

SUSTAINING A POST GRADUATE STUDY PROGRAM IN ICT IN A DEVELOPING COUNTRY– A CASE STUDY AT THE NATIONAL UNIVERSITY OF RWANDA

Dr Felix K. Akorli, National University of Rwanda, Butare, Rwanda.

Email: fakorli@yahoo.com

Abstract

The National University of Rwanda started a postgraduate program on Information and Communication Technology, ICT, in 2004. Twenty four students were admitted to start the two year MSc degree course in Computer Science /Software Engineering and Telecommunication Engineering. In the subsequent two year 23 and 25 students have been admitted respectively. The program is organised to have some common courses and the rest are optional. Lecturers come from Europe and in the sub-regional African countries. Since the inception of the program it no students have defended their theses works. This paper highlights on the huddles of the program over the past three years. It gives accounts of various solutions there are put in place to sustain the program. It recommends how partnerships with university in the developed could help such program.

Introduction

In the policy document of the Government of Rwanda - Vision 2020 there is a clear indication that the socio-economic of the country shall be developed on knowledge base society using ICT as the se rock for its socio-economy of the country. Due to the low numeric strength of manpower in the country it became obvious that the government put premium on training to strengthen to expertise in the fields of ICT.

The National University of Rwanda in collaboration with Blekinge Institute of Technology, in Sweden planned a joint postgraduate program in Information and Communication Technology - ICT.. The main objective of this program is to train locally high calibre manpower in ICT at master's level in two specialised fields namely: computer science/Software engineering and telecommunication engineering. Nineteen selected courses are taught over a period of four semesters and the students are to defend a thesis research work in order to graduate with a MSc degree.

Enrolment into the MSc in ICT Program

Admission into the course is strictly on merit however considerations are given to female students in order to encourage them to participate in the program Table 1 shows the number of students present during the first two semesters for each of the batches for the three years of the program.

It is realised that the number of female students that are admitted into the program is low. We try as much as possible to encourage them but with no success. The total number of students that leaves the program at the end of the beginning of the second semester 41%, 30% and 23% for the 2004, 2005 and 2006 intakes respectively. However, these numbers stay on till the end of the program. Some of the reasons for the large percentage of abandoning the program during the first semester is not necessary due to academic work but for financial difficulties.

Lecturing and Supervision of Theses

Lecturers who support the program mainly come from Blekinge Institute of Technology (BTH), Sweden, University of Kwa-Zulu Natal (UKZN), South Africa, University of Cape Town (UC), South Africa, University of Nairobi, Kenya and University of Rwanda (NUR). Initially the number of lecturers from BTH takes about 70% of the courses. As the years passed by the number lecturers from BTH reduces. During the academic year 2007 only 20% of the courses shall be handled by BTH. It, therefore, became very necessary to get lecturers from the neighbouring countries. It is normal for students to take a lecturer who have taught them as theses supervisors. In the program this was what has taken place. Contact with lecturers is mostly done through Internet. This has caused delays in completing their theses research works.

Aim of the Program

The main aim of the program is to provide well trained manpower experts in research and teaching in the fields of ICT for the National University of Rwanda in particular and for the private and the public institutions and companies in general.

The question to answer is – How can the program fulfil its aim while few students are completing their course works and none has yet defended their thesis work? The answer can be yes or no.

It is positive because the new and emerging ICT industries in Rwanda are in great demand for ICT experts. The few who have managed to improve their skills in ICT particularly in software engineering and telecommunication engineering particularly from the MSc in ICT Program have become targets of the old and emerging ICT companies. Over fifty percent of the students have been taken on by companies. As a result most of the students could not fully participate in lectures and tutorials. This affected their output as students. The companies however could not do away with their services due to their contribution. The negative effect of this is the inability to complete on time affects the overall strategic plan for the University in particular and the country in general.

What can be done to solve the problem and sustain the training the training program?

The full commitment of the students in the program can be achieved if one carefully take the following steps.

- Involvement of the industries in supporting and training.

The industries when involved in the training and supporting the students will support the program financially and also may suggest research projects which would be practically oriented to help the students feel satisfied. The companies will rather encourage the students to complete early. On the other hand the students will also gain some financial support from the companies and may have job security.

- Expand collaboration with other universities to have joint research projects for theses research works. In ICT

A lot of foreign universities in developed countries have over the pass few years support their under and post graduate students to carry out research works in developing countries. The program can seize the opportunity to collaborate with these faculties in ICT eg Georgia Tech to have joint collaboration research works. This will not only help the students exchange ideas with their colleagues in the advanced universities but also give them the confidence of being part of the global ICT world. In this way there will be a continuation and the sustainable research work even if the funding could not continue.

- Encourage students to attend local and international conferences and workshops and also present papers.

The dissemination of research findings at conferences and workshops will be improved from the NUR with support from the collaborating institutions.

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