Implementation of an open and distance learning (ODL) program

For the Doctor of Education

degree (Ph.D.)

With a specialization

in Technology Integration

in Education

A project presented for submission to the

2011 CAGS/ETS AWARD FOR EXCELLENCE & INNOVATION IN ENHANCING THE GRADUATE STUDENT EXPERIENCE

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Université
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"Information technology
is not a magic formula or panacea.
But it is a powerful force that can
and must be harnessed to our
global mission
of peace and development."

Kofi Annan,
*The Net World Order: Bridging
the Global Digital Divide* (Business
Council for the United Nations, NY,
June 18, 2003).

1. PROJECT DESCRIPTION

Under the leadership of Professor Thierry Karsenti, M.A., M.Ed., Ph.D., holder of the Canada Research Chair in Information and Communication Technology (ICT) in Education, the Faculty of Education at the Université de Montréal sought to address four daunting scientific and pedagogical challenges that Africa currently faces:

1. The need to train top-quality African researchers in the field of ICT in education

2. The need to halt the brain drain from the African continent

3. The lack of university programs to meet the demand

4. Low graduation rates from distance university programs.

How did the Faculty attempt to address these four challenges? By setting up an open and distance learning (ODL) program with the aim of developing **excellent and innovative coaching practices with university student**s from French-speaking African countries enrolled in a doctor of education degree (Ph.D.) program with a specialization in ICT. This is the first distance doctor in education program to be established in the entire Francophonie. Moreover, this project holds particular promise for both Africa and for Canadian universities like the Université de Montréal that would like to diversify their clientele and extend their programs beyond traditional geographic boundaries. We would also like to mention that this project is closely aligned with the mission and goals of the Université de Montréal, including the paramount ideal of *le chantier international* an international workshop.

The Doctor Degree (Ph.D.) program

2. WHAT MAKES THIS PROJECT INNOVATIVE?

We set up an open distance doctor degree program for 20 doctoral candidates from eight West and Central African countries (Benin, Burkina Faso, Cameroon, Ivory Coast, Mali, Mauritania, Niger, and Senegal). Using a **hybrid** pedagogical formula, we were able to combine the advantages of face-to-face training and open distance learning (ODL) through a judicious use of ICT. Three major face-to-face sessions took place in Africa. Face-to-face interactions allowed the students to exchange ideas in person and present their work. They also helped sustain their motivation throughout the program. In addition, all candidates completed a **short-term** internship in Canada (year 2) in order to meet and share with the Canadian research community. This internship proved highly instrumental in developing the candidates' research competencies. It also gave them an opportunity to collaborate with internationally renowned research teams, take courses, meet diverse experts, and so forth.

The team of professors opted for an integrated educational approach, with connections across seminars and courses. In addition, the program was based on socio-constructivist and project-based learning. Importantly, a series of efficient ODL conditions was designed to maximize the students' success and sustain their interest along the way. Although many authors have sung the praises of ODL, the actual results in the literature show that success rates are still far below those for so-called "face-to-face" methods. Therefore, in order to maximize the candidates' odds of success, we set up an effective support and coaching system (see 2.2).

2.1 Videoconferences: getting the most out of the program

As part of the program, we set up videoconference sessions (more than 50 over three years). Videoconferences provide a number of advantages. For instance, they lessen the participants' travel time and costs. That is, they allow students to be in direct contact with the team of professors while remaining at home, a highly convenient and encouraging factor. The videoconferences also shortened the time that the students would have to be absent from their jobs.

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2.2   A unique distance learning platform

A specific learning platform was established for this program. It has most of the functions of Moodle and WebCT. However, it includes a special function for "preventive" feedback, which was regularly sent to the students. On this topic, the research clearly shows that most distance learning programs provide students with feedback only when their work is late. In our case, the platform allowed the team of educators to send friendly reminders ahead of time for some assignments, as appropriate. Automatic messages were sent by the system and signed by either one or more educators. This system was greatly appreciated by the students, who viewed it as regular and systematic coaching.

The Doctor Degree (Ph.D.) program

3. QUALITY OF THE COACHING PRACTICES WITH THE DOCTORAL CANDIDATES

The students in this distance doctoral program were coached according to three key principles:

- The idea was to impart to the students the intellectual, professional and ethical standards and requirements for individual and team scientific research.

- The aim was to help them complete the program within a reasonable timeframe and to benefit from being initiated into all aspects of scientific research in the unique field of ICT.

- We strove to provide the Francophonie network with productive researchers, by giving them first-hand experience with intellectual production and what it requires, notably by writing and participating in articles for publication in scientific journals so that they could produce their own articles in turn.

With respect to the coaching under this program, research was considered not just the process of producing new knowledge, but also a learning process for the participants. In this spirit, and according to the three above-mentioned principles, all the doctoral candidates participated in the following educational activities:

- Attendance at scientific conferences held by the Canadian researchers for the doctoral candidates

- Presentations delivered at scientific conferences

- Participation in writing reports, articles, books, etc., with clear and consistent acknowledgement of their contribution

- The development of specific competencies (computer skills, methods, statistical techniques, etc.), and the responsibility for training other candidates in their cohort in these competencies.

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Finally, we should mention that, by and large, the candidates made valuable contributions to the scientific literature. Most of those who completed their thesis had their results published (or accepted) by reputable scientific journals. For example, Modibo Coulibaly from Niger, the first student to obtain a doctor degree, had an article published in the journal Éducation & Formation, an acclaimed education journal (see excerpt below).

**Le processus d'adoption des TIC
pas des enseignants du secondaire au Niger**

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RÉSUMÉ. Cet article présente l'analyse du processus d'intégration des technologies de l'information et de la communication (TIC) aux pratiques d'enseignants de lycée au Niger. Il décrit le processus d'adoption des TIC par les enseignants du secondaire (volet quantitative) et analyse le cheminement parcours par ceux ayant atteint un niveau élevé d'adoption des TIC (volet qualitative). Les objectifs de recherché ont été réalisés grâce à une enquête par questionnaires auprès de 69 individus représentant l'ensemble des enseignants. Les résultats portant sur le processus d'adoption révèlent, dans un contexte naissant d'alphabétisation informatique, des disparités dans les utilisations que fons les enseignants des TIC. Par ailleurs, au plan qualitatif, les réponses des participants révèlent seulement deux (sensibilisation et utilisation professionnelle) des quatre stades de Raby (2005) peignant l'évolution d'un enseignant dans son utilisation pédagogique des TIC.

MOTS-CLÉS : Formation des enseignants ; adoption des TIC ; enseignement secondaire ; Niger.

The Doctor Degree (Ph.D.) program

4. PROGRAM SUCCESS INDICATORS

In conclusion, we would like to present some salient data on how this special program proceeded and the graduation rates of the doctoral students who participated. As the graduation rates show, the results are outstanding, particularly for an open distance program.

- Percentage of students who completed the mandatory course requirements: **100%**
- Percentage of students who completed the comprehensive doctoral examination: **100%**
- Percentage of students who completed their research design: **100%**
- Percentage of students who met all ethical and administrative requirements: **100%**
- Percentage of students who completed the data collection phase: **100%**
- Percentage of students who completed the data analysis phase: **100%**
- Percentage of students who successfully defended their thesis (after 3 years): **25%**
- Percentage of students who have submitted their thesis and are awaiting the thesis examination: **75 %**
- Estimated percentage of students who will complete this doctoral degree program: **90%**.

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