CHALLENGES AND COMPETENCES OF THE E-TEACHER: A HIGHER EDUCATION EXPERIENCE IN PORTUGAL

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Abstract. In the wake of the vast array of new horizons the Internet has opened up in little more than a decade, one can truly say that today distance learning is an entirely different activity than what is was in the past, especially as regards the resources used and the network-based teaching processes. Distance learning is today supplied not only by institutions specialised in the field, such as the open universities, but also by a myriad of other institutions and organisations that are in some way linked to education or professional training and which, for different reasons, have embraced the use of digital network technologies to broaden or extend their traditional educational supply. From the operational point of view, this means being able to count on agents that are duly qualified to push forward and lend substance to the educational and training goals, at least from a perspective that promises meaningful innovation through harnessing the potential of the new information and communication technologies. Agents who are able to take advantage of these technologies and can go further than they traditionally did in pedagogical terms, both in relation to the training and educational strategies, and as regards the very aims of the learning. Indeed, in addition to instruction focused on the transmission and reproduction of knowledge, society has come to demand the acquisition and development of competencies that go far beyond the declared knowledge of each professional domain. We are referring namely to the transversal areas that include the competences of self-learning, collaborative work and all aspects that in one way or another contribute towards preparing individuals to deal with today’s changing times. It is in this specific context that we chose to tackle the issues related to the challenges and competencies of the “e-trainers”, i.e. all those who, in starting or performing a professional activity in the training or teaching area, would like to deepen their knowledge about the implications of the fact that that the new online learning environments are being shifted onto different levels.

Keywords: Distance learning, Meaningful learning, In-depth learning, e-Teacher

1 Introduction

In addition to the mere acquisition of knowledge, today’s society demands that each citizen develops a set of essential competencies, namely the ability to adapt to change. This is especially relevant for anybody who is in employment, whatever it may be. In the case of teachers and trainers of distance learning, this is even more relevant given that the contexts in which they carry out their action have already begun implementing new ways of carrying out the educational activity, namely through using information and communication resources and tools provided by the Internet. In the case of students and learners, this shift becomes increasingly pertinent as these contexts move away from the traditional teaching and learning practices and put more emphasis on a teaching and learning perspective that we can call, to use the words of Paulo Freire, intrinsically emancipating.

We are bringing to the fore and referring specifically to the teaching and learning contexts structured so as to promote the active participation of the students, in order that the learning takes place based on the work of each individual and as near as possible to his/her interests, needs and expectations. These contexts stimulate and facilitate the development of the each individual’s autonomy in the organisation and management of his/her own learning, for example through devices that allow the acquisition and perfecting of personal organisation, reflection and self-regulation strategies. These contexts also give rise to frequent opportunities for interaction and collaboration in a network, especially between the student groups, which can bring positive aspects in terms of shared construction and distribution of knowledge.

As different studies suggest, the most successful distance learning systems are not necessarily the most technologically advanced ones, but those which invest in the quality of the teaching and learning opportunities they create. In other words, by striking a balance between the technological dimension and the methodological dimension, but also in the way the personal objectives of each student are taken into account and articulated with the goals of the training and educational institutions. It is from this perspective that we map out the working model in this paper, trying to outline, through specific examples and testimonials, the strategy that we have monitored for several years in different training projects that have a distance-learning facet and which we have recently been putting into practice through a curricular subject of a Master’s Degree in Education, taught as a distance course, in the Institute of Education of the University of Lisbon.
2 Concepts and assumptions of the e-learning model

Given that we are focusing on distance-training models exclusively based online, through the Internet, before all else it is important to clarify some essential concepts, namely as regards the diversity of the technology available, but also as regards the specific use of the learning service. An initial aspect to take into account is linked precisely to the necessary distinction between the concepts of “e-learning” (very much in fashion in recent years), “distance learning” and “online learning”. Although often interchanged indifferently, these terms actually refer to separate things. “E-learning” is a way of learning at distance. However, not all distance learning is carried out via “e-learning”. “E-learning”, defined here as learning based on technology, presupposes the use of a broad and wide-ranging array of technologies, such as, for example, television, satellite, or others, and is therefore not confined to what some people label “online learning”, i.e. learning based exclusively on the Web.

Having made the distinction between the concepts usually used in these contexts, it is now important to look more closely at the concept of “distance learning”, especially with regard to what new aspects it brings into the teaching and learning environment in comparison to face-to-face educational situations. We refer in particular to the fact that it can happen in “any place” and at “any time”, i.e. it is not dependent on a rigid place and time, as is the norm for face-to-face teaching.

In order to broaden the field of vision over the set of technologies available and to simultaneously “compartmentalise” the question to help the e-teacher to better understand the potential of each aspect, we propose an organisation around two orthogonal axes: the axe of the technologies (offline – online), and the axe of the activity (synchronous – asynchronous). As such, we propose a very simple classification, but one that enables a clear separation between face-to-face teaching and conventional distance learning, and between the latter and 3rd generation distance learning. This final category, which we can also label virtual learning, is precisely the education which takes advantage of the new information and communication technologies that we can easily use today in any distance learning context, as long as an Internet connection is available, obviously.

In the case of virtual training we have, to sum up synchronous communication tools and asynchronous communication tools. The synchronous communication tools are all the technologies that allow real-time interaction and collaboration, such as Skype or Messenger activities, in which the participants in a given course meet virtually, at the same time, to carry out a joint task. The asynchronous communication tools are, in contrast, all the technologies that allow interaction and collaboration in deferred time, i.e. in which the communication takes place without it being necessary for the participants to be available at the same time to carry out the activity. This is the case of sending e-mail messages, forum discussions, or simple consultation of resources made available in virtual environments that serve as the basis for the development of the teaching and learning activity, such as, for example, the Blackboard, WebCT or Moodle systems.

3 Structural pillars of the teaching and learning activity

Either implicitly or explicitly, at the basis of any training course is a set of premises that define the trainers’ vision in relation to the teaching and learning process. Therefore, we now present the pillars we consider essential for the design and implementation of the distance learning model discussed herein. In this model, the student is at the centre of the teaching and learning process; the learning is permanent and uses a rich and diverse set of strategies, especially communication and collaboration between the participants; the curricular structure is open and flexible, enabling adjustments resulting from the needs identified and the dynamics created throughout the process; and, finally, the learning resources are used to bring about rich, meaningful and in-depth learning.

3.1 The student is at the centre of the teaching and learning process

The wide range of methods and materials and the interaction among the students are good strategies to enrich the learning. Indeed, interpersonal exchange and collaborative work seem to be important factors in valuing how one learns, as they help to clarify concepts and develop more creative and diversified thinking, paving the way for exposure to different styles of thinking and expression and the distributed knowledge (Salomon, 1993). As such, in this distance working model emphasis is given not only to the frequent interaction between the trainer and the trainees, but above all to the creation of frequent opportunities for communication, interaction and collaboration
among the participants, whenever possible making use of the origin of the knowledge; in other words the real and authentic sources or even invited experts. This is possible considering the wealth and diversity of the information sources available on the Internet, although it is indispensable that the e-teacher duly searches, scrutinises and filters the information beforehand. It is also pointed out that, in this working model, the learning can also be structured based on resources and materials created for the purpose, with the proviso that this only makes sense within the framework of involving the students in the reflection and decision making with regard to the main issues underpinning the learning goals.

3.2 The learning is an on-going process and uses a rich and wide-ranging set of strategies, especially communication and collaboration among the participants

In this working model, the entire teaching or training model is based on the analysis of the prerequisites. It is necessary to situate where the participants are at and help them to invert incorrect ideas, such as, for example, what it means to learn autonomously, or about what is involved in learning in collaboration with others. Therefore, the organisation of the learning process initially seeks to ascertain the level of knowledge and competencies in the specific area of the course and the students’ previous experience in similar activities, but also their ideas, attitudes and practices as regards the teaching and learning process itself. Hence, time is duly set aside to prepare the students in order that they understand and feel comfortable with the proposed work strategy, i.e. to understand that in order for the learning to be in-depth and meaningful, it is crucial that they actively take part, as borne out in the conscious and thought-out appropriation of knowledge or competencies to be acquired and in defining the learning, personal and professional development goals.

3.3 The curricular structure is open and flexible, allowing adjustments to be made resulting from the needs identified and the dynamics created throughout the process

Notwithstanding a body of basic ideas and guidelines as regards the work to be carried out, the intention is that the curricular structure be decided in line with the specificities of each context (Figueiredo and Afonso, 2006), and by the evolution of the work undertaken within this framework, instead of a predefined and rigid structure. It shall depend, above all, on the needs identified and the objectives of each moment that are defined in accordance with the evolution of the work and the participants’ characteristics. A particular working structure can be developed in each situation, in line with the specific needs and work dynamics (CUTSD Project, 2000). To help attain these objectives, the activities should be organised to cater for the interests of the students and should be geared towards the application of the acquired knowledge, given that it is important to transmit the sense of the practical utility of the learning, namely as regards personal intervention projects or research. It is also suggested that the working and learning scenarios are of a short duration, in order to allow quick feedback adapted to the needs of the students in carrying out their work.

3.4 The support materials serve to aid a meaningful and in-depth learning experience

A meaningful learning experience is characterised essentially by the active involvement of the individual in the construction of knowledge, through the articulation of ideas, self-reflection and questioning (Jonassen, Peck and Wilson, 1999). As we mentioned above, when the option is made to use materials designed for the learning purpose, these materials should be drawn up so as to involve the participants in high-quality tasks, i.e. based on mental operations that involve a high level of cognitive activity (analysis, summary, reflection, assessment, creation). In order to leverage in-depth learning, the learning situations should be organised around materials that imply the design or creation of something specific, whether individually or collectively. On the other hand, and given that adults learn by responding to the problems that are presented to them, the materials should be structured in order to constitute a challenge: to question, analyse, assess, summarise, create, imagine, explain and propose.

Also with regard to the use of support materials, the particular situation of the synchronous work sessions are pointed out, given that in this background the main resources are precisely the individuals themselves who are involved in the teaching and learning situation. Without rejecting the fact that these situations can also opt for the creation of specific materials, it is above all the interaction established and the way it is structured that will determine its effectiveness, given the simultaneous presence of the teacher and the students.
4 Critical areas for the e-teacher’s activity

Given what has just been mentioned above, it is clear to see the decisive strategic importance of the e-trainer, e-teacher or e-tutor. It is easy to conclude that in these new electronic contexts, the person in charge of overseeing the process is faced with a set of demands that go far beyond those of a traditional teacher, namely as regards the creation of conditions to make the intended working model a reality. The e-teacher is in charge of organising each of the learning and student development activities. As well as his/her scientific knowledge and general technological competence, other critical factors are involved in the new roles played, such as mediation or social facilitation, but also the teacher’s motivation, willingness to learn and actual involvement in the tasks (Costa, 2007).

Although we can outline some specificities directly deriving from the philosophy that underpins the working model we briefly describe herein, the e-teacher should possess a set of competencies and personal traits that allow him/her to perform roles that are very different from the tasks carried out by a traditional instructor, such as acting as a facilitator, moderator or leader of a growing group. For practical reasons, and in order to facilitate the identification and development of the respective competencies, we have placed them into different categories, in line with their specificity. As such, as well as the scientific and didactic competence in the teacher’s specialised area of knowledge, he/she should have the following skills:

- management of the virtual learning environment supplied;
- design of learning activities (course design);
- facilitation and guidance of the individual learning;
- leadership and socialisation, to promote interaction among the participants;
- assessment, with particular focus on the “art” of supplying “feedback”;
- management of the entire teaching and learning process online;
- mentoring, i.e. supporting personal and professional development.

To sum up, in performing the role of the organiser, facilitator and mediator (Dias, 2008), the e-teacher should: make sure that everybody actively takes part in the learning activities and contributes to the joint construction of knowledge; organise, promote, guide and monitor the discussions; help the students to develop personal organisation and meaningful learning strategies; collect learning assessment items and provide regular feedback in timely fashion; help the personal and professional development of each individual, encouraging self-reflection and boosting confidence in the use of the technologies used to leverage the learning; stimulate interaction among the members of the group and help solve conflicts.

According to Adams and Freeman (2003), the e-teacher must above all use specific strategies to stimulate the students and make sure they actively participate. This shall involve, among other actions: the organisation or an initial informal talk in which each of the participants present themselves to the others, selecting what they deem the most relevant aspects; the regular scheduling of discussions, in order to enable the participants to get used to working in the learning environment used; the creation of a facility where doubts can be raised and questions can be asked about the organisation and management of the teaching and learning activities; the creation of a facility specifically aimed at sharing the materials, resources and experiences, in order to motivate the participants to swap and interchange ideas; the invitation of experts to take part in the discussions of the topics selected or who is willing to answer questions asked by the participants; attributing responsibility to the participants for organising certain activities, rotating this task among the different members of the community. These constitute a set of suggestions that can easily be added to based on the experience of specific situations, and which we invite the reader to complete as we end this first part of the chapter.

5 The implementation of a curricular subject in a Master’s Degree

The preparation and subsequent implementation of the curricular unit we use here as our reference point (Curricular Integration of the ICT), was based on the four guiding principles presented above. As such, our starting point was a vision of a virtual classroom, with the characteristics inherent to an online distance learning context, and we designed a collaborative working space in which the students were simultaneously individuals and members of the learning community “class”.

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5.1 Organisation and overall working strategy

In the organisation of the curricular subject we took into account the characteristics of each student, namely as regards their professional practices and their ideas in relation to the topic under analysis – the use of information and communication technologies for education purposes. We deemed it essential, therefore, to start work in the subject with two brief tasks that will allow us to characterise the personal opinions on the topic under analysis. On the one hand, a personal presentation forum in which information is requested about the student’s professional situation, the reasons he/she enrolled for the Master’s Degree and his/her expectations concerning the subject. On the other hand, the students were also asked to briefly reflect on a text on the topic of the curricular integration of the technologies, establishing links to what occurs in their professional situation. We intend, through these initial activities, to get to know the students and to supply an initial bridge connecting the content to be worked on and the students’ experience.

Another essential aspect in terms of organisation was the use of activities and high-quality tasks, i.e. situations that would provide opportunities for the students to undertake meaningful, self-directed and autonomous learning. As well as the activities proposed, which we shall presently explore, the framework of the common working area in the system sought to support these principles, in showing from the start all the tasks and the expected results of the students throughout the quarter. These goals seemed to have been achieved, judging by the words of one student when he mentions that “another strategy that led to an improvement in time management by the students was the fact that all the content was made available from the start on the Moodle system.”

The online working facility was also set up to make navigation easy and intuitive, whereby all the modules had a similar structure: contents and aims of the module; tasks to be carried out by the students each week; resources and tools needed to carry out the tasks; important dates; other references to study the topics in more depth. The aim of this organisation was to make it easy to distinguish between what was essential for the activities and what was complementary, so as to nurture an attitude of selection from the students themselves. One of the students pointed out that this method of laying out the resources “avoided an initial dispersion of the students. First the essential documents and tools were presented and then other references, which despite being optional were the cement that consolidated the learning.” As for the overall working strategy adopted, we based it on the presupposition that the diversification of materials and interaction with others are the only ways to create authentic and meaningful learning situations. As such, the curricular subject was based on a variety of resources, tools and tasks, but also on the creation of frequent collaboration scenarios among the participants, as well as moments of autonomous individual work.

5.2 Activities, tasks and resources

Emphasising the importance of the interpersonal exchanges and collaborative work in the undertaking of the learning, and not neglecting the need for each learner to appropriate what is being constructed together, the curricular subject is essentially based on collaboration tasks and individual tasks. It is precisely in striking a balance between these two learning aspects that gives rise to the benefit of the education in this context. The three modules that constitute the subject were designed sequentially, so that one would follow another and lead to the final task: a proposal of curricular integration of the technologies within the scope of a given subject or subject area of choice.

For each module some group tasks were planned, such as analysis of texts in forums, synchronous sessions with invited experts or assessment of digital educational resources available online. Whenever there was a group task, the result of which was presented together, the students were asked to subsequently reflect on what they had done, how they had done it, and what they had learned. We gave a lot of emphasis to the reflection and questioning, as we believe these are essential aspects behind autonomous and in-depth learning. One of the students identified this dynamic, stating that “the subject was very much based on the reflection in small and large groups and individually. What we reflected on with regard to one task would serve as the basis for the next task. Everything was very well interconnected and channelled as all the work carried out was geared towards the undertaking of the final group task.”. This student also pointed to another example of the relationship that we tried to establish between the collective and the individual: the definition of two intermediate individual reports and a final group task. The idea was to allow the students to individually deepen their knowledge about the potential of the technologies for their curricular area, so that at the end they could contribute in a more enriching manner to a proposal for curricular integration of the ICT. The phasing and interconnection of the tasks would allow the students to acquire conceptual and methodological tools necessary to reach the final target.
5.3 The intervening parties: the students and the e-teacher

The issues explored previously are linked above all to the idea and the preparation of the curricular subject that, in our opinion, constitute essential functions of the e-teacher. We have no doubt, after the experience described herein, that the decision concerning the organisation and selection of work strategies is essential to create a coherent and helpful environment for distance learning. However, we have left one aspect for last, which we believe is perhaps the most important of all to bring success in the learning: the interaction among the intervening parties.

With regard to the students, the various group tasks provide joint work situations that aim to encourage sharing and to bring about the collective construction of knowledge, but also intend to support the students in deepening their essential competencies such as collaboration, discussion and negotiation. These activities are usually geared towards more complex issues that demand a critical perspective over certain content, and therefore the intervention of different students in the same task can bring about a meaningful improvement in results. These results are related not only to the specific knowledge of the curricular area on which we are working, but also as regards the integral development of each student, which one of the students described as follows: “The amount I learned and ‘grew’ in this short space of time is immeasurable and surpassed all my expectations. I’m not talking only about the content of the subject itself, but also the collaborative work experience online and the spirit of sharing that I have experienced over this period.”

The e-teacher, on the other hand, adopted an open attitude from the start, trying to make himself available (virtually) as much as possible. To do so, two synchronous meetings per week were scheduled, via Skype, each one lasting one hour and after normal working hours. These meetings, which were optional, had the purpose of aiding the students as they did their work, clarifying doubts and encouraging the participants to collaborate more closely with one another. In an initial phase all the students attended at the scheduled time, but as they realised that the e-teacher was always available to support them online (which happened on practically a daily basis), these meetings became just one of several moments of synchronous communication that took place between the students and the e-teacher. This constant presence seems to have been positively appreciated, as expressed by one student when he talked about “the opportunity to have a present-distance-tutor. (...) There was and is no way we can feel alone. Even if you were not always online, obviously, we knew perfectly well that a question, a doubt, would be quickly answered.”

Also worthy of mention is the crucial role played by the e-teacher’s assessments of the students’ work. The fact this took place on a regular basis led to a process of self-reflection and self-assessment by the students. Aware that fast feedback is essential to keep the students motivated, and to guide their learning path, whenever we sent some information or clarification to the whole class, we included a small overall appraisal of how the activities were going, looking to focus on the positive aspects identified. This did not affect, however, the necessary individual assessments. Whenever it was opportune we sent a motivational e-mail to each student, showing our appreciation for the work he/she was carrying out and giving some advice on how to improve it. These were moments of educational appraisal, but also moments in which the e-teacher could get closer to the students and give them incentives and motivation.

The same level of attention was dedicated to the final assessment of the tasks. As well as the qualitative mark awarded for each product, the students always received, within a short space of time, a comment comprising an overall appraisal, explicitly mentioning the strongest points and what could be improved. This is the strategy referred to by another student when she says that the tutor “was always available for us, … she always clarified our doubts and gave us feedback so that we could improve our participations and contributions, paving the way for us to go beyond the limits of our knowledge at the time.”. In response to these messages, several times the students themselves identified specific aspects that could have been tackled in a different way and made specific proposals to perfect previous tasks. This frequent and individualised approach not only helped keep the students motivated, but also actively involved them in improving their learning. Conclusion

Although the testimonials contained herein are chiefly provided to illustrate some of the aspects with regard to the implementation of the working model that we have followed in the teaching and distance learning contexts we have been involved in, they are part of a broader strategy involving recipients of the education in a reflection about this kind of learning. As well as the continuous observation and registering of their reactions to the topic under study and the methodologies proposed, at the end of the process we sought to obtain their assessment of each of the
components of the work strategy experienced, so that we could benefit from their critical view and their contribution about the process.

6 Final considerations

In an area in which so little is still known, as is the case with distance learning in virtual environments, we believe it is of capital importance to listen to the voice of the end recipients, both in terms of self-assessment of the learning achieved, and above all in terms of satisfaction in relation to the work methodologies and tools used. In these kinds of environments, where the individuals are never physically present, it is particularly relevant to be attentive in order to detect and register the myriad of critical incidents that happen throughout the process. This is precisely where the key lies to the solution of many problems experienced as described in the extensive literature on conventional distance education. We are referring not only to problems of solitude and problems arising from the difficulty in autonomously overcoming obstacles thrown up by any learning process, but also those that paradoxically derive from the very flexibility usually attributed to this kind of education.

Equally important are the problems that derive from two situations that are easy to detect. The first is linked to the lack of preparation most individuals admit to as regards independent and autonomous learning, with everything this entails in terms of the lack of essential key competencies that enable them to profit from this kind of education. The second emerges from the challenge faced by the distance learning contexts themselves, which, as is now understood, cannot merely mimic face-to-face teaching, especially as regards the value attributed to the transmissive model, centred on the content and the teacher. It is with this conviction that we carried out the exploration and reflection on the distance teaching and learning contexts in which we have had the opportunity to intervene, and this is also the proposal we make to the reader interested in this area.

7 References


