# INNOVATION IN OPEN AND DISTANCE CONTINUING TEACHER EDUCATION

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Universidade Aberta started its activity in 1989 offering in-service distance courses in education for basic and secondary school teachers.

In Portugal, since 1994 teachers from Basic and Secondary Education[1], in order to progress in their careers (according to the regulations of the Ministry of Education) need to engage themselves in continuing education. Courses or workshops on pedagogic, methodological or scientific topics are organized for them by higher education institutions, or by associations of schools of different levels located in a certain area. In these courses, teachers may gain credits, which are necessary for their progression. These are traditional face-to-face courses. Universidade Aberta offered this kind of courses too, but in 1997 it started an experimental programme of open and distance continuing education. Short courses on new technologies for teaching, evaluation and assessment techniques, didactics of literature, child and youth literature were offered to basic and secondary school teachers. This was the first open and continuing education programme organized by Universidade Aberta.

In the first year, a large number of teachers phoned to Universidade Aberta asking for information about the courses. Some of them said they were afraid of having difficulties in adapting to distance learning. An important percentage of those that registered to follow the courses, in this first year, had been previously students of Universidade Aberta, having obtained their bachelor's degrees or done their professional training there. In the following years, the number of courses and teachers increased and many asked for the organization of new courses. Teachers from schools located outside the big cities were the target group, but many of those that followed the open and distance continuing education courses were teachers from the big cities looking for a new experience on teacher training and the convenience of studying at home, after finishing their work at school or during week-ends. Since 1997 more than three hundred teachers have completed these courses and progressed in their careers.

In this paper a special importance is given to the organization of the courses on new technologies.

**An Experiment of Open and Distance Continuing Teacher Education**

When starting this experiment of distance continuing education we aimed at two major goals:

- to address the teachers' need of training in new technologies;
- to develop positive attitudes concerning new technologies through their use as an important part of the training process.

Several authors (Dupagne & Krendl, 1992) consider that the teachers' lack of training is one of the main obstacles to the use of new technologies in education. Furthermore, a number of studies (Barker, Helm & Taylor, 1995; Huang, 1994) have shown that positive attitudes towards new technologies are strongly related with their effective use in the classroom. In this sense, the development of positive attitudes in teachers regarding the new media will be a major contribution to their implementation in schools.

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(1) Basic Education is the compulsory education -9 years of schooling from 6 to 14/15 years of age; Secondary Education -3 years of schooling from 15 to 17/18 years of age**.**

We therefore started with the assumption that the so much needed introduction of new technologies in the schools depends, among other factors, on the familiarization of the teachers with those media and on the understanding of their potentialities by teachers and students alike.

Our course comprised two modules:

**Module** 1 -*Educational Software: Analysis and Use;*
**Module** 2 -*Principles for the Design and Development of Educational Software;*

### Target Group

**Module** 1 was meant for teachers who were not much familiarized with the use of new technologies in education, but knew basically how to use a computer.

**Module** 2 required that the teachers enrolled had already some knowledge on the educational use of computers.

**Course Duration:** 2 to 3 months.

### Objectives

**Module** 1 sought essentially to provide the teachers information on the characteristics of the various types of educational software available, as well as suggesting instruments that would allow them to evaluate that software in terms of educational objectives. It also aimed at promoting a reflection on the new role of teachers, as well as presenting and discussing some orientations on class planning and management concerning the use of new technologies, since the breaking up of work routines usually generates some anxiety and therefore inhibits innovation.

**Module** 2 intended to initiate teachers in the design and development of small applications that would meet their actual educational needs. In fact, the upsurge of numerous tools that have made programming possible for non-experts set the path for the creation of homemade educational applications of a high pedagogical value. It is thus fundamental to encourage teachers to develop them. In this module, we presented and discussed design principles and defined the several stages in the production of a Storyboard with resort to plenty of examples.

### Working Materials

Each module had a handbook structured and organized as a self-learning material. Besides the presentation/discussion of the contents, the handbooks also included checklists of learning objectives, suggestions for practical activities concerning the topics studied and tips for self-evaluation. These handbooks were accompanied by educational software produced in Universidade Aberta, which provided support for a number of activities throughout the training process.

### Tutoring

Based on our experience in distance in-service teacher training, as well as on the results of some studies in this field (Ferry et al. 1996; Parker, 1999), we think that the success of these courses relies heavily on the clear formulation of their objectives. Another important factor is the level of interaction achieved, since that interaction compensates for the absence of face-to-face contact felt by some trainees. Thus we tried to provide all the relevant information, in a summarized manner, prior to the beginning of the course, so that teachers would clearly understand the goals of the course and what was expected of them. At the same time, we wanted to stimulate contact through the various means of interaction available. Besides tutoring over the telephone, we tried to encourage tutoring via e-mail[2], which would allow teachers to become proficient in the use of this new medium of communication, according to the objectives we had established.

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(2) Since 1997 the use of Internet in all Portuguese middle and secondary schools is available due the initiative of the Ministry of Science and Technology.

We think that a very significant interaction between tutors and trainees was achieved, mainly through e- mail. This medium was extremely useful not only in the solving of difficulties throughout the learning process but especially in the presentation and discussion of the practical activities the trainees produced.

## Assessment

There were two moments in the assessment of the trainees: an assessment test (compulsory according to the regulations of the Ministry of Education) and a practical work, which consisted in the analysis and evaluation of educational software (Module 1) or in the production of a storyboard for an educational application (Module2).

The tutors would later send an individual feedback report to each of the trainees. Moreover, the tutors were available for face-to-face discussions with the trainees regarding their assignments. There was a great investment in the execution of these practical assignments and in Module 2 several trainees were encouraged to develop the educational application they had designed.

In the end the trainees were asked to evaluate the courses using an instrument specifically designed for that purpose while the tutors also evaluated the learning process and the results achieved.

Generally speaking, the evaluation on the part of the trainees concerning the contents (interest, adequacy to professional practice, familiarity/difficulty), the design of the self-learning materials (clarity, objectivity, formative activities, assessment) and the means of interacting with the tutors was very positive. In this last respect, the use of the e-mail was highly valued even by those who had never tried it before. Comments like "positive and very useful for the teacher's work, with respect to theory and practice", "very interesting, the materials were very well designed and I still use them after the course" or "I'd do it again" lead us to believe that there was a high level of satisfaction regarding the model adopted.

As a way to perfect the training process several trainees suggested that there should be a face-to-face session where they could exchange ideas not only with the tutors but also among themselves.

As for the attitudes towards the use of new technologies in the teaching and learning process and towards distance teaching, we can say that more than 50% of the teachers who took part in Module! enrolled the following year in Module 2 and/or in distance training courses in other areas.

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