360º E-ASSESSMENT: AN ONLINE COLLABORATIVE PROCESS IN THE SCENARIO OF THE OPEN UNIVERSITY OF CATALONIA (UOC)

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Introduction

The incorporation of Information and Communication Technologies to learning processes promotes a reconsideration of assessment systems, fostering a change of the teacher's role as a communicator of the student's mark to that of an open system in which teachers and students get involved in the learning process and develop online assessment skills.

Based on the theoretical principles of assessment in virtual environments, this paper approaches e-assessment (Rodríguez Gómez, 2012), defined as any assessment process in which ICT is used in order to introduce and carry out assessment activities and tasks, register the answers and evaluate them from different perspectives: learners, teachers, institutions (JISC, 2007). The variety of applications of e-assessment and its innovation and efficiency reaffirm its potential as a booster of the learning process and learner outcomes (Open University, 2006)

The experience presented in this paper focuses on the subject "ICT competencies" (ICTC) which is part of all the UOC university programs. This subject helps students to develop key methodologies and skills to work in digital environments from a rational and critical perspective, and its objective is that students begin in a gradual and integrated way with the acquisition of transversal competencies at the UOC; "Use and application of ICT in an academic and professional environment" and "Online team work" (Guitert et al., 2008). The methodological approach is project-based learning (Railsback, 2002), concretely, the developing of a collaborative digital project is contemplated. To undertake it, students form groups of four, and have their own group space which integrates a variety of tools.
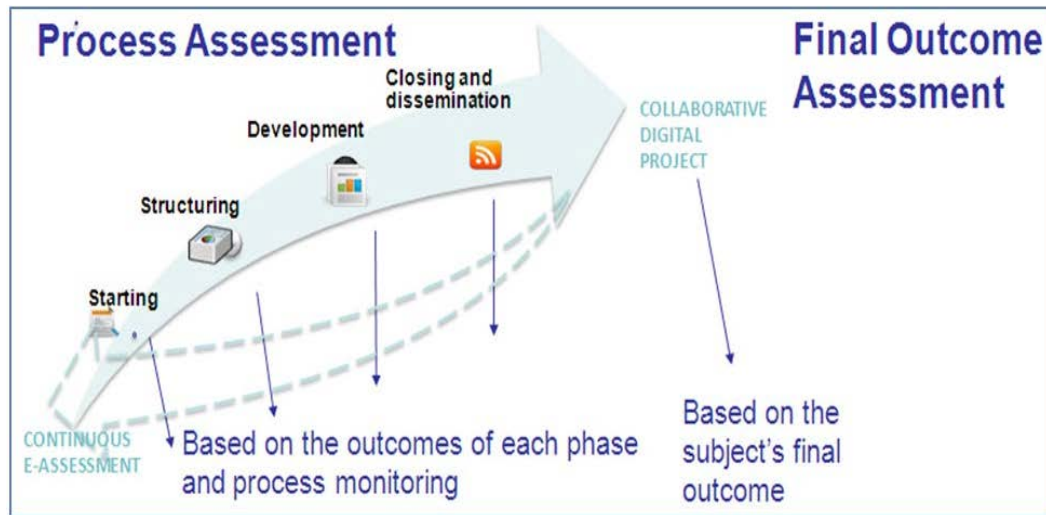
Figure 1. Phases of the Collaborative Digital Project and e-assessment processes

As shown in Figure 1, the development of the project is planned in 4 phases: (Starting, Structuring, Development, and Concluding), and a set of interrelated activities is put forward for each one.

The starting phase provides an environment to create working teams and perform the initial searches. This assists the students in setting out the theme of the project. The second phase involves making a deeper search for information to structure the project. Subsequently, the project is developed: the processing and the development of the gathered information are carried out. Through this step, the first version of the project is achieved. Finally, the closing and dissemination of the project are done, as well as the sharing and discussing of the final version of the project. In order to assess the acquisition of the competencies during the subject's development, some assessment criteria were defined and shown in the learning activities.

In fact, student learning is assessed from two dimensions provided by the continuous assessment paradigm: on the one hand, based on the analysis of the process followed during the development of the activities and, on the other hand, based on the final outcome (Figure 1).

The fact of developing a digital project collaboratively facilitates the implication of the students not only in their individual learning process but also in the collective learning process. This is further corroborated when the definition of collaborative work is defined as a "shared, coordinated and interdependent process, in which students work together in order to achieve a common goal in a virtual environment and based on a process of activity, interaction and reciprocity between students, thus facilitating the collaborative construction of meanings and individual progress towards reaching higher levels of development" (Guitert & Pérez-Mateo, 2013, p.24).

This scenario boosts the development of a new teacher's role as an advisor and facilitator of the learning process (Pérez-Mateo et al., 2012), providing a more active role of the students through reflecting on their own learning process and peer assessment.

Considering this perspective, the concept of 360º e-assessment can be formulated from the bases of the 360º Communication, which is "considered as a state of constant dialogue in which organizations take on a Communicator role with their clients (internal and external)", so it becomes a comprehensive strategy that connects companies constantly with their public, online and offline (Lopez & Martinez, 2012) Based on the 360º communication theory, 360º e-assessment can be defined as following (Curcoll, 2014):
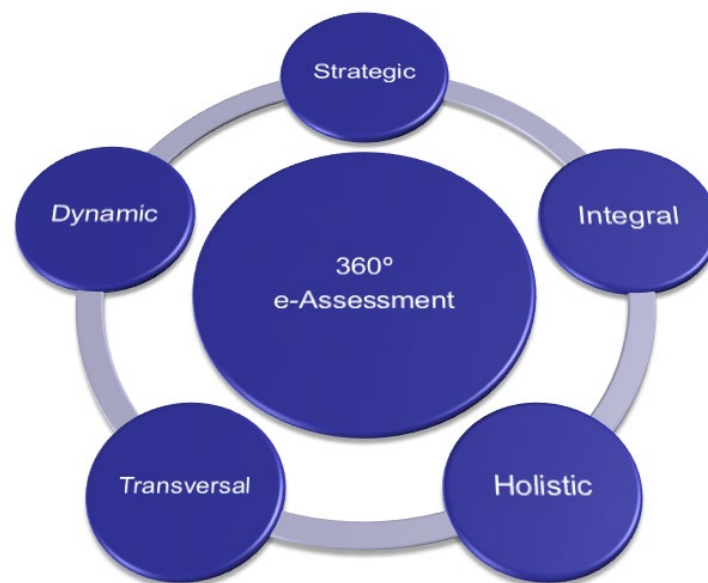

Figure 2. 360º e-assessment definition (adapted from Curcoll, 2014)

- Strategic: considering the totality of the learning experience and competency acquisition,

- Comprehensive: seeing the learning space as a live, changing and dynamic system that affects all of the agents of the teaching and learning process,

- Holistic: takes into account all the internal agents – understood as work groups- and external – the whole classroom- in order to understand collaborative learning as more than an addition of several parts,

- Transversal: it affects all of the learning actions and activities and the interactions that take place during the learning process,

- Coherent: it coordinates and gives sense to the whole teaching-learning process,

- And dynamic: it conceives assessment as a constant interaction process among students and between students and teachers that can be redefined depending on the inputs received.

Following this definition, the aim of 360º e-assessment is to reinforce and motivate the students' learning process in order to help them to acquire the competencies of the ICT competency course.

Typologies of e-assessment in the 360º paradigm

Having defined the changes of the roles of the teacher and student during the process of learning assessment (teacher-students-group of students) and the new scenarios of collaborative learning, different types of assessment can be considered in the 360º paradigm:

Table 1: Typologies of the 360º e-assessment paradigm

	Process assessment	**Final outcome assessment**
Teacher	Assessment of the process of the groups followed during the learning activities. Student's self-assessment is taken into account in the assessment process carried out by the teacher. Individual and group feed-back.	Result of the assessment based on the analysis of the outcome of each phase of the digital project using the assessment criteria shown in the learning activities.
Student	Self-assessment Peer-assessment Reflection about the teamwork at the end of each phase.	Dialectic assessment based on the analysis of the projects of other teamwork.

From the teacher's perspective, a process and final outcome assessment are carried out. The teacher monitors and assesses the work developed in each of the groups during the process in order to improve their dynamics. During this assessment, the active role of the students is quite relevant, since the self-assessment they develop in each phase of the digital project is one of the elements that determine teacher's post-assessment of their work.

The process assessment is finished with both individual and group feed-back: individual feedback is based on the observation of the participation of each student within the group and the group one is based on the monitoring of the group's dynamics and processes.

In the assessment of the final outcomes, the teacher assesses the final product of each phase following the predetermined criteria shown in the learning activities. This assessment is developed using a set of indicators that are a concretion of the afore-mentioned assessment criteria.

From the students' perspective, both the assessment of the process and the final outcome are carried out as well. The process assessment, is produced in a **self-assessment** process in which both the student and peer participation in a work group are analysed, developing a dynamic **peer-assessment** In addition, a process of reflection about the teamwork is carried out at the end of each phase of the project.

The assessment of the results focuses on a **dialectic assessment** based on the analysis of the projects developed by other groups at the final stage of the course. During this phase, a defence process takes place during which every student participates individually as an evaluator and as part of a group participating in the elaboration of the responses that their specific group receives from other individual evaluators.

The active participation in the assessment process provides students with an awareness of their grade of competency acquisition, thereby allowing them to be an assessment agent of their own learning process from different perspectives or dimensions. In consequence, e-assessment becomes, within the ICTC's subject framework, a very valuable resource to foster students' implication in their own learning, from both the individual and collective perspective. In addition, the consideration of this dual perspective provides a higher level of personalization of student assessment: each student of the same team can obtain different marks according to the quality of their individual work in the framework of the team. In this situation, the e-assessment process can become a network assessment process (Figure 3):

Figure 3. Representation of the network assessment process
Retrieved from http://cambio-de-vidaa.blogspot.com.es

Conclusions

The continuous development of assessment activities from different perspectives becomes a validation process in itself. The carrying out of collaborative activities in digital environments "facilitates the gathering of evidence of the interactions and the process of a shared construction of knowledge" (Guitert & Pérez-Mateo, 2013). In that sense, the realization of an online assessment process allows teachers to triangulate assessment from the evidence registered in the common spaces of the online environment, fostering the individual assessment of both the process and the final outcomes, based on the participation of all the afore-mentioned agents.

The 360º e-assessment paradigm boosts students' active role during their learning process and provides the following advantages:

- Teacher feedback helps students to understand and promote their learning process,
- 360º e-assessment helps students to be more aware of their acquisition of competencies through self-assessment,
- Peer-assessment processes promote the objective assessment among group peers,
- It allows students to improve their individual activity in the framework of the group,
- It helps students to improve their products during the learning process. It reinforces group dynamics and the relationship with peers through both reflection and discussion processes,
- The dialectic assessment developed at the end of the course has two clear advantages for the students:
  – The assessment of other projects promotes the critical analysis of students' own projects,
  – The assessment received from peers of students' projects helps them to detect their own project's weaknesses.

In conclusion, what provides the 360º' vision to e-assessment is the fact that it is carried out collaboratively and each student has an important role in both self and peer-assessment processes. In order that this collaboration becomes authentic, it is necessary that all of the participants show some attitudes like those of constant participation, periodicity in communication, commitment and transparency. In addition, it is a great resource to improve online teaching and learning processes.
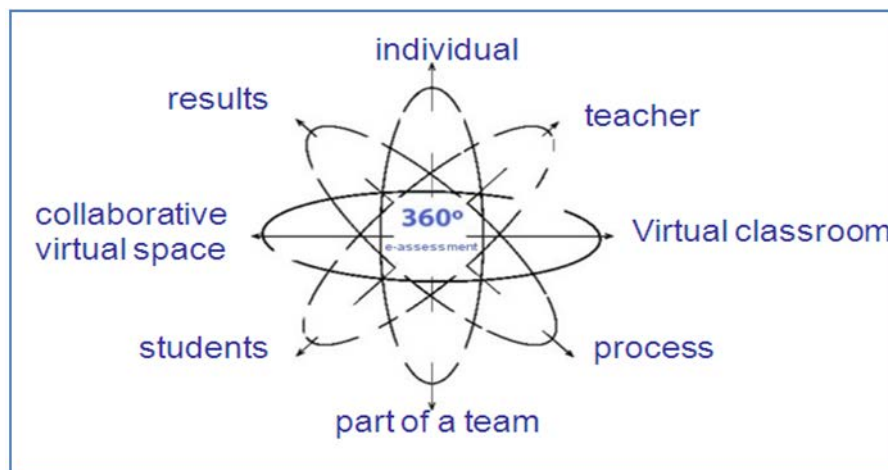

Figure 4. 360º Vision of e-assessment adapted from Curcoll (2014)

The 360º e-assessment proposal presented can be transferable globally or partially to other contexts depending on the grade of implication of the different actors in the learning process.

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