

# UNIVERSITY TEACHERS' DIGITAL EMPOWERMENT FOR BLENDED TEACHING: AN EXPERIENCE OF TEACHERS' TRAINING IN EUROPEAN HIGHER EDUCATION

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## ABSTRACT

*Due to the global pandemic, online training became a response for educational institutions to develop their training activities. HE teachers adopted remote solutions based on replicating face-to-face dynamics and activities online, while any online education activity needs a proper design to be developed and to assure students' meaningful learning. The results were not coherent with online teaching principles, causing a negative vision on online teaching and learning. To promote HE teachers' Digital Competence, an online course was designed, implemented and evaluated in six European universities. The process of design and implementation will be critically discussed to highlight the limit and opportunities of this training as a model to help teachers to transform their practices to blended teaching.*

## INTRODUCTION

Digital technologies were heavily integrated into all aspects of human life during the worldwide pandemic. When educational institutions used hybrid solutions to expand their training initiatives, online training emerged as a response.

Additionally, the need to respond to these changes made teachers aware of their own lack of digital competency—not from a technical standpoint, but from a pedagogical one. This fact has been found in the use of online teaching models based on the techniques they employ in face-to-face settings, without consideration of some elements that greatly differ in online settings, such as the interaction process, the potential for asynchronous communication, the redefinition of time and its management, or the requirement for more continuous, formative, and varied assessment processes.

HE teachers developed remote solutions focused on simulating face-to-face dynamics and activities in online settings (such as video conferencing technologies, for example) as a result of being unable to carry out their teaching practices in face-to-face settings. However, because any online educational activity requires a good design to be properly produced and to ensure students' meaningful learning, remote teaching cannot be regarded as online teaching (Hodges et al., 2020).

The results of remote teaching were inconsistent with online teaching principles as a result of this scenario and the solutions used, casting a poor light on online teaching and learning.

Blended learning (BL) is more than just the blending of in-person and online components. Armellini and Padilla (2021, p. 15) state that "BL is an approach that incorporates a range of dimensions that interact with and shape one another in an educational intervention". These dimensions are represented in a cross chart, where any BL proposal can integrate them between the extremes of each axis. Other factors that can be considered include, for instance: Individual work and collaborative work, peer assessment and tutor assessment, synchronous and asynchronous communication, etc.

## **1. KEY COMPONENTS OF ONLINE TEACHING AND LEARNING**

Ten essential components for online teaching are briefly stated below, taking into account all of the aforementioned factors and based on more than 25 years of experience at the Open University of Catalonia (UOC) in online education:

### ***Student's active role***

Online learners must be engaged, capable of managing their own learning (autonomy), planning the creation of assignments or activities, mature, responsible, driven, and critical with the use of ICT tools, and committed to fostering social interaction through collaborative learning.

### ***Competences***

According to Paquette (2002), competence is the combination of knowledge (to know), skills (to know how), and attitudes (to be) that an actor needs to develop a function, duty, or role and to accomplish a goal, within a particular context and in accordance with the established conditions and established norms. The online training assessment procedure must be competence-centered in order to encourage students' acquisition of competences. Teachers must establish a number of assessment criteria throughout the design phase based on an examination of the evidence of students' knowledge, skill, and attitude growth during the creation of the online activities.

### ***Active and collaborative methodologies***

Active and collaborative approaches should be taken into account in order to maintain coherence in the design of online learning activities and to advance the first essential element of online teaching and learning. Among the possible methodologies, the work of Maina et al. (2019) can be consulted

### ***Wide typology of e-activities***

E-activities are activities created online that call for active student participation as well as teacher direction and orientation within the context of online learning. E-activities in online training should be built on collaborative design processes, problem-solving exercises, virtual debates, and inquiry processes with concrete substance.

### ***Asynchronous and synchronous communication***

Nowadays, a variety of tools encourage online interaction, which is particularly beneficial for the creation of online learning activities. However, when designing the online educational activities, communication must be developed in addition to the instruments. It is important to remember that in a fully online situation, synchronous communication cannot be the only method of communication.

Asynchronous communication is advised to develop reflective and knowledge-creation tasks, while synchronous communication can be very helpful for decision-making and consensus during the development of online collaborative activities. Asynchronous and synchronous communication can be used for different types of activities in the same online training.

### ***Resources for teaching and learning***

The choice of resources is one of the most crucial factors that must be taken into account when designing online learning activities. Because Open Educational Resources (OER) ensure that all students will be able to access and/or download them without issues or limitations, teachers must prioritize online resources and seek out OER.

Because there are so many materials available online, online teachers must choose resources based on a variety of criteria in order to ensure their academic quality. Kurilovas, et al. (2014) and Senter for IKT i utdanningen (2018) are two reliable sources to consult regarding the most crucial factors to take into account.

### ***Continuous assessment***

Because students can adjust their behavior to maximize their learning through constant feedback, continuous evaluation can enhance students' learning and help students acquire competencies. The teacher intends to assist the pupils in their learning by using the process of continuous assessment.

### ***Teachers' role as a guide***

In addition to allowing a sizable change in the role of students, the changes in educational models located outside of traditional settings have also altered teachers' roles. Today, the teacher is viewed more as a facilitator of students' learning rather than as a source of information and substance, a coordinator of education. In online training activities where students have more autonomy, this new function becomes increasingly clear.

### ***Planning***

In order to ensure the success of all the processes, it is crucial to organize online teaching and learning activities. Each activity and task must be carefully designed, and the online instructor must be able to synchronize not only the performance of the students but also all the procedures that enable online learning.

### ***The stable learning environment and well-bounded tools***

The environment and resources used in any online learning and teaching activity must be carefully chosen to ensure that they support the development of the various activities. Online teachers need a variety of selection criteria to enable them to choose the best tools to develop the activities they design. As a result, it is essential that they have a minimum level of technical knowledge to assist them in choosing an environment and tools that are simple to use, offer device interoperability, and are up to date.

## **2. TRAINING PILOT FOR ONLINE TEACHING IN HE: BACKGROUND, DESIGN AND DESCRIPTION**

European HE teachers' training has been developed using an integrated approach that draws on the ten essential elements of online teaching and learning.

The proposed training, developed within the framework of the European project Empower Competences for Onlife Learning in HE (ECOLHE), was created by academics from the Open University of Catalonia. It will be implemented in six European nations (Italy, Spain, Ireland, Greece, Cyprus, and Finland).

Participants in the pilot were involved in creating, implementing, and evaluating their own online activities in addition to receiving theoretical training on online education. In several training phases, the participants will take on the roles of teachers and pupils while working cooperatively in teams.

In terms of planning, the training pilot was divided into two synchronous and four asynchronous activities, with a 30-hour burden overall.

The training's activities were divided up as follows:

### ***Introduction. Synchronous.***

This activity, developed in a webinar format, consists of a synchronous activity sharing the training with the involved partners, including an introduction, training development, methodology, materials, etc

**Activity 1 - Analysis of a learning activity. Asynchronous.**

During this activity, participants analyze an online training proposal developed by UOC for students. In this activity, participants work in collaborative groups, guided by a template and share their analysis with the rest of the participants. This activity is focused on knowledge of a set of digital resources (OER) organized by the seminar competences (see section Competences and Continuous assessment).

**Activity 2 - Activity design. Asynchronous.**

In this activity, participants apply what they learned during the first activity and collaboratively design a blended learning activity addressed to their students.

**Activity 3 - Activity implementation. Asynchronous.**

Each university manages two of the designed learning activities playing two roles. As teachers implementing one of these activities, and as students performing the other activity designed by another group.

**Activity 4 - Activity evaluation. Asynchronous.**

Each group evaluates the implemented activities following an evaluation guide provided by UOC.

**Conclusion and training evaluation. Synchronous.**

The evaluation of the pilot is based on continual evaluation and considers the various agents involved in the learning process. Participant activities involving self- and co-assessment are another active component of the evaluation process. In order to do this, a set of rubrics is developed to assess the degree of skills attained. Additionally, a final synchronous activity was carried out with the participation of every participant to assess the training pilot.

**3. PILOT TRAINING FOR ONLINE TEACHING IN HE: IMPLEMENTATION AND EVALUATION**

The pilot program was intended for professors, tutors, doctorate and post-doctoral students, and researchers who were interested in developing their online teaching methods. As was already noted, 40 of the 128 participants in the pilot course completed it. The following table analyzes the evolution of the participation count:

# Enrolled Participants	Intro	ACT 1		ACT 2		ACT 3		ACT 4	
	P	G	P	G	P	G	P	G	P
128	71	13	48	11	40	11	40	11	40

Table 1: Training pilot number of participants evolution: P = People and G = Groups

Each partner evaluated the qualitative aspects of each pilot experience. These contributions served as the basis for this evaluation's data collection. Due to the wide range of participant characteristics and variations across the participating institutions, certain lessons can be gleaned.

Each partner shared a "National Report" with the rest of the partnership in the form of a summary paper based on these qualitative evaluations and the monitoring carried out throughout the pilots.

Each of the key elements of online teaching and learning is examined to create this part, using national reports as a guide.

In some circumstances, the discussion combines the evaluation of more than one component to streamline the evaluation's content. For each component, italicized passages from the partners' national reports are mentioned.

### ***Competences and Continuous Assessment***

A few competences were chosen to be developed through the suggested activities for the training, including professional collaboration, selecting digital resources, assessment strategies, feedback and planning, and eight additional competences chosen from the DigCompEdu framework.

Participants without experience in online teaching or in team work reported that their lack of experience in these areas made it harder for them to learn during the training:

- *The material provided often assumed basic knowledge that was not encountered in all participants. The group work was also carried out thanks to the previous knowledge of some participants (ROMA 3).*
- *Concerning online teaching, participants expressed their concerns during the online webinar about their ability to become familiar with the platform in a short period of time (UPATRAS).*

Therefore, it is essential to confirm prior understanding of these essential competencies before enrolling participants in training that involves both online and group work.

### ***Active and collaborative methodologies and Wide typology of e-activities***

The coordination amongst other group members was expected to be a significant problem for those participants with no prior expertise in collaborative work:

- *You cannot expect teachers from a variety of disciplines to know these theories and practices therefore this should have been supplied as part of a course that relied on their use to complete it (UCC).*

However, after this first challenge is overcome, training becomes a fantastic opportunity to reach new learning objectives since collaborative work provides the chance to benefit from the experience of other colleagues:

- *The interaction in teamwork with people from different disciplines was a challenge at the beginning, but once the common objectives and themes of the activities were established among them, working with people from other disciplines was very enriching (UOC).*

Regardless of the assignments each course activity suggests, it's crucial that participants' existing activities or those they use in their regular classes can be incorporated into or modified:

- *The first proposal is that the course could have additional learning paths aligned with the traditional one. There are students that could be motivated if they had the possibility to report/publish their existing development work or who are willing to develop e.g., a new study unit (LAUREA)*

### ***Asynchronous and synchronous communication***

Participants discuss this topic's use of asynchronous or synchronous communication as well as its substance, which are two connected aspects. The more online experience the university has, the easier and more beneficial asynchronous communication is judged in terms of which type of communication is best for them:

- *The asynchronous nature of the pilot made them feel uncertain about their progress in case of a weak understanding of the structure and the tools, and the effort it would take to tackle any obstacles. There was no familiarity with the specific asynchronous teaching platform (UPATRAS).*

Therefore, developing more confidence and understanding of asynchronous communication performance should be one of the initial learning objectives before implementing a training program like the ECOLHE pilot training.

Regarding its substance, even in institutions with more online training, periodic synchronous encounters to clarify some of its more practical elements are encouraged:

- *The synchronous session could have focused on the specifics of completing the course rather than the big-picture overview of the design (UCC).*

Synchronous meetings were employed in various grades to fill an expanding need for communication between group members or between participants and e-facilitators.

The recommendation regarding the introduction of asynchronous communication in online training is to do it gradually, better if there has been prior training specifically about asynchronous communication, and incorporate some synchronous sessions into the design of the training to see if there are any areas that could be improved or clarified.

### ***Resources for teaching and learning***

All of the participants gave the quantity and quality of the suggested reading material very high ratings, with two suggestions on how to enhance the training.

Some participants requested films to further explain certain aspects of the training:

- *A variety of both video and text resources is best practice for self-directed courses (UCC).*

About the second consideration, there are contradictory opinions among participants:

- *The documentation shared on the platform is very complete and of quality. It is very positively valued that access to the necessary information for each activity is facilitated, as well as the infographics highlighting the most relevant information of each phase of the training (UOC).*
- *The amount of materials could be reduced. In particular, the additional teaching material - additional readings and informative documents - has lengthened the time and dispersed the concentration (ROMA 3).*

This issue needs to be made very apparent in the presentation of the training materials.

### ***Student's active role, Teachers' role as a guide and Planning***

In all cases it was necessary to adapt the initial planning, for different reasons: due to the initial difficulties in managing the platform, or to the lack of confidence and experience of the participants in online learning, or to an excessive workload that the course entails for the participants.

- *The training participants had a tight personal working schedule and it was obvious that the original course schedule was too demanding for them. The instructors extended the course deadlines, (LAUREA).*

These modifications to the strategy had an impact on participants' motivation and boosted participation from the e-facilitators.

The participants must take an active part in the training. Depending on each participant or institution, and the online teaching-learning experience, this involvement was highly diverse. For instance, participants in UOC overcame initial challenges by taking the initiative and looking for alternate solutions in each group, but participants in UPATRAS lost some of their enthusiasm owing to the necessity of being actively participating online:

- *Initially, at the beginning of the online course,... This made them feel uncertain about their ability to follow the rest of the course and weighed negatively on their motivation (UPATRAS).*

The program is based on the UOC model, and there is a significant amount of instructional presence, with the teacher accompanying the students at all times. The e-facilitators must be present all the time. Teachers who have never taught online naturally assume that this is not the case since, in conventional universities, teaching presence is associated with being in-person. The workshop also aimed to alter this perception and provide participants with tools to virtually follow students. This was not always accomplished, but the method used by some institutions to get over obstacles in this area is highly impressive, as demonstrated by the actions of the UCC teachers:

- *In the end there was not merely a need for adaptation but the facilitator joined three of the four teams as a participant on the course and this was the only way that those participants were able to complete the course. The participants who needed this much support to complete the course were all from the higher education sector highlighting that this design does not meet the needs of educators in this sector. This is in stark contrast to the experience of the two participants from the further education sector who completed the course ahead of schedule and with no need for adaptation or assistance from the facilitator (UCC).*

The distinctions between people who have various experiences with new technology used in education are also explained in the previous paragraph. It is crucial to modify the course for instructors who are less accustomed to online teaching-learning.

### **The stable learning environment, and well-bounded tools**

The Moodle platform's use has influenced the experience within the training. It can be said that those participants who were accustomed to using this platform had a positive experience whereas those who were not did not.

- *The second challenge was the course environment itself (Moodle). The instructors were not familiar with Moodle, and it took some time to figure out how Moodle works (LAUREA).*
- *In general, it is possible to state that the participants showed good motivation and had no problems using the Moodle platform, as they are used to using it in university activities. So the online activities had no problem getting carried out (ROMA 3).*

This idea is further supported by the requirement that participants receive pre-training in order to provide them with the background knowledge required to fully engage in online teaching and learning.

## **SUMMARY OF KEY CONSIDERATIONS**

The use of technology to offer alternatives to face-to-face teaching offers opportunities to HE institutions, due the flexibility and ubiquity of online teaching are rising values.

There is not a single training system applicable to all institutions. It is necessary to make enough flexible training proposals to be adapted (and adopted) by each teacher.

Collaborative work and the use of asynchronous communication are two key competences to ensure success in online training (and both require the active role of the participants).

Therefore, a pre-training to the participants and another one addressed to the e-facilitators to offer all the background necessary to go deep in online teaching-learning and knowledge of the training platform and toolset.

Promote that the activities that the participants use in their day-to-day courses can be integrated or adapted to an online environment

Incorporate in the design of the training some synchronous sessions to check if there are any aspects to improve or clarify.

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