THE PRACTICAL APPLICATION OF E-PORTFOLIO AT THE OPEN UNIVERSITY OF CATALONIA: ASSESSMENT OF COMPETENCE BASED LEARNING

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0. Abstract

The paper presents the results of the piloting or pilot test in a virtual classroom[1]. This e-portfolio was carried out in the 2005-2006 academic year, with students of the Doctorate in Information Society, at the Open University of Catalonia. The electronic portfolio is a strategy for competence based assessment. This experience shows the types of e-portfolios, where students show their work without interactions, and apply the competence-based learning theories in an interactive portfolio system. The real process of learning is developed in the competency based system, the portfolio not only is a basic bio document, has become a real space for learning with competence model. The paper brings out new ideas and possibilities: the competence-based learning promotes closer relationships between universities and companies and redesigns the pedagogic act.

Keywords: Competence based learning, authentic evaluation, assessment of competence, e-portfolio, management by competence, standards, free software.

1. Introduction

In today's society, there is a demand for new professional competence, largely based on the service economy. This places demands on the institutions responsible for higher education, to promote the consolidation of combined theoretical and practical competences. In this context, if we aim to promote the development and strengthening of personal and professional competence, we must create a closer relationship between the world of education and the professional sphere. Several authors have already raised the question of linking concepts related to competence, for example Edwards (1993), who poses the question of "life-long learning" to demonstrate the need for a more profound approach to the workplace, and for the strengthening of competence throughout a lifetime. In the field of education, this effort is being made. Evidence of this can be found in the notable increase in the experimental use of tools like e-portfolio in recent years.

Nowadays we find many examples of its practical application, where the student exhibits his or her work using an electronic portfolio as a folder that contains diverse examples of his or her academic performance. Technological tools such as Elgg[2] or the innovative Pebble Pad[3], or even

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[2] Elgg is open source software for Internet users. It allows the application of the electronic portfolio to a variety of subjects depending on the client's needs: http://www.elgg.net/

[3] Pebble Pad is a company that designs e-Portfolios in order to support learning at different levels. The company offers its services to educational institutions: http://www.pebblelearning.co.uk/

collaborative movements such as that encouraged by the OSPI community (The Open Source Portfolio Initiative)[4], support this electronic portfolio model, which is not so much based in the interactivity itself, as on a sample of the content, selected by the student.

In the case presented here, the Open University of Catalonia adopted the electronic portfolio as a strategy for competence based assessment, within the framework of virtual learning. The ultimate aim is to evaluate the progress experienced by the student during his or her learning process. The teacher-student interaction is produced through the tool we have designed, which is inserted into the course's virtual classroom. This helps to maximize the personalisation and of the learning process and make it more meaningful by valuing evidence of process and product.

Technologically this is an experience of the e-portfolio, where both teacher-student and student-tool interaction are important, if the proposed aims are to be met. This virtual interaction obliges us to make a constant effort to improve and enrich the learning process. Specifically, the current development of the tool is concentrating on broadening the programme offered by Elgg. This a new approximation focuses on two aspects: on the one hand, on the communication-learning system between the teacher and the student, and on the other hand, on the systems of assessment and learning feedback from teacher to student. We give a concise revision of the concepts and processes that underlie our paper on the experience of using e-portfolio as a strategy for the assessment of learning in a virtual environment.

2. Learning through competence

2.1 The idea of competence and ESHE

The European Space for Higher Education came out of the framework of the Declaration of Bologna (1999). It took the form of an open, flexible EC body that enables education to respond to the training needs emerging from the new European reality. In the field of teaching, a demand is being made of the universities that they play a fundamental role in the training of competent professionals, and facilitate experiences that enable life-long learning. In accordance with this process, higher education institutions must establish close and permanent links with the labour market and the business world. Similarly, university degrees must respond to the demand for increasingly competent professionals in the European market. The ultimate aim is to adapt the design of the trainings on offer to the new professional profiles and the competences they require.

The conceptual references that underlie the term 'competence' are quite broad. Below, we present one of many possible definitions, proposed by the European Commission for the Tuning Project. This definition serves as an illuminating reference point for the Spanish higher education environment. It illustrates with clarity what we should consider when we talk about competence:

Competence represents a dynamic combination of attributes, in terms of knowledge, skills, attitude and responsibilities, which describe the learning results of an educational programme, or what the students are capable of demonstrating at the end of an educational process[5]

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[4] The OSPI is open source software that allows the implementation of electronic portfolios for particular users and companies in order to help them promote their personal-professional management.

[5] Tuning Educational Structures in Europe
http://tuning.unideusto.org/tuningeu/

This perspective also takes in Le Bortef contribution (1994), which defines competence as *knowing and entering into action*. This implies knowing how to integrate, mobilize and to transfer a collection of resources (knowledge, attitudes, reasoning, etc.) in a given context, in order to carry out a task or deal the different problems faced (in Roegiers, 2001:66). Competence would therefore mean the capacity to respond in an efficient, autonomous, flexible manner and with a high degree of success.

The learning based of competence involves a variety of different dimensions; it considers a high and complex level of knowledge, linking it in practice with the overall capacities displayed by a person in a specific environment. We will advance a little more into what concerns us here, by delimiting the relationship between competence and learning, and subsequently linking in the evaluation element that underlines them both.

2.2 Competence-based learning

The processes of teaching and learning from the point of view of competence are guided by a new paradigm. There is a fundamental change in which the focus shifts from teaching to learning. As a result, competence acquires much greater power over the aims of the process. In this sense, the axis of learning becomes the activities the students carry out as a means to acquiring the different competences included in a specific training programme. The increased involvement of the student in the diverse processes inherent in carrying these activities out is important here. Training or learning a competence requires a consideration of the diverse processes that must be developed for its consolidation. Among other things, there should be a close link between knowledge and action. The putting of competence into practice requires basic decisions to be taken, in terms of the focus of the content, the methodological line to be adopted and the strategies for assessment of the learning that will be prioritised. One of these decisions is linked to the practice of assessment, as we will see in the following section.

2.3 The assessment of competence-based learning using e-portfolio

The portfolio can be understood as an educational resource, the principal aim of which is to provide evidence for, and evaluate the progress made by a student during his or her learning process. It is essentially made up of a collection of evidence of learning that the student selects analyses and presents with the aim of displaying or demonstrating the achievement levels reached in terms of process and product (Barret 2005).

In experiences of assessment learning based on the e-portfolio, the teacher suggests a process of constructive reflection about the student's learning. This requires innovation in educational practice, moving the centre from the teacher to the student and demanding that the latter takes a more active role. As various authors have commented, and we cite Ash (2000), this new role for the student is an essential component of their success in learning, as it without doubt strengthens the development of new attitudes and practices, empowers students to successfully meet their academic challenges.

3. e-portfolio as a strategy for competence evaluation: the case of the UOC

A pilot test was designed, and implemented with a group of doctoral students at the Open University of Catalonia during the 2005-2006 academic years. Twenty-seven students from the Virtual Learning Contexts programme took part in the experience.

3.1 The tool

The electronic portfolio was designed to be inserted within a virtual classroom, using a tab marked "Assessment". This tab leads to the different sections of the tool, with different active configurations depending on the role of the user: teacher or student. It has been configured in three sections:

- Presentation: This enables the students to present themselves to their peers.

- Competence: This incorporates the five research competences worked on with the students in specific forums; evidence models and the rubric applied in order to evaluate the learning process. It is worth highlighting the richness of the experience of the forums here. In each of the forums, there were periods of reflexive discussion about the aspects under consideration, taking into account the competence being worked on at that point. At the end of each forum, there was a phase of global agreement as to the axes that allowed advances to be made in the following forums.

- Monitoring: Set up for the professors who developed the pilot test, it shows the evidence published by the students in their different versions, enabling assessment of the progress made in process and the product, based on the evidence published in the portfolio.

3.2 Phases of the Pilot Test

Initial Phase

An initial familiarisation period where the students spent three weeks learning to use the tool, through a virtual ePortfolio workshop and a competence based learning evaluation.

Development Phase

This lasted approximately three months, in which time personalised and group monitoring took place to help the students with the production of their evidence of learning. Formative evaluations were also included here.

Final Phase

This was done with the aim of providing feedback on the final versions of the evidence produced by the students. It lasted for two weeks and took place alongside self-evaluation of the process, and an informal evaluation of the experience and of the ePortfolio tool by the students.

3.3 Evidence of learning-Feedback

When the student undertakes a competence-based learning activity through the e-portfolio, they must have an adequate understanding of what they will be developing, in terms of the importance of the process and the product. The formal aspect of handing in their evidence should be very clear. All this means that, among other things, it is important to consider:

- Clearly defining the competence being evaluated.

- Evaluating the possible forms of evidence that would constitute valid proof of learning achievements.

- A prior knowledge of the criteria and the rubric that will enable the products of assessment.

- Receiving opportune and pertinent feedback about the efforts linked to their evidence of the competence being worked on.

- The students should be clear that each competence has its phases and constituent elements, which must be considered in order for the work to be a success.

We have given a succinct outline of how we developed this experience of competence-based learning assessment, using the electronic portfolio. Now we will try to reflect on some future lines of research, which will undoubtedly enrich these efforts and illuminate others when it comes to the development and application of similar projects.

4. Future lines of work

Learning based on the e-portfolio presents new expectations and challenges at many different levels:

New roles for student and teacher: For the student this is an opportunity to enjoy made to measure learning, where previous work and experiences can be naturally taken into account. The proposed system creates a space for employment experience to be validated and valued in an educational environment. For the teacher it is an opportunity to specify the formational objectives and add to the quality of the learning.

The challenge of redesigning the pedagogic act, based on competence: by working with competence and evidence, the teacher is obliged to specify not only his or her teaching plan, but also the details of his or her assessment. Personalisation means the assessment of evidence, and this brings with it an effort for the teacher.

The inclusion of new strategies and demands of assessment when considering learning achievements based on competence: In this field the tools for the automation of correction and copy control systems are a basic requirement for achieving the successful implantation of learning based on the e-portfolio.

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