

## RECOGNITION, VALIDATION AND CERTIFICATION OF COMPETENCES USING EPORTFOLIO. CONTRIBUTIONS TO CHANGING THE EVALUATION PARADIGM AND TO THE DEVELOPMENT OF COMPUTER SCIENCE LITERACY.

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**Abstract:** The Padre Benjamim Salgado's Secondary School has an open source learning platform - Elgg ePortfolio - available since November 2006. The usage of this platform, by both teachers and students, has been stimulated through several divulgation and training sessions, the latter in the context of a continuous training program for teachers. In the scope of a Ph.D. degree in progress, we are using the platform in the Education and Training of Adults (ETA) initiative. We intend to analyze the extent to which the ePortfolio usage contributes to the construction of the learning reflexive portfolio in ETA courses.

### 1. Research Presentation

E-portfolios have been recognised as a strong tool for the development of students' self-evaluation, because it provides an environment where students can collect their work in a digital archive; select specific pieces of work; reflect on the learning demonstrated in the portfolio, in either text or multimedia form; set goals for future learning to improve; and celebrate achievement through sharing this work with an audience, whether real or virtual (Barrett, 2005).

When used in formative, classroom-based assessment, teachers (and peers) can review the portfolio document, and provide formative feedback to students on where they could improve, as well as to help teachers in the preparation and organization of the learning activities (Barrett, 2006). It promotes the pedagogical relation and student knowledge, supports the learning, helps students' assessment and students' results progress.

In this context, this research aims to understand and describe the extent to which the ePortfolios (being both technological and strategic tools in the teaching-learning - as well as evaluation - process) usage contributes to the construction of reflexive portfolios in the certification of competences of adults at the New Opportunities Centers ("Centros Novas Oportunidades").

Our study is being developed in Padre Benjamim Salgado's Secondary School (PBSSS), considering both trainees and trainers at the local New Opportunities Center.

Ongoing work includes conducting a preliminary survey of the portfolios (in paper format) constructed in the recognition and validation of competences of the students enrolled in ETA courses (secondary education level).

Afterwards, we will encourage the Elgg ePortfolio platform usage within a group of trainers, promoting the definition of strategies to be adopted with trainees in the transition to that platform.

The contribution (advantages/disadvantages) of ePortfolios usage will be analysed under the trainees' point of view, namely regarding the significance of the learning and evaluation processes, as well as under the point of view of trainers.

Our study will be descriptive and will seek possible generalizations.

## **2. Methodological Framework**

In the context of the M.Sc. thesis titled “The ePortfolio in secondary education: a descriptive study of the Elgg platform usage”, we installed and promoted a digital portfolio platform (Elgg) among PBSSS’s students and teachers, analysing its (non mandatory) usage during 4 months (from November 2006 until February 2007).

In this study, some constraints were observed: there was limited Internet access and the participants’ technological skills were poor. We see these constraints as temporary, given the fast paced adoption of new technologies both in school and social contexts.

This research prompted the reflection, usage and construction of ePortfolios at PBSSS.

After the completion of this research, a workshop titled "Elgg Platform - reflecting on the digital portfolio role in Mathematics" was held under a continuous training program for Mathematics teachers, allowing them to use the digital portfolio in their own subjects as well as in multidisciplinary projects.

Based on this research, we are now studying how to better use the ePortfolio concept, while capitalizing our prior experience, in the ETA courses currently being offered at PBSSS.

## **3. Problem and Objectives**

This research aims to understand and describe the extent to which the ePortfolio usage contributes to the construction of reflexive portfolios in the certification of competences of adults in ETA courses.

Simultaneously, it aims to develop computer science literacy of both trainees and trainers, promoting a technology-conscious culture (Herman, & Winters, 1994)...

The ultimate purpose is to find methodologies and suitable practices that might be used in similar situations. In this context, the following question arises: At what extent does the ePortfolio usage contribute to the construction of reflexive portfolios in ETA courses and also to the improvement of the recognition, validation and certification (RVC) processes?

We thus state the following objectives.

1) Conduct a preliminary survey of the work developed by trainers and RVC professionals with their students in the recognition and validation of competences process, while constructing the learning reflexive portfolio;

2) Increase the Elgg ePortfolios platform usage within a group of trainers at the PBSSS’s New Opportunities Center, promoting the definition of strategies to be adopted with trainees in the transition to that platform, in the process of recognition, validation and certification of competences;

3) Increase the Elgg ePortfolios platform usage within a group of trainees, according to the strategy defined with the trainers, and construct a learning reflexive portfolio;

4) Analyse and compare the preliminary survey results obtained during the Elgg ePortfolios platform usage;

5) Analyze the contribution (advantages/disadvantages) of ePortfolios usage under the trainees’ point of view, as well as under the point of view of trainers;

6) Contribute to changing the evaluation paradigm in both formal and non formal training contexts.

#### 4. Stages, tools and techniques of data collection

We plan to conduct this research in five stages.

In the first stage we will attempt to address the first objective. Thus, through interviews with both trainees and trainers, we will collect information on their experience constructing the learning reflexive portfolio. We will also gather the portfolios in paper format made by trainees. Afterwards, we will process, analyse and interpret the collected information.

In this stage we will use a sample drawn from a set of 240 trainees (who are currently enrolled in the secondary level ETA courses and distributed over 7+6 classes) and 40 trainers. To carry out the interviews, 6 trainers were chosen, 2 from each area of key secondary level competences: Society, Technology and Science; Citizenship; and Communication, Language and Culture. The trainers selection was based on their willingness to participate in this project, who played a rather relevant role due to the fact that our objectives can only be achieved through them. For each one of these trainer, 2 trainees were selected according to their (high/low) proficiency. Thus, a total of 18 interviews were conducted, involving 12 trainees and 6 trainers.

In the second stage, we will encourage the usage of the Elgg ePortfolios platform within a group of trainers at PBSSS's New Opportunities Center. To achieve this, we will organize training sessions for trainers in order to: present and/or summarize the functionalities of the Elgg platform (formative action); and jointly define the strategies to be adopted with the trainees in the transition to ePortfolio, in the process of preparing the learning reflexive portfolio (formative action).

During this stage, we will take field notes, which will be analysed afterwards. The sample consists of a group of trainers with PBSSS who are enrolled in a continuous training program for teachers.

The third stage comprises the encouragement of the Elgg platform usage within a group of trainees, as previously designed with the trainers, in constructing the learning reflexive portfolio. In this way, we will organize training sessions using the Elgg platform accompanying both trainers and trainees in their activities; we will analyse the resulting ePortfolios through analysis grids; moreover, we will apply a questionnaire to trainers and trainees regarding the process (structured questionnaire and selected interviews) and will also analyse and interpret the collected information. The sample will consist of the second stage group of trainers and a class of trainees per trainer. Similarly to the first stage, in this stage the selection of trainees is determined by the selection of trainers involved in the project.

The fourth stage includes the analysis and comparison, by contrasting practices, of the preliminary survey results obtained during the Elgg ePortfolios platform usage.

In the last stage, we will analyze the contribution (advantages/disadvantages) of ePortfolios usage under either the trainees' or the trainers' point of view. In order to achieve this, we plan to: construct a model for a formative evaluation paradigm (Alves, 2004); assess the functionalities of ePortfolios for an integrated evaluation; organize a final session with the involved interveners and mediated by the researcher, where one may comment on the added value and/or constraints of the whole process; apply a questionnaire to trainees and trainers in order to assess the impact of this project on the development of computer science literacy and also on raising a technology-conscious culture.

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