

Responding To the Need of Qualified Teachers through Distance Education: The Case of Pedagogic University

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Introduction

The Pedagogic University (UP) was established in 1985, by the Ministerial Diploma nº 73/85 of the 4th of December, it is a higher education institution responsible for teacher training at all levels of the education system in Mozambique (the primary level, the secondary, special education, vocational education and higher education). The UP is also involved in the training of the other educational staff (UP Strategic Plan, 2000).

The objective of this paper is to present UP experience in the implementation of an in-service teacher training project for General Secondary Education (ESG) teachers through the modality of Distance Education (DE). This is a pilot project that is being implemented in two provinces of Mozambique namely: Cabo Delgado and Manica. The first is located in the North and the second in the Centre of Mozambique.

1. The Objectives of The Implementation of The Distance Education at UP

The implementation of the modality of DE at the UP has the following main objectives:

- to provide a greater equity in the area of teacher training throughout the national territory;
- to promote initial and in-service teacher training courses to general secondary education (ESG) teachers and to other educational staff, such as, primary school teachers, teacher trainers for teacher training institutes, school headmasters, district education managers and educational inspectors;
- to contribute to the improvement of the quality of education through the initial and in-service teacher training without taking teachers out of their work places;
- to progressively reduce training costs of the Educational staff;
- to respond to the growing demand to access to the higher education in the country;
- to increase the number of graduates in the various courses offered by the institution.

In order to materialize these objectives for implementation of the DE modality at the UP, a commission for the creation of the Centre of Open and Distance Education (CEAD) was created in March of 2001, with a view to coordinate actions for distance education courses in the institution.

2. The Courses of Physics and English

As previously referred to, the objective of this paper is to discuss about the courses of Physics and English that are taking place in the provinces of Cabo Delgado and Manica. In Cabo Delgado Province the course began in 2007 with 100 students (in-service teachers) of these 49 are English teachers and 51 Physics teachers. Currently there are attending 97 students of which 49 Physics teachers and 48 English teachers. These students are distributed into four provincial resource Centres, namely, Pemba, Macomia, Montepuez and Mueda.

In Manica Province the course began in 2009 with 136 students of which 71 English teachers and 65 Physics teachers. In this province the students are distributed into 2 provincial resource Centres, namely, Chimoio and Catandica.

The opening of these courses brought about a big advantage in the lives of these in-service teachers, because they are attending their courses without leaving their classes and their families to attend the courses in other provinces of Mozambique.

Before discussing the courses in full and how they are implemented it is crucial to have a historical overview in order to explain some important steps taken for the preparation that allowed for example, the choice of: a) the places where the Resource Centres function; b) the courses to be prioritized (Physics and English); c) printed-based learning material like basic self-instructional material, and d) other aspects.

3. Implementation Background

The main program documents of the Government of Mozambique - the Action Plan for the Reduction of Absolute Poverty (PARPA)¹, the Government 5 year plan (2005 – 2009), the Education Strategic Plan - recognize DE as crucial to assure the continuous in-service teacher training and the training of other technicians for the development of the country.

¹ PARPA II (2005 – 2009)

However, the strategic plan has identified the following as constraints for the development of the ESG: I) the lack of teachers to satisfy the needs of the educational system; II) the high number of teachers in the system without professional qualification; III) an inadequate teacher training system to respond to the demand.

In fact, at the time of the scoping phase for the development of the courses, in Cabo Delgado, statistics from the Ministry of Education and Culture, Directorate of Planning and cooperation (2005), stated that the ESG had a total of 4393 Mozambican teachers of which 2084 had no professional training while 1188 teachers did not have adequate qualification for teaching in this level. Currently, and according to 2007 data, the existence of a high number of teachers in the system without adequate professional training still prevails. Furthermore, data indicates that in the ESG 1st cycle, within a total of 6738 teachers in duty, 3598 had a professional training and 3140 did not have training. Some of those who had training it was not adequate to the level they were teaching. Apart from that, the Ministry of Education and Culture recruits annually more than 1000 teachers without adequate training. This situation has forced the Mozambican Government, as well as teacher training institutions, such as the UP, to reflect and undertake teacher training through the modality of DE.

4. The Role of the Government in the Implementation of DE in Mozambique

As previously mentioned regarding the Government concern on teacher training, the implementation of courses through the modality of DE, by the different institutions in Mozambique, had a Government support in several aspects, especially the training of the key players in the process, in view to guarantee quality. In 2003 the government defined that it was a priority to create competences for the management of the system, through training. For this reason, a consortium formed by the Commonwealth of Learning (COL) and the South African Institute of Distance Education (SAIDE) was contracted to deliver a specific training course to a group of around 50 participants, originating from different institutions that intended to offer DE courses in Mozambique. The objective of this training was to ensure the creation of a homogenous body of specialists that, even working in different institutions, would be aware of the project that was being implemented (Neeleman & Nhavoto: 2003).

The above mentioned training took place from September 2003 to May 2004. In this training, 5 Pedagogic University lecturers took part and they wrote their end of the course projects in the different branches of the DE system namely: assessment in education, tutorial and student support, information technology in DE, instructional design and material production, and management and administration. The training of these specialists was fundamental to the Pedagogic University as they worked hard for the implementation of this pilot-project. They already possessed the knowledge of the need of a systematic approach in the implementation of the DE modality.

Another government training action, equally important, that stimulated in a certain way the UP to open DE courses was the existence of the Commission for the creation of the National Institute of Distance Education (INED) created in 2001. The actual Institute was officially established in December 2006. This is a public institution for the coordination and regulation of DE policy, in the scope of the National Educational System, and it is legally, technically, scientifically and administratively autonomous, with the following attributes:

- To define policies, regulations, strategies and implementation plans of the DE system in the country;
- to safeguard operations of the national network of DE provincial resource centres;
- to create and develop a system of accreditation in the scope of this modality of education.

In the scope of its attributions INED has followed up and has given a big support on the reflections and activities leading to the implementation of the pilot-project by the UP.

5. Brief Background Information on the Introduction of the Courses of Physics and English at the UP

In 2005 a feasibility study was conducted to assess the conditions for the implementation of teacher training programs offered through DE in Mozambique. This study was conducted from January to March 2005 with terms of reference drawn jointly by then the Ministry of Education and Culture and the UP involving 7 technicians from the Ministry and 6 lecturers from the UP working for the CEAD. The study had the following objectives:

- To locate the potential candidates;

- to know the characteristics of the target group (in-service teachers);
- to identify the priority courses;
- to assess the perception of the Education managers;
- to assess the level of use of the communication means by the potential candidates;
- to evaluate the cost - benefit;
- to identify the available resources (human and material).

In this study the potential candidates for training, potential tutors, education managers at various levels, resource centres managers, Deans of Faculty and other academic sectors at the UP were interviewed in order to listen to their opinions regarding the way these courses should be implemented.

The result of this study showed that there were conditions and need for the UP to implement DE courses. The study allowed among several aspects to know the environment of the majority of the target group could, their socio-economic conditions and motivations to participate in a training of this nature. Further, on the basis of this study it was possible to verify the subject areas that were in great demand of teachers and the provinces with great training needs. In this way an implementation action plan was defined that included:

- Elaboration of guiding principle for the adoption and adaptation of the face-to-face curriculum for the DE modality. The guide had a function of setting up the theoretical and philosophical conception, the structure, the curricular organization and the duration of the courses at the UP in order to standardize procedures in the adaptation of the curriculum from face-to-face courses to DE courses;
- Choice of the technology;
- Choice of the first courses to be launched (Physics and English);
- Location of the resource centres;
- Establishment of partnerships for equipping the RC;
- Planning for the training of content developers for the production of self-instructional material;
- Training of tutors and resource centres managers.

5.1 Duration of the Course and Curricular Organization Model

The courses award a Bachelors degree and have the duration of four years (eight semesters). Each semester corresponds to 16 weeks.

The curricular organization model is similar to the current teacher training courses at UP in the face-to-face modality and it is composed of three training components:

- General training component: includes languages, research methodology and others;
- Psycho-pedagogical and didactics component: includes basic knowledge related to the areas of Education, Psychology and Didactics, that prepare the students to conduct the teaching and learning process;
- The specific subject component: includes the subject area in which the student will specialize.

5.2 The Study Material

The contents of the subjects of the courses are presented in form of printed modules for individual study, *"although we are in the computer age, the microelectronics and of the telecommunication, the printed self-instructional material, the first generation of educational resources of DE plays an essential role in this modality of education/learning"* Landim (1997:86). The same author states that it is important *to always have in mind that any pedagogical proposal should be put into the context of the economic, social and political reality of each country.*

In fact the UP has opted for the printed-based learning material because the target group (in-service teachers) are from the rural areas, deprived of electricity, without access to the computer and other technological means.

In order to guarantee the quality of the learning material design, a multi-faceted team was involved. The UP specialized staff were responsible for the scientific content of the modules, whereas the instructional design, language review and graphic arrangement was done by DE technicians, as for language revisers, template and illustration specialist were hired from outside.

The modules currently in use at UP have the same organizational structure and are composed of units which in turn are composed of various lessons; there are modules with

20 lessons and others with 40 lessons or more. The number of lessons depends on the length of contents presented in the program.

The lessons above mentioned apart from the content, contain some activities, self-assessment exercises, feedback, key to the exercises and the bibliography for reference. In the lessons there are also case studies, description of experiences to be carried out at home or in the resource Centres.

Additionally, the module content developers, as well as, the instructional designers were trained in the DE area by consultants who are renown internationally from COL and SAIDE. The training of these specialists was considered of extreme importance because the communication between the teacher and the student occurs basically by the means of the printed material. The material should allow the student to in fact learn without the physical presence of the teacher, as the material replace the teacher, the classroom and, to a large extent the interaction of ideas among the students.

5.3 The Resource Centres

The student support system is carried out at the Resource Centres (RCs) which are generally located in the secondary schools.

In the RC the students can find the relevant bibliography, audiovisual material, "lab kits" for practical experiences and other computer services.

The RC has the following functions for the students:

- A place to check the academic schedule of each semester, for example, the tutorial dates and evaluation dates;
- A place to participate in general tutorial sessions as well as specialty sessions tutorial;
- A place to carry out tests and the exams;
- A place to find pedagogical and administrative support in general.

As an easy way to attend to the students and the general public a schedule was established for the opening hours of the RC. The RCs are open from Tuesday to Friday from 7:30 AM to 5:00 PM and on Saturdays from 8:00 AM to 12:00 AM. This timetable may be adjusted according to the reality of each centre, without reducing the daily working hours.

The existence of a UP resource centre, does not rule out the possibility of the student to be recommended by the tutors to seek other libraries or places where he can find other kind of support.

5.4 Tutorial

In the DE modality it is not enough to only have materials which are considered efficient, but there is also a need for an efficient student support system. In this support system the role of the tutor is an essential element. For example, Landim (1997: 125) considers the tutor as being *"an indispensable and important element in the network of communication that links the participants to the educational institution, because apart from maintaining the students' motivation, the tutor provides the academic and pedagogical feedback on the learning process (...)"*

In the courses provided by UP there are two kinds of tutorials:

- General Tutorial
- Subject Tutorial

The general tutorial is of the responsibility of the general tutor. The general tutors are selected among the best teachers in the district with the support of the Provincial Directorate of Education and Culture. The tutors provide support to the student when:

- They need help related to content of the subject;
- They are facing any social problems that can reflect negatively in their learning;
- They need clarification related to the administrative organization of the course.

The student has the possibility of contacting the tutor for the maximum of ten (10) hours per semester. This contact is not compulsory; it depends on the need of each student. Only in the cases that a student is not performing or has any other problem a tutor may solicit that student to find out with him what is happening. The specific tutorial is of the responsibility of the specialist tutor in this case a UP lecturer, specialized in that course subject. The subject tutor supports the students in face-to-face sessions during the period when the module is being studied. There is one face-to-face group session in each module.

5.5 Assessment and Evaluation

In the teaching learning process the assessment system has a fundamental place. In this way, during the study of the modules, there are various assessment forms such as: self-assessment activities, tests and research work. The assessment process ends with a written exam. The assessment schedule is sent to the resource centre at the beginning of each semester.

The tests and exams are conducted by the local tutors or by UP lecturers. The tests and exams are corrected by subject tutor.

Apart from the assessment of the teaching and learning process carried out by CEAD, there are regular evaluations, whose objective is to follow up the program of the on-going course in order to issue recommendations that may help in the decision-making aiming at the improvement of the courses. As a result, in December 2008 an evaluation took place that helped to find out that:

- i) students were satisfied with the course as this contributed to increase their knowledge and helped to improvement their classroom performance in their schools;
- ii) self-instruction learning material were well-designed although there were some problematic subjects;
- iii) tutorial system was satisfactory;
- iv) the management of course information system was poor (time-table of activities, feed-back on assessment).

6. Challenges

Although the UP is making a big effort towards taking the university to the student there is still a long way to go and this should be translated into three fundamental areas, namely:

6.1 Human Resources

- To guarantee a body of qualified staff in order to guarantee the quality of tutorials;
- To promote a permanent and continuous training of learning material developers, tutors and resource centres managers;

- To encourage CEAD staff and others to continue studying so that they may be able to propose new strategies to improve the effectiveness of DE system.

6.2 Improvement of Resource Centres

- To create condition for rehabilitating and equipping the resource centres with: library, lab kits, audio-visual material and computers with access to the internet;
- To gradually introduce ICT in the modality of DE.

6.3 Expanding Courses

- To expand the modality of DE for in-service teachers throughout the country;
- To identify the demand of the professional technical courses and management courses;
- To produce modules in order to introduce others courses until 2013.

Conclusion

Based on the UP experience in scoping, planning and implementing DE programs to train in-service teachers, we believe that DE could be regarded as a strategic way to progressively reach more under-qualified and untrained teachers countrywide. In specific, ensure and maintain the quality of our programme is essential considering that the final aim of our DE courses is to improve the quality of education at secondary level. Only ensuring the quality of our courses - through the continue training of materials developers, tutors of the courses and DE technicians, and developing an effective management and administrative support to our course, will help the UP to pursue its objectives and bring a change in the daily teachers practices and performances in secondary schools.

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