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# 5 KEYS OF ONLINE COLLABORATION IN UOC'S PRE-SERVICE TEACHERS' TRAINING

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## 1. RESUM:

The Digital Competence Area at UOC performs a training for online teachers of a course (ICT competence) focused on collaborative online teaching. It provides them both strategies for the teaching of the subject and skills for collaboration among teachers.

They experiment both roles of online student and teachers, working collaboratively suggesting online resources and designing assessment tools.

This work presents some key aspects for online collaboration in pre-service teachers' training.

## 2. ABSTRACT:

The Digital Competence Area at UOC performs a training for online teachers of a course (ICT competence) focused on collaborative online teaching. It provides them both strategies for the teaching of the subject and skills for collaboration among teachers.

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## 3. PARAULES CLAU: 4-6

Higher education, online collaboration, collaboration among teachers, teacher training, professional development

**4.  KEYWORDS: 4-6**

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**5.  DESENVOLUPAMENT:**

**1 INTRODUCTION**

The Digital Competence Area of the UOC organized the Form@tic seminar, which takes place before an online teacher begins his/her relationship with the institution. This training is specific for teaching the course Competences ICT (ICTC), This course is based on Project-Based learning (Pérez-Mateo, Romero, & Romeu, 2014)

ICTIC responds to different student profiles, with a range of skills assigned in 22 different programs at the UOC. The course is taken by an average of 3,500 students per year.

The main aim of the course is to prepare students for the acquisition of the transversal competences at the UOC: "Use and application of ICT in an academic and professional environment" and "Online teamwork". The first mentioned competence involves:

- Searching and selection of information online
- Processing and development of digital information
- Presentation and dissemination of digital information
- Digital technology
- Study and work planning in a virtual environment
- Communication and collaboration in the Net
- Digital attitude

Process is carried out through four phases (figure 1). The students, organised into workteams, acquire the competences in a gradual and integrated way, with the support and continuous monitoring of the online teacher.

Figure 1. Phases and activities in the ICTC subject.

As can be seen in figure 1, students perform a series of continuous activities in which they acquire an active role. Is important to highlight that any of the steps showed and explained below must be completed to progress to the next one because any of the steps help students to collaboratively elaborate their projects.

The starting step provides an environment to create working teams and perform the initial searches. In line with Guitert, Romeu & Romero (2015), it is important to give students resources to suitably form the online groups.
Groups are created with the support of online teacher who subsequently provides them the

group space to start online collaboration.

Once the groups are created, they must define the groups functioning with issues such as the frequency in communication, what to do in case of one of the teammates is missing, how to solve conflicts and the different roles in the team. Subsequently they have to plan individual and group tasks.

The second step involves making a deeper search for information to structure the project. It involves that the groups start to work together and to share searches focused on the theme of their projects and define its structure for the next phase

Subsequently, the project is developed: the processing and the development of the gathered information are carried out and the first version of the project is achieved. During this step, groups elaborate the content of the project collaboratively.  In addition, they develop self and peer-assessment activities, collaboratively reflect on the group activity and revise group's rules and planning in order to make adjustments for the development of the last phase of the project.

And finally, discussing the final version of the project is done with its closing and dissemination. During this step, students present the final versions of their projects and conclude process in the groups with a reflection about the collaborative process developed during the course. In addition, they disseminate their projects in the general classroom space and discuss them in mixed groups created by the teacher.

The seminar Form@tic emulates the subject explained. This allows pre-service teachers to acquire a double role during the process: the role of the student and of the teacher developing activities of collaboration.

The conduction of the seminar is carried out by an online teacher who guides the whole process and acts as an example of the teaching in the subject (Romeu, Guitert, & Sangrà, 2016).

The seminar takes place in a classroom in the Virtual Campus of the UOC, like in ICTC subject, with different resources structured according to the activities, with materials and spaces to enable collaborative work.

The seminar is structured through four activities all of which are designed to foster collaboration among teachers:

   An Online discussion on Online Teaching Strategies: a debate about a couple of real situations that have taken place with the students of the subject, contributing with different strategies to approach these situations.

   Collaborative contribution for the creation of a tools' catalogue: each participant provided tools for any of the activities performed in ICTC, specifying the skills related to them and a brief description and access to tutorials.

   Organization of the group (rules of the game): participants were grouped according to affinities and interests in groups of four. Each group decided the organisation, planning, distribution of tasks and functioning of the group, considering their diversity.

   Conceptualization to present ICTC: to create an infographic or a video to present the

subject to students, based on existing information about ICTC.

▯▯Collaborative creation of an initial test or rubric: groups chose between an initial test for students of the ICTC course to diagnose their level of digital competence, or a rubric to assess digital competence.

The two first activities were developed at a group class level and the rest at a small group level of four people.

## METHODOLOGY

The research question of this work was: How should initial online teacher training be designed and implemented?

In order to answer the research question, this research was approached from an interpretative paradigm through a qualitative case study approach (Baxter & Jack, 2008; Cohen, Manion, & Morrison, 2007; Creswell, 2009; Stake, 2010).

A case study is a method used for research a contemporary phenomenon "in depth and in its context in real life"(Yin, 2013, p. 46) .

The aim of this methodology is to provide a rich holistic description that illuminates one's understanding of the phenomena (Merriam, 1998).

Hitchcock and Hughes (1995) suggest that the case study approach is particularly valuable when the researcher has little control over events that is the case of the study presented in this paper giving the fact that researchers has an active role in the design and implementation of the online seminar.

Research also used digital ethnography techniques (Dicks, Soyinka, & Coffey, 2006), to collect, analyse, and interpret data. Data have been extracted from the observation of the online collaborative communication and creation spaces of the participants and their products. In addition, at the end of the training, the participants completed a qualitative online survey.

In order to answer the research question, we focused on the following units of analysis based on previous research (Ernest et al., 2012; Romeu et al., 2016):

▯▯Collaborative Interaction

▯▯Management of online teamwork

▯▯Collaborative creation

▯▯Teaching model for collaboration

## 2 RESULTS

### 2.1. Collaborative Interaction

During online discussion, interaction and participation was very high, with 174 messages

collected.

Thanks to the interaction and the different contributions there was a joint construction of knowledge, because of the evolution of the discourse and the own reflections.

Regarding the three last activities previously described, interaction between members of all was quite high. This is evident in the work spaces of each group, with an average of 120 messages per team.

### 2.2. Collaborative creation

Regarding collaborative creation in the classroom through the construction of a catalogue of tools, participation was very high, as reflected in the product, where different contributions of the participants are shaped. A process of joint creation of knowledge was carried out, with the enrichment that entails that the participants come from different disciplines, producing a very rich and varied catalogue, contemplating different competences of the subject.

Creating a collaborative product made them be aware of the importance of communicative and attitudinal skills, such as negotiation or initiative, to facilitate a consensus among members in an agile and effective way, especially in online environments.

### 2.3. Management of online teamwork

This has been progressively developed during the three small group activities, starting with the creation of group agreements and planning. This has made them aware of the importance of addressing any activity as a team.

This teamwork management evolved progressively during the different group activities, improving the organizing and planning skills of the participants.

### 2.4. Teaching model for collaboration

The role of the trainer of the seminar was key to motivate collaboration in the classroom. To do so, he developed a whole series of strategies based on activities.

During the collaborative creation, the teacher sent 5 messages, providing information and guidance, without having to intervene too much during its development. On the other hand, in collaborative activities in small group they needed more guidance, with a total of 12 messages to facilitate or guide their implementation as the activity progressed.

In these activities the trainer kept track of the evolution of each group within their group spaces, and not intervened in these spaces to give specific directions, and provided group feedback.

Thus, during the training process, two key elements for collaborative teaching were demonstrated. On the one hand they had to experience being students working collaboratively and, on the other, the role of the teacher in online training.

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4. **CONCLUSIONS**

From the research presented, it is necessary to raise some key aspects in relation online collaboration in pre-service teachers' training: It is important to maintain a **constant interaction** to carry out the collaboration

- It is necessary to make explicit the **process of management and planning** that requires teamwork.

- Pre-service teachers need to experience the role of the online student, to identify situations and needs that will be useful to them to propose future teaching strategies and to predict what may be the main difficulties or problems of students.

- The **online teacher has to become a model for the participants** when they are put into practice. This teacher plays a proactive and dynamic role and varies the degree of presence depending on the moment of formation and type of activity (Anderson, Rourke, Garrison, & Archer, 2001; Nagel & Kotzé, 2010).

- It is necessary to be aware that for collaborative learning to be effective, **progressive collaborative activities** need to be considered based on the degree and the complexity of collaboration that increases as training progresses (Figure 2).


Figure 2: degrees of collaboration depending on the complexity of the activity

- Taking in to account the attitudes in online collaboration, it must have been explicit during the whole process.
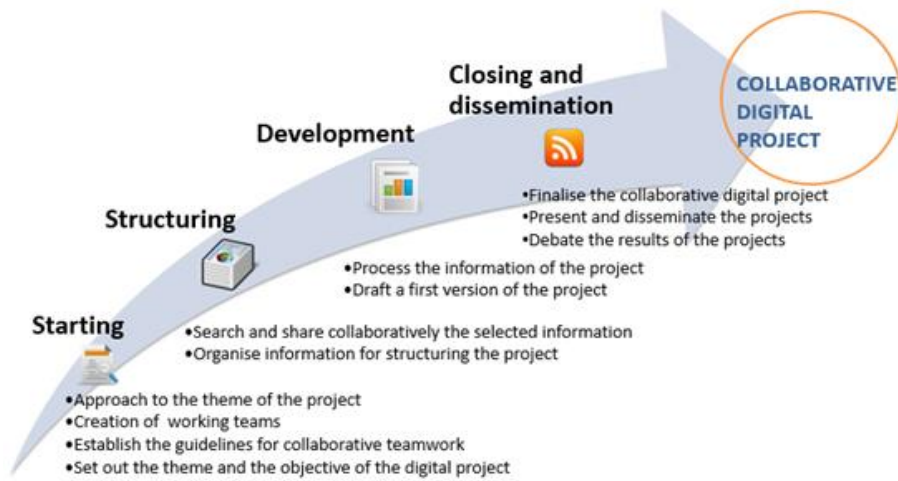
Continuous teacher training is a fundamental element, especially in online teaching. Results point that the training presented has **contributed to the professional development of the participants**.

We propose, as future research, to apply this training and this research design to other subjects of the UOC to increase its degree of generalization.
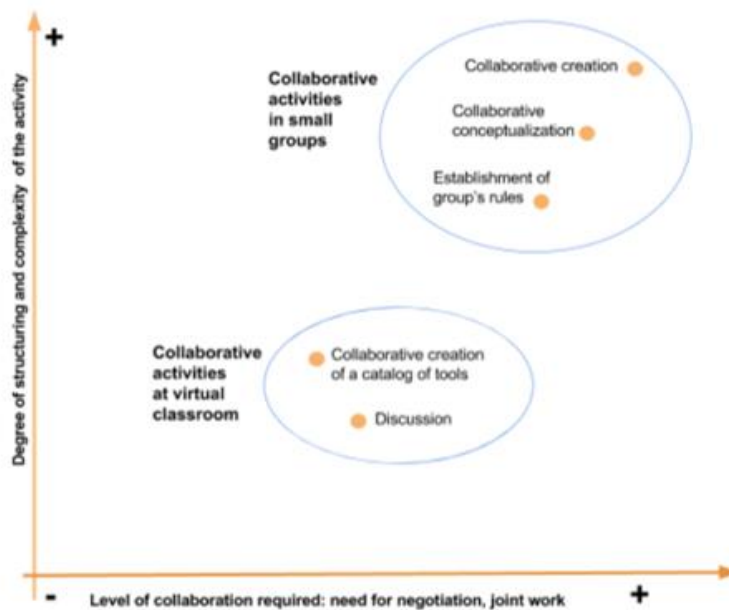
## 5.1. FIGURA O IMATGE 1



## 5.2. FIGURA O IMATGE 2

## 6. REFERÈNCIES BIBLIOGRÀFIQUES (segons normativa APA)

Anderson, T., Rourke, L., Garrison, D. R., & Archer, W. (2001). Assessing Teaching presence in a Computer Conference Environment. *Journal of Asynchronous Learning Networks*, *5*(2), 1–17.

Baxter, P., & Jack, S. (2008). The Qualitative Report Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers. *The Qualitative Report*, *13*(2), 12–1. Retrieved from http://nsuworks.nova.edu/tqr

Cohen, L., Manion, L., & Morrison, K. (2007). *Research Methods in Education, Sixth Edition*. New York: Taylor & Francis. Retrieved from http://dspace.utamu.ac.ug:8080/xmlui/bitstream/handle/123456789/182/Research-Methods-in-Education-sixth-edition.pdf?sequence=1&isAllowed=y

Creswell, J. W. (2009). Mapping the field of mixed methods research. *Journal of Mixed Methods Research*, *3*, 95–108.

Dicks, B., Soyinka, B., & Coffey, A. (2006). Multimodal ethnography. *Qualitative Research*. https://doi.org/10.1177/1468794106058876

Ernest, P., Guitert Catasús, M., Hampel, R., Heiser, S., Hopkins, J., Murphy, L., & Stickler, U. (2012). Online teacher development: Collaborating in a virtual learning environment. *Computer Assisted Language Learning*, 1–23. https://doi.org/10.1080/09588221.2012.667814

Guitert, M., Romeu, T., & Romero. (2015). 360$^{o}$ E-assessment: an online collaborative process in the scenario of the Open University of Catalonia (UOC). In A. Moreira, A. Szücs, & I. Mázár (Eds.), *EDEN 2015 ANNUAL Conference book of abstracts* (pp. 32–33). Barcelona: European Distance and E-Learning Network.

Merriam, S. B. (1998). *Qualitative research and case study applications in education*. San Francisco: Jossey-Bass.

Nagel, L., & Kotzé, T. G. (2010). Supersizing e-learning: What a CoI survey reveals about teaching presence in a large online class. *Internet and Higher Education*, *13*(1–2), 45–51. https://doi.org/10.1016/j.iheduc.2009.12.001

Pérez-Mateo, M., Romero, M., & Romeu, T. (2014). Collaborative Construction of a Project as a Methodology to Acquire Digital Competences. *Comunicar*, *23*(42 (On preprint)), 15–23.

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Romeu, T., Guitert, M., & Sangrà, A. (2016). Teacher collaboration network in Higher Education: reflective visions from praxis. *Innovations in Education and Teaching International*, *53*(6), 592–604. https://doi.org/10.1080/14703297.2015.1025807

Stake, R. E. (2010). *Investigación con estudio de casos*. Madrid: Morata.

Yin, R. K. (2013). *Case study research: Design and methods*. London: SAGE Publications.