

## **E-PORTOFOLIO PROCESS IN VOCATIONAL EDUCATION**

**Emilia Saulescu**

*Romanian Society for Lifelong Learning*

**Abstract:** A portfolio can be defined as a collection of student's work chosen to exemplify and document a student's learning progress over time. The portfolio is a record, which is entered by learners, of the learners' process of learning (what the student has learned and how he/she has gone about learning; how he/she thinks, questions, analyses, synthesis, products, creations; and how he/she interacts intellectually, emotionally and socially with others and other resources).

*Copyright SREP*

**Keywords:** Software Engineering. Models, Methods and Tools.

### **1. AIM OF THE PROJECT**

The E-Portfolio project is co-financed by the European Union within the Leonardo da Vinci programme (ref. no. TR/06/F/PP/178110). The main aim of the Project is to develop education quality of vocational and technical education in European Context in regard of ensuring the e-portfolio process in the vocational education. Target groups of ePVET (e-Portfolio Process in Vocational Education) project consist of trainers, teachers, tutors and learners in vocational education. Potential users and direct beneficiaries of the project results and products are trainers, teachers, tutors and learners in vocational education. In addition to, project products and results will be used by planners and program-developers for design of innovative training programs.

Objectives of the Project are:

1. To report present applications related to web-based training, portfolio and e-portfolio in vocational education in Europe.
2. To construct an e-portfolio framework that would be used by trainers for design e-portfolio processes in different fields of vocational education.
3. To develop web-based learning materials to teach learning and assessment approach of e-portfolio and its usage in vocational education.

4. To design sample e-portfolio processes for different professions in vocational education and to apply them on target groups.
5. To report results related to application of e-portfolio in vocational education
6. To support life-long learning of trainers, teachers, tutors, planners and learners in vocational education
7. To provide more effective use of computer and web based technologies in vocational education.

#### *1.1 E-portfolios.*

Principles of Electronic Portfolios:

1. Should bring significant advantages over paper-based alternatives
2. Should be considered in the context of wider (human) processes
3. Clarity of purpose(s)
4. One size does not fit all
5. Should be learner-centric
6. Should be an integral part of the learning experience
7. Should support life-long learning
8. Research / evaluation is essential

Summative and Formative Purposes:

- 1 Portfolios are often used to evidence the

achievement of learning outcomes for summative assessment.

2 There may be potential problems if the portfolio serves both formative and summative processes.

3 Reflection is less likely to be open and honest if the learner knows that the work will be assessed (loss of authenticity).

4 The production of a portfolio can itself be a formative learning process ie. it is as much a 'journey' as an end-point for assessment.

5 The use of electronic portfolios may potentially reduce the tension between formative and summative processes by supporting both assessed and private / non-assessed content.

6 Students have the choice to select which content is private and which is made available to assessors, appraisers, tutors, peers, and others involved in their education.

#### *Advantages and weaknesses of e-portfolios.*

An electronic portfolio offers several advantages:

1. The ePortfolio can make full use of the fact that many learning and support materials are now created, presented and distributed in electronic form.

2. As it is web-based the ePortfolio can be accessed from any networked computer, so the user has no need to carry anything around.

3. By sharing the portfolio on a named basis, the student can allow tutors and assessors to review the students' learning without needing to photocopy documents - thus saving time and ensuring confidentiality.

#### Potential Weaknesses of ePortfolios:

- Limited access to computers / Internet
- Varied IT experience & Technophobia
- Reliability of IT systems
- Possible duplication / overlap with paper systems
- Research / Evaluation is essential
- Optimisation will take a number of years

#### Potential 'value added' features of ePortfolios:

- Highly customisable
- Multiple structures / views
- Sharable - facilitating interaction with supervisors, peers, and others
- Easier cross-referencing
- Searchable
- Integration with VLEs
- Transferable data to support life-long learning
- Reduced / enhanced admin
- Downloading records in a variety of formats
- Backup and reduced physical storage requirements.

#### *1.2 E-learning tools for learners and teachers.*

##### ➤ VMAP (Visual Mapping of Portfolios)

The e-portfolio can be shared, published and disseminated through the use of a visual mapping interface.

➤ Petal (Personal e-Portfolios for Teaching and Learning)

Petal produced a general e-portfolio tool for lifelong learning based on the Open Source Portfolio Initiative and the Certified Member of ALT scheme.

➤ ePET (e-Portfolio Extensions Toolkit)

The project developed a RESTian interface to a formative/reflective e-portfolio system developed under the FDTL4 Programme. This was achieved by adapting the current e-Portfolio Generic Toolset to be used within a Web Services framework.

➤ EPICS (North-east regional collaboration around e-portfolio progression pathways with illustrative case studies)

This project is exploring PDP practice in the North-East, implementing e-portfolios in a number of institutional contexts, and trialling data transfer between e-portfolio systems. It is also investigating the legal and governance issues of a regional shared e-portfolio infrastructure.

➤ ePISTLE (e-Portfolios Informing and Supporting Teaching Learning and Evaluation)

ePISTLE has implemented the use of e-portfolios (PebblePad and ePet) in two schools and three FE colleges in order to gain insight into: how to best integrate an e-portfolio into the curriculum; the issues with the use of e-portfolios for transition and progression; issues of storage and access; and the factors which affect use and non-use of e-portfolios.

➤ MANSLE (Manchester Self-directed Learning and e-Portfolios)

This project is implementing an e-portfolio system for use by three health foundation courses across the North-west. The system implements services offered by existing portfolio projects (Horus and ePet). The project has evaluated the issues around interoperability and integration of existing web services for repurposing in ways that are predicted by the e-Framework.

➤ ISLE (Individualised Support for Learning through e-Portfolios)

The ISLE project aims to develop and embed a shared concept of personal development planning (PDP) and e-portfolios to enable its FE and HE partners to meet the diverse and individual needs of learners in a radically more efficient & effective manner. It seeks to realise a seamless transition model that meets expectations for efficiency, quality, sustainability and transferability to different institutional contexts.

➤ The KEEP Toolkit

KEEP Toolkit allow to select and organize teaching and learning materials, prompt analysis and reflection by using templates, transform materials and reflections into visually appealing and intellectually engaging representations, share ideas for peer-review, assessment, and collective knowledge building, simplify the technical tasks and facilitate knowledge exchange and dissemination.

## 2. INNOVATION OF THE PROJECT

Usage of e-portfolio in the vocational education will form a learning approach in which taking into consideration to constructivist approach, observing individual differences, emphasizing continuous improvement, placing to authentic conditions of learning, providing multiple participation for learning activities (other students, teachers, employers, parents etc), developing latent potencies and self-confidence of students. On the other hand, it will let learning process gain efficiency and attractiveness with the help of the efficient usage of virtual medium in the vocational education.

More efficient usage of computer based technologies will be supported in this way. The project will form a new pedagogic framework in the viewpoint of utilization of computer technologies in the classes for educators in vocational educational institutions.

## 3.RESULTS AND PRODUCTS OF THE PROJECT

Output 1 - Project report related to learning needs and use of portfolio and online applications in vocational education

Aims:

- To take the views of the educators and students on the web based vocational education, and applications of portfolio and e-portfolio.
- To determine opportunities related to e-portfolio application in Europe
- To analyze the desires and learning needs of the educators and students
- To determine the fundamental properties of e-portfolio framework

Content:

- Report on web based education, portfolio and e-portfolio in vocational education in partner countries.
- Applications of web based education, portfolio and e-portfolio in vocational education in partner countries.
- Applications of portfolio in vocational education based on traditional method.
- Applications of e-portfolio in vocational education.
- Results and conclusions of applied questionnaires.
- Analysis of learning needs
- Expectations and desires to constitute a basis for project products

Output 2 - E-portfolio framework

Aims:

- To facilitate use of e-portfolio approach for teachers, educators, tutors and planners in vocational education.
- To constitute a model and wizard to create e-portfolios for different fields of vocational education. To report the expectations of the educators and students

Content:

Name of e-portfolio, aims of e-portfolio, learning For this experiment we will provide hand written code for both versions. valuation, targets for e-portfolio (workers, students, parents, Institutions, etc.), owner (learner, organization), area of e-portfolio, time management of e-portfolio, student (collecting, choosing, reflecting, presenting), teacher or educator (planning, progressing, examining, professional development)

Sources

The existing hardware and software inventory students, parents, workers, etc.)  
Use of web (internet, accumulating online capacity)  
The level of use technology (lecturer, student, etc.)  
Using technology Videos, Audios, documents, pictures Assessments Directives, standards, evaluation of the program  
Culture Cooperation (the opportunities for cooperation with persons who will be included within the process).

Output 3-4 - Web based learning material and handbook.

Aims:

- For learning material  
To develop a learning material for teaching learning and assessment approach of e-portfolio.  
To constitute individual learning opportunities to teachers in vocational education.
- For handbook  
To facilitate and support the use of project products.

Content:

### 1. Learning material

- A brief description of the project
- Description of portfolio and e-portfolio in europe
- History of portfolio
- Learning and assessment approach of e-portfolio
- Differences between approaches of traditional and portfolio learning
- Description of electronic portfolio
- Differences between electronic portfolio and traditional learning approach
- Benefits of electronics portfolio in learning process
- Fundamental elements of an electronic portfolio
- Use of electronics portfolio in vocational training
- Classes of electronic portfolio in vocational training
- Benefits of electronic portfolio in vocational education
- Basic steps to design an electronic portfolio process
- A sample e-portfolio process design

### 2. Handbook

Output 5 - Sample e-portfolio

- For learning material  
- To constitute a sample the use of e-portfolio process in specific vocational fields.
- To illustrate the use of e-portfolio learning and assessment approaches in learning process

Content: Each partner will develop an e-portfolio process for own vocational field. To do this, partners will use e-portfolio framework

#### Output 6 - Application Report of the Project Products

- To provide feedback from target groups for e-portfolio framework, web based training materials and sample e-portfolio processes.
- To perform internal and external evaluations of the project results and products through feedbacks from target groups
- To develop and complete project products through evaluations
- To extend effect of the project in both national and international levels.
- To contribute valorisation strategy and activities of the project including activities that involve target groups.

Content:

- Application report for web-based learning material
- Application report for e-portfolio framework
- Application report for sample e-portfolio processes
- Comments and suggestions to develop project products.

#### 4. PROCESS OF THE PROJECT

First of all, a platform on the web is going to be formed to strengthen the communication among the project partners and to record the progress of the project. The management and progress of this project are also constructed according to the e-portfolio approach. The platform is going to contain some components such as e-mail, upload and download sides, synchronized conference tools, performance counters etc. e-portfolio approach is going to be used in the management of the project therefore it will be helpful for the running of the project.

The reports related to on-line education, portfolio and e-portfolio applications in the vocational education in the partners countries was integrated in the project international conference, which took place in Bucharest on the 2nd and 3rd of May 2007.

In this stage education materials such as CDs, web, manual etc. for teaching of e-portfolio utilization in the vocational education are going to be prepared. These materials are going to be designed according to trainers who use the portfolio process in the vocational education. The final form is going to be given to these materials following the applications done by the partners and finally the project is going to be generalized in Europe.

Reference materials developed in this field are needed for the utilization of e-portfolio process in the vocational education. In regards of solving this problem, the project is going to prepare a portfolio framework usable for the vocational education. The

frame adaptable to every field is going to be generalized thorough Europe in the end of the project.

After e-portfolio framework as model blank-technology is prepared, the partners are going to design and apply an eportfolio process as full-technology according to their specialized field.

E-portfolio framework and e-portfolios prepared by partners are going to be revised and rearranged according to results of applications.

In the final step of the project, some related activities are going to be done for generalizing of the reports which are the basic products of the project, education materials, blank-technology e-portfolio frame and full-technology example eportfolio.

#### 5. CONCLUSIONS

E-Portfolio applications are in an incipient phase in Romania but they enjoy a large appreciation among the local training institutions, thus universities being the main promoters of the introduction of these applications in the educational system in Romania. Following the works presented within the International Conference on "E-Portfolio Process in Vocational Education; Present and Future", there was an increased interest of the universities and colleges in Romania, towards the e-portfolio applications.

It is certain that the following years will bring about a sustained increase in the use of these applications in Romania as well.

What remains to be seen is the way in which they will evolve during the following years.

#### 6. REFERENCES

- Allal, L. et Wegmuller, E., (1998). Le portofolio dans la dynamique d'entretien tripartite. In: *Mesure et évaluation en éducation*, **Vol. 20**, n° 3, pp. 5-31.
- Dumitriu, C. (2003), *The Alternative Procedures of Evaluation*, E.D.P., București.
- O'Malley, J. M., Pierce, L. de (1996), *Authentic Assessment for English Language Learners: Pratical Approaches for Teachers*, Reading Addison-Wesley.
- Stoica, A. coord. (2001), *The current evaluation and the exams*, ProGnosis, București.
- Tomșa, Gh. (2005), *Pre-scholarship and scholarship psycho-pedagogical*, București.
- Weiss, J. (2000), „Le portofolio, instrument de légitimation et de formation”, en: *Revue Française de Pédagogie*, nr. 132.
- XXX (2000), *Guide book of evaluation at sociological disciplines*, ProGnosis, București.