

# #LEARNING.COM PEDAGOGICAL APPROACHES FOR ONLINE HIGHER EDUCATION

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## **Abstract**

Information and communication technologies have contributed significantly to educational and methodological changes in education. Higher Education institutions have great responsibility in granting teacher and student access to suitable educational technologies as well as in providing the adequate means for the adoption of different tools and in the creation of opportunities for the dissemination of technical knowledge and pedagogical expertise amongst all intervenient. Teachers and students in a collaborative way have to rethink teaching and learning environments in order to meet the needs, curiosity and challenges arising from the knowledge society in a lifelong learning perspective. In addition, there is a deficit in the use of pedagogical practices that suit all learning contexts. Despite all the recent changes in the area of online and distance education, we are still far from achieving the expectations of several generations of students (individuals) that also search for a suitable training according to their work demands. In this communication we will share the experiences, perspectives and practices of different teachers and students involved in an ongoing pedagogical program that uses different approaches and technologies to enhance organizational knowledge, teaching, learning and performance. The data was collected from the implementation of a research project that covered nine schools focused on different educational areas: Engineering; Accounting and Business; Education and Teachers Training; Health, Tourism, Music and Performative Arts; Management and Technology; Industrial Studies; Media, Arts and Design.

Keywords: Pedagogy, technology, online education.

## **1 CONTEXT**

Nowadays, in the majority of European countries, teachers from higher education do not need to have pedagogical training in order to work at higher education.

Typically, higher Education pushes their teachers to develop deep work related to the scientific area less than to related to pedagogical area [6].

Consequently, the pedagogical professional development in higher education has not been a priority to new teachers [7].

The quality of the teaching process is vital, but teachers across Europe are not always well prepared for their pedagogical career since they have been investing on their research careers instead [12]).

If higher education institution seek for better results and reduce the rate of dropouts, they would need to invest on the pedagogical education training of their teachers as much as the scientific area [8].

[11] argue that the pedagogical training of higher Education teacher has positive effects in the pedagogical methods and the students' results.

In general, teachers give knowledge to their students but they can also develop a collaborative work in order to help students on building their own knowledge [4].

The concept of giving knowledge means give information. In this way, teachers make efforts in order to give all information to the students, produce a lot of material, maintain the schedule on time in order to guarantee that they teach all the topics due for the unit. In this context, teachers, usually, focus their work on the students as a whole group [13]. According to this approach, students are seen as equal and not as a complex individual biologic system [5].

Nevertheless, the European Commission [2] underlined the importance of improving the pedagogical quality in higher education beyond the scientific research. Nowadays, more and more teachers at higher education are concerned with this issue. The quality of pedagogical training in higher education have been receiving a greater attention. In fact, this theme has been discussed in the last years among higher education professionals. At the same time, the pedagogical skills of higher education teachers have

been included in many of their evaluations. In many countries, the pedagogical training has become mandatory [3]. In the last decade, the teaching training process became a tendency well spread across many countries [11].

In training and promoting the attractiveness of training, the Unit of e-Learning and Pedagogical Innovation at the Polytechnic of Porto (EIPP) aims to mobilize the teachers' community, by working on training and disseminating of better teaching practices. It aims to develop technical and pedagogical skills mainly in the use of web technologies. This training aims at further online training provision, in various areas framed in the mission of Polytechnic of Porto. In a joint effort with all eight schools in order to increase awareness of the institution in the field of e/b-learning and reach new audiences.

## **2 THE IMPORTANCE OF TEACHERS' TRAINING IN HIGH SUPERIOR INSTITUTIONS**

Besides a degree in a particular scientific area in the chosen field of study, a diploma, degree or certification in the art and science of teaching is mandatory [10]. Teaching and learning are interdependent activities which interact with the multidimensionality of students' lives. There are many ways of teaching and learning, this means that teachers have to learn and improve their teachers' skills to make learning happen. As we know, some teachers have no acquaintance with basic knowledge on Social Sciences, either on Psychology, Philosophy or Sociology and so too many things are taken for granted. Furthermore, teachers have to deal, every year, with different groups of students with different educational and social representations on learning and with different social and cultural backgrounds. Furthermore, binary technology has expedited the explosion of knowledge, thereby making knowledge more accessible [10]. This means that every year different approaches for teaching and learning have to be considered. It is fundamental an innovative attitude, dynamic and directed to the needs of lifelong learning and social change.

In this perspective, teachers' training involves understanding that teachers and students, in a collaborative way, have to rethink teaching and learning environments in order to meet the needs, curiosity and challenges arising from the knowledge society. It also means that teachers have to be able to promote reflective thought amongst students, which implies reflective and strategic teaching grounded on an educative process centered on the student rather than the educator. Powered by reflective thought, students and teachers are able to regulate their own learning process, by developing learning strategies with educators' assistance [1]. "Getting to know about learning styles of a class of students and individual preferences, their background, motivation levels and, above all, their present knowledge of the subject at hand will form the right launching program to design the strategies needed to put across the right message in the best manner possible" [11].

## **3 TEACHING IS MUCH MORE THAN TALKING: THE TRAINING PROGRAM**

Teachers are communicators and good communication is the foundation of successful relationships, both personally and professionally, either in classroom or in a meeting. Verbal communication is important, but the ability to understand and use nonverbal communication is also a powerful tool that will help us connect with others, express what we really mean and be attentive to what others mean. Being so, the pedagogical program was designed taking into account the acquisition of knowledge on the key theoretical and methodological frameworks that enable the analysis of social and educational realities considering the scientific areas of the nine schools, focused on different educational areas: Engineering; Accounting and Business; Education and Teachers Training; Health, Tourism, Music and Performative Arts; Management and Technology; Industrial Studies; Media, Arts and Design.

The sessions with 3 to 6 hours (presential and non-presential) focus on different topics such as:

- Diagnosis of learning needs;
- Preparation of study plans;
- Curricular unit programmes;
- Curriculum articulation (vertical and horizontal);
- Planning and facilitation;
- Teaching methods;
- Teaching methodologies;

Assessment of student learning;  
Collaborative work;  
Communication and voice training for teachers;  
Digital citizenship and net-etiquette;  
Learning platform Moodle and Learning apps;  
Virtual networks;  
Institutional and organizational culture: mapping the way.

The whole programme, workshops and other learning and debate situations aims to create a pedagogical relationship in different group works, to encourage active learning, develop communication skills and decision-making. In all sessions we use information and communication technologies (ICT). Different tools for different purposes were proposed and experimented in the different sessions in order to improve preparation in each area, context and curricular unit. Exchange of experiences and practices as well as interdisciplinarity are considered fundamental.

#### **4 ASSESSMENT**

In order to guarantee the assessment and continuous improvement of this initiative, a questionnaire was devised. Following the assumptions of Portuguese Normative 4545, the sixteen questions focused on: *learning objectives, contents, trainers' abilities, organization/management; results and expectation and global assessment*. All participants were invited to assess their training session immediately after. The results were always anonym. The results are promising. On one hand the participants scored the highest for learning objectives, trainers' abilities, contents and results and expectations. Further improvement in organization and managements was considered important. Moreover, the participants were eager to update and upgrade the sessions, by suggesting higher training periods and multiple sessions. In fact in two separate occasions, the training sessions were doubled to meet the number of participants.

#### **5 IN SUMMARY**

In this paper, based in an ongoing pedagogical program, we explored knowledge-seeking procedures among educators in High Superior institutions highlighting four core questions:

- 1 Teaching and learning are interdependent activities;
- 2 Suitable training demands pedagogical innovative programs;
- 3 Exchange practices and experiences are fundamental;
- 4 ICT tools makes education more engaged.

The program studies the knowledge-seeking training and practices of teachers with different academic backgrounds. Although the findings are still in a very exploratory stage we can identify similar concerns and practices that suggest the importance of the program for particular vulnerable groups. Technology is no substitute of an inspiring teacher; however students access the internet all day anywhere, anytime. Online materials are far more available (100% of the day), than the teacher, meaning that learning is beyond classroom. If education is about knowledge technology and pedagogical skills lies at the heart of teaching and learning. Online education as part of the evolution is the present and the future of education either on fully online courses and programs, blended learning or MOOC (Massive Online Open Courses) so we have to be ready for different challenges with caution and enthusiasm.

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