many actors play important roles in this process. The Graduate School, the Library and the Information Technology Group are the departments of the university to implement the ETD project after the University Administration approves it; they must be ready to support the faculty and the graduate students.

At the same time, in order to start an ETD project a university must have a digital library system. This means not only hardware and software but also staff who are proficient in digital libraries.

Pontificia Universidade Católica do Rio de Janeiro (PUC-Rio) and Universidade Católica de Pernambuco (UNICAP) are two private universities which belong to the Roman Catholic Church. PUC-Rio is located in Rio de Janeiro, in southeast Brazil, and UNICAP in the state of Pernambuco, in the northeast. They are about 1,500 mi apart.

UNICAP started its graduate program in 1999 and the first dissertation was presented in 2000. The library and the IT teams thought it would be very convenient to start the ETD project while few dissertations had been presented. This meant the retrospective capture could easily be accomplished.

Because of this interest, UNICAP hosted one session of the course for Directors of ETD Projects that has been sponsored by the UNESCO's Regional Office for Science in the Caribbean and Latin America since August 2000. The course was held in April 2001 and it was the kick off of the ETD project.

From April to December the project was presented to the Graduate School, the Vice-Presidency for Academic Affairs and to the Rector. The project was approved and the funding was obtained for the project to begin.

At the same time, UNICAP has its library fully automated. All library items are cataloged on a computer system that runs on a mainframe, and the University is in the process of acquiring a new system. After the proper choice is made, some time is necessary to install, to transfer all information and to have the system smoothly running. The decision to wait for this to happen could mean wasting time towards the creation of the digital library of T & D.

PUC-Rio has a digital library laboratory (LAMBDA) and has taught the course for UNESCO four times in 2000 and 2001. PUC-Rio is proficient in digital libraries and has an ETD project with more than 300 full text T & D. The Maxwell System [01] was developed in this laboratory and it contains the digital library that holds the ETD's. This system has a multi-institution architecture - library items, users and courses can be identified by the institution they belong to and by the system (in this institution) that generated their identification codes.

Because of previous joint activity in library automation and since the Maxwell System could hold UNICAP's ETD's, an agreement to incubate this project was established.

The plan is to host UNICAP's ETD's and their metadata items while their new library system is not ready to receive them. After the system is installed and stable, and the ETD environment is consolidated, the metadata items will be exported from Maxwell's database to the one on the new system and the ETD files will be transferred too.

The discussions started in April 2001 and the operation has been running since January 2002. A byproduct of the ETD Project is online publishing. The following sections describe the activities that happened last year, the current challenges and the plans for future steps.

## II. Initial Steps

In April 2001, the 3<sup>rd</sup> session of UNESCO's course was held in Recife; UNICAP hosted it. The discussions on the possibilities of incubating the ETD project started at this moment - the two groups were together - and the basic points were set between PUC-Rio and UNICAP in an informal way.

The basic points were:

- 01. Write a project to be presented to the Vice-President for Academic Affairs and to the Dean of Graduate Studies. This was to be done by UNICAP and PUC-Rio would help if necessary.
- 02. Submit the project internally to receive the approval and the funding. UNICAP was responsible for this task.
- 03. After approval, make up the team and purchase the equipment. UNICAP was responsible for this task.
- 04. Examine the system to make sure the multi-institution feature was operating to fix any malfunctions. PUC-Rio was supposed to do this.
- 05. Prepare an agenda for the week in Recife and submit it to UNICAP. PUC-Rio was responsible for this task.

Funding was necessary for three reasons. The first was to have a librarian to manage the project and a second to help and/or substitute; these librarians will have a part of their time allocated to the project which means that their other activities had to be taken care of by someone else. The second reason was the purchase of the necessary equipment - two computers, a scanner and a printer. The third was to have two persons from PUC-Rio spend a week in Recife to start the operation; a two day training session (the concepts of the project and the use of the system) and three days helping the workflow becomes consolidated.

It is very important to observe that UNICAP's ETD Project is truly a team project. In the course, in April 2001, there were staff members from the IT Group, the Library and the Graduate School.

In October 2001 all the approvals had been obtained and the operation was ready to start. The two groups decided to wait for January, during the summer vacation, when there were less activities on campus and more time could be dedicated to the project.

## III. Start of the Operation

In January, the activities were held during a whole week - from Monday to Friday.

The first two days were used to hold a workshop; librarians from other universities with graduate programs were invited to join in the morning sessions. The morning sessions were about digital libraries and ETD's. The afternoon sessions were specific on the use of the system. They were spent registering the users and granting them authority levels; librarians and the IT staff were trained on how to include elements to the database domain tables, authors, keywords, etc. After that, the whole workflow was examined and all the steps to use of the system were presented and discussed.

During the first two days, all the information needed to start the process was identified. Some information was missing and the Graduate School was contacted to provide it. The problem of missing information had a lot in common with the situation in PUC-Rio at the beginning of the project. One example of common problem to both institutions was that of titles and keywords in English - although all theses and dissertations had abstracts in English, the titles and keywords had only the original Portuguese writing.

Days three, four and five were left to start the cataloging and the uploading of the dissertations.

UNICAP started its graduate activity with a Master Degree Program in Psychology. The first dissertation was presented in 2000 and, in January 2002, there were 3 to be included in the system. This was the set the team had to work with.

During the three days the dissertations were included by the local librarians with the help from PUC's team. All activities were accompanied by an IT staff member. A workflow was established beginning with the deposit of the dissertations in electronic format and ending with inclusion of the metadata and the digital objects in the digital library, meaning they were available.

The ETD Project at PUC-Rio is voluntary and Graduate Program in Psychology has not joined it. For this reason the system did not have a set of keywords in the area of psychology. The fact that UNICAP started using the system to make available psychology dissertations added this new area of knowledge to the set.

At the same time, when other UNICAP programs have theses and dissertations they will benefit from PUC's previous work in compiling keywords.

An experiment was made - scanning a printed doctoral thesis and generating its electronic version to include in the digital library. This was necessary because of a second ETD activity UNICAP wants to undertake.

UNICAP faculty got they graduate degrees in other institutions in Brazil and abroad. Upon their return, copies of their dissertations and theses were presented to the library. Thus, the library has a collection of 457 of such items. After obtaining the authorizations from both the authors and the original institutions, these T & D will be included in the digital library. The retrospective capture will start in the near future.

## IV. A By-product of the ETD Project

UNICAP publishes 2 journals: Interlocuções: Revista de Psicologia da UNICAP and Revista Symposium. The authors and the library staff wanted to publish some papers on the Internet to make them available to the general public.

The system was ready to receive technical reports, research reports, etc. which had not been previously published on paper. In order to receive this new type of contents, some new features had to be added, though this did not stop the first paper to be included in January. This allowed the method to be established.

The publishing functionality is not complete and the next few months will see it be enhanced.

## V. Current Situation and Forecast

The current situation and the forecast can be seen from two different poins of view: internally - examining the situation within UNICAP, and externally - examining the way UNICAP relates to other institutions.

#### Inside UNICAP

Maxwell System has been hosting UNICAP's ETD's and electronic papers for 4 months. During this time the numbers became:

- Dissertations 9
- Articles 27

At the moment, 17 dissertations have been presented which means that there are 8 to be included in the digital library. These 17 are from students admitted in 1999 and 2000. There are 4 students who have not presented their dissertations.

The students admitted in 2001 are supposed to present 16 dissertations.

The Graduate Program in Language Sciences started in 2002 with 20 students.

It is expected that by the end of 2003 more than 90 dissertations will be on the digital library.

Currently UNICAP is seeking the approval to start graduate programs in Civil Engineering and Law. They are supposed to start in 2003.

The situation is very favorable since the ETD Project has started almost simultaneously with the graduate programs. Thus UNICAP will be able to have all its T & D in electronic format and no backlog to deal with.

UNICAP is about to install a new library system and when the digital library environment is ready the metadata that are stored on Maxwell's database will be exported to the new system along with the corresponding digital objects.

#### UNICAP and other Institutions

Brazil has a centralized system of curricula vitae of researchers. It is the Lattes Platform run by CNPq - Conselho Nacional de Desenvolvimento Científico e Tecnológico [02]. This platform holds

the curricula vitae of researchers working in research centers, universities and private companies. CNPq is linking this system to other databases. The Maxwell System is linked to Lattes.

Thus, faculty who has supervised theses and dissertations that are on the Maxwell System have an icon on their curricula on Lattes. When this icon is clicked, a command line is executed and the the user is directed to a page with all the dissertations he/she supervised to choose from. After choosing, the catalog description is presented and the link(s) to access the full text thesis or dissertation are made available.

Since UNICAP is using the system, when data is sent to CNPq, their supervisors data is also sent and their curricula receive the icon.

Another relation of the Maxwell System is with the BDTD - Biblioteca Digital de Teses e Dissertações, established and run by IBICT - Instituto Brasileiro de Informação em Ciência e Tecnologia [03].

The BDTD project started in 2001 and one of its objectives is to create a cooperative database of metadata for and integrated search in the set of theses and dissertations of the member institutions. The first text was run in December. When the real operation is performed by July 2002, UNICAP information will be made available too.

These two outside external connections are used by UNICAP as a consequence of the joint activity.

#### VI. Benefits to Both Institutions

This project has been beneficial to both institutions. The first and most important benefit is that it has allowed the ties of both Universities to become closer. But there are more practical consequences that are positive and can be listed:

## Digital libraries were introduced in UNICAP

The concepts and the operation of a digital library were introduced in the University and, for this reason, they will be able to start other projects. Their publications started to go online too.

## UNICAP's dissertations became available online

The dissertations of UNICAP students became available online. This means that they can be read and used as references. It also means that their work will be known outside their campus.

## UNICAP will have no backlog

Since UNICAP was able to start the ETD Project almost at the same time the first dissertations were presented, they will have no backlog to deal with.

## Industrial strength to Maxwell's multi-institution feature tested and enhanced

The Maxwell System was implement to be multi-institution. The use of the system by UNICAP has helped consolidate this characterisitic because UNICAP is using the system and many functions are involved in the ETD and online publication environments.

This use also helped test the upload of objects from remote locations.

## System online publishing enhanced

The Maxwell System had a very primitive publishing feature and it had not been enhanced due to the lack of users. UNICAP publishes 2 periodicals in the area of humanities and it was their will to have, at least, some of the articles online.

For this reason, they started using the publishing functions. They showed to require many enhancements. Some were urgent and had to be done in January and February. Others will be performed later on; the idea is to remodel the whole functionality and UNICAP team will be important players in this activity.

# The set of keywords was increased

The Graduate Program in Psychology of PUC-Rio is not a member of the ETD Project. For this reason, the set of keywords did not contain any elements in this area. Since UNICAP is feeding the set, this area started having elements.

At the same time, the library team of UNICAP offered to start normalizing the overall set - an activity that no one had volonteered to do at PUC-Rio.

#### Functions were enhanced

Since the library backoffice functions of the system have been operated by the lab team, many of them were not as friendly as they should. The use of the system by UNICAP showed that enhancements were necessary. Many have been implemented and others will in the near future.

## VII. Final comments

The most important conclusion from this joint project is that it was beneficial to both institutions. A close observation fo the listed benefits shows that the host institution had the most of it.

A second conclusion is that if more incubating projects are undertaken, the overall ETD situation in the country will be enhanced. It happens that in Brazil many universities are in the process of implementing library systems. Thus, if the ETD digital library can be started during this process, not only the backlog will be smaller but the T&D will be available sooner.

## Links

- [01] The Maxwell System <a href="http://www.maxwell.lambda.ele.puc-rio.br/">http://www.maxwell.lambda.ele.puc-rio.br/</a>
- [02] Conselho Nacional de Desenvolvimento Científico e Tecnológico <a href="http://www.cnpq.br/">http://www.cnpq.br/</a>
- [03] Instituto Brasileiro de Informação em Ciência e Tecnologia http://www.ibict.br/
- [04] Pontifícia Universidade Católica do Rio de Janeiro <a href="http://www.puc-rio.br/">http://www.puc-rio.br/</a>
- [05] Universidade Católica de Pernambuco http://www.unicap.br/

# E-mail para a Jaíse:

- 01. Quando começou o mestrado em PSI?
- 02. Existem dissertações em backlog?
- 03. Quando se iniciam as novas defesas?
- 04. Qual o número previsto de dissertações para a nova safra de defesas?
- 05. Quais os novos programas de PG?
- 06. Quando começaram os novos programas de PG?
- 07. Quando são previstas as defesas dos novos programas?
- 08. Quantas sãs as T & D dos docentes da UNICAP de M & D em outras instituições?
- 1. O mestrado em PSI iniciou em 1999
- 2. O total de dissertações do mestrado são 17. Temos 09 delas na nossa bib dig
- 3. Turma do mestrado de PSI iniciada em 2000 : houve 08 e estão faltando 04 Turma do mestrado de PSI iniciada em 2001 : previsão de 16 para 2003 Turma do Mestrado de Ciencia da Linguagem iniciada em 2002 : previsão de 20 para 2003.
- 4. Total de defesas referentes aos anos de 2002 a 2003: 48 dissertações
- 5. Está em processo de aprovação pela CAPES dois mestrados: Engenharia civil e direito. Esse a no a comissão de especialistas virá a Universidade, e se tudo der certo a previsão será iniciar no próximo ano.
- 6. O total de dissertações e teses que temos atualmente é de : 457

# Outro e-mail para a Jaíse:

- 01. Quantos foram admitidos em PSI em 2002?
- 02. Já foi decidido qual será o sistema de bibliotecas? Ele comporta uma biblioteca digital para a qual serão migrados os metadados?
- 03. Lattes