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Eportfolio As A Tool Of Learning, Presentation, Orientation And Evaluation Skills

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Abstract

These last years drove to many mutations of learning in training terms throughout life. The Moroccan universities began changing paradigm of education. This change consists in passing from a purely transmissive teaching paradigm to a learning paradigm where learners become the main actors of learning process and acquiring new skills and knowledge. Most of learning tools have adapted to this paradigm. Among these tools, there are the learning management system (LMS) and the electronic portfolio (ePortfolio). Our work focuses on monitoring and periodic evaluation of the formation of a student in higher education, particularly, the skills acquired by the student during his university education. Also we will show you other uses of the e-portfolio. From this perspective we suggest a computer device " ISIFePortfolio " which not only allows monitoring of learners, but also acts as an ePortfolio (electronic portfolio) assessment skills, and a social network combined systems. Based on the Mahara technology, "ISIFePortfolio" is an application set up by the team ORDIPU University Hassan II Mohammedia - Casablanca. It has been integrated into the platform of distance education "Education Master ISIF" for the master " Engineering Information Systems and Training.".

Keywords: ePortfolio, LMS, skills, digital monitoring of the learner, evaluation, orientation.

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1. Introduction

The need to develop and evolve the skills of the Moroccan population results in recent years to an impressive number of projects (E1P10: Integration of ICT in learning E1P11: Improved evaluation system, ...) and initiatives to meet the objectives of the emergency program 2009/2012 as "learning refocused on the knowledge and basic skills, to encourage the students development. ... "

Also, the National Charter for Education and Training (NECS) has introduced a new reform which aimed at once the universalization of basic education (in response to the pressure of the dominant socio-economic logic) and improved operation of learning by placing the learner at the center of educational activities and developing a competency-based approach. "The digital portfolio could be a way to focus on the individual, his journey and his career. It is necessary to use information technologies and communication to improve access to services for adults and increase their autonomy.

The digital portfolio is a research field that deserves to be explored given its tendency "towards a critical assessment of a career through the learning of shared meaning construction process. It is a learning and an assessment tool. For oneself and for others "(Eduscol, 2009).

Researchs on ePortfolio or digital portfolio (Drier, 1997; Barrett, 2007; Johnson, 2009; Lin, 2008; Endacott, 2004 ... ..) have shown that the use of ePortfolios allows the improvement (enhancement) of learning experiences. Through this, they can offer an educational resource in various "areas of knowledge" and "levels of training".

2. Portfolio and electronic portfolio (ePortfolio)

The portfolio has many definitions, which since the appearance of the word "portfolio" have been improved based on the objectives to which it's associated. The first use of portfolio in schools was in 1980 with the aim of evaluating the learners work (Belanoff, Elbow, and Fontaine, 1991, cited by Barrett, 2007). In 1994, the use of portfolios appears in learning approaches and its strong educational potential was recognized by Herman and Winters (1994) cited by Barrett (2007).

In current dictionaries the portfolio is described as "a briefcase in which we find productions or works produced for specific purposes" (Multidictionnaire of the French language, the PetitRobert 1997, 1993), it's also defined as a collection of "work that a learner has collected, reflected, selected and presented to show his evolution over time" (Barrett 2010). Thus it helps to tell the history of learner efforts, progress and achievements (Wade, 2005 cited by Barrett, 2007).

EPortfolios have many advantages over printed portfolios, they are easily accessible, with the ability to store multiple media, they are easy to update, and references the work of learners

According to the multiple definitions of the portfolio, we can find several types of it. According to Barrett (2007), there are no standardized terms to define the variety of roles in the portfolio. Different terminologies approaches are then found. There are three similar types in Barnett (2007) and Greenberg (2004) approach. They both identify the three following types of portfolio: learning portfolio, presentation portfolio and evaluation portfolio.

It should be noted that these three types of portfolio are often cited in the literature. In different contexts, this typology can be enriched with other purposes, such as the type of "professional development" and "orientation". We can therefore use the ePortfolio for several purposes as shown in Fig. 1.
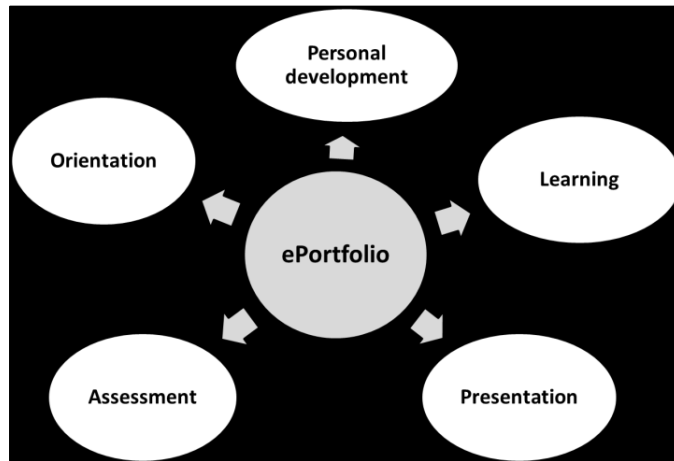
Fig. 1. The different purposes of the ePortfolio.

3. The ePortfolio for learning purposes

The Use of learning ePortfolio provides for all university students the opportunity to actively engage in the learning process. The learning ePortfolio shows the progression over a period of time with all the documents and all the reflections prepared by the student. This ePortfolio includes all types of work and reflection on the student's work, so to highlight the progress of it over time (Mail-Viard Metz and Albernhe-Giordan, 2010). This collection of knowledge, whose structure is personal, allows the learner to better understand and monitor his learning and identify the problem to address.

So we can say that the learning ePortfolio documents, guides and allows progress constantly learning. Example: A student develops a learning ePortfolio that allows him to know how he has improved his technology skills during his year of study. (Eifel, 2007).

4. The ePortfolio for presentation purposes

The portfolio has long been used in various sectors such as arts, photography, architecture and engineering, where professionals are expected to showcase their most significant achievements. In the area of education, the ePortfolio can also be used for purposes of communication and presentation. From a single document base, the ePortfolio used for the purpose of presentation allows the learner to establish syntheses, communicate the result of his achievements and to do various demonstrations of his knowledge or achievements. In addition, the author can use the ePortfolio for submissions to a contest, training programs or interviews. Depending on the audience concerned, the ePortfolio author may choose to present his ePortfolio in various ways.

This shows that the ePortfolios of information presentation to a hearing the evidence of learning as well as the collection of personal achievement and / or professional student (Mail-Viard Metz and Albernhe-Giordan, 2010) according to criteria specific to the selected student or as part of an evaluation to institutional criteria. Example: a computer engineer creates an ePortfolio presentation that shows the relationships with professional certifications he obtained the code he wrote and his career.

5. The ePortfolio for the purpose of personal development

According to Mail-Viard Metz and Albernhe-Giordan (2010), this type allows the collect and structuring of documents to facilitate the learner choice of career or training.

To be motivating, a learning process must be coupled with a personal goal. In this sense, the learner can use the ePortfolio to know his assets, strengths and weaknesses. Assemble an ePortfolio can help the learner to identify his interests, his personal or professional need, which allow him to set a clear and realistic goals. This aspect of the ePortfolio improves self-knowledge and can feed the motivation to learn.

So we can deduce that the ePortfolios of personal development archive the students learning, the results of his reflections.

6. The ePortfolio for orientation purposes

The use of the portfolio as part of the orientation approach must engage the learner to develop a reflection on him, his education and career aspirations. The tool should be designed to promote reflection on the orientation process implemented for each learner. . (Duroisin, 2011)

Generally, the tool should enable the students to be aware of his academic development and to discover the steps he has already crossed and the one that he have yet to overcome, wich will allow him to achieve the degree corresponding to his expectations.

The implementation of the ePortfolio in student learning enables him to draw specific goals for what he wants to do later in his academic or professional career. We could say that the ePortfolio is a very efficient tool for self-orientation. (Guerss and Aitdaoud, 2014).

The ePortfolio of orientation should enable the student to know himself, to understand his talent and his personality as a worker. We also note that this ePortfolio is a personal and original tool that differs for each individual based on their needs, expectations and aspirations.

7. The ePortfolio for assessment purposes

In recent years ePortfolios have been used in higher education as an alternative assessment tool. They represent an important asset in the context of continuous assessment of learning and skills development. This tool allows the evaluator to better track the progress of a learner in retaining, for example, the historical documents that he produced, or giving him the opportunity to intervene, if necessary, by stimulating trade and reflection. The learner, in his part, can use the ePortfolio to compile the results and comments related to his formal and informal learning. In addition, it can share his ongoing work with other students, colleagues or trainers. The ePortfolio also allows direct and to eventually lead the evaluation process that it was unthinkable to conclude at distance this past few years; It provides, for example, the ability to monitor the course of a person who is abroad or validate the personal skills. The following table (Ministry of Education, 2002) shows the benefits of using the ePortfolio for assessment purposes.

The ePortfolio of assessment is used to collect production-related to the acquisition of skills and it must be representative of the variety and characteristics of the tasks performed by the student in order to be evaluated by teachers. This ePortfolio is used to assess the level of skills development of the learner (Mail-Viard Metz and Albernhe-Giordan, 2010).

So we can say that ePortfolios of evaluation demonstrates the learner achievements by providing evidence in his ePortfolio. Example: A nursing student submits an assessment ePortfolio as evidence of a specific skill required.

8. The integration of an ePortfolio

In this section we will give our case of experience that revolves around the integration of an ePortfolio system who is based on Mahara technology with Moodle LMS, using the interoperability specifications (Hatala, et al., 2004 and Charles, S., 2010, JISC CETIS, 2010) supported by both systems.

Mahara is an open source software that was created by the Government of New Zealand, which consists of several features (content, pages, collections, user, forum, group, message, preferences and export, ...). This application which has been called "ISIFePortfolio" (Bentaib and Aitdaouad, 2014) was established by the research team of the Laboratory of Information Technology and Modelling / ORDIPU University Hassan II Mohammedia - Casablanca.

This case study is related to the social part of our research project which implements an elearning platform "Training Master ISIF" to create a personal learning networks (PLN) (Richardson and Mancabelli, 2011) to benefit the students of the master ISIF "Engineering Information Systems and Training". It aims to integrate their personal learning environments (PLE) (Van Harmelen, 2006), ePortfolios, and LMS (Oliveira and Moreira, 2010). This environment is developed using the Mahara technology integrated with Moodle LMS.

Moodle and Mahara share the student profile, so it has a unique set of authentication data (login and password) on both applications (Single Sign On) (He, 1999). Thus, a student authenticated in Moodle can automatically access his profile Mahara without the need to reconnect. If the student has not yet created a profile in Mahara, it will be created automatically when he first access, based on the data of his Moodle profile.

9. Conclusion

The use of the ePortfolio for the purpose of development and management of knowledge and skills is booming. Today, we made the shift to a knowledge society and digital culture. The emergence of ePortfolios is entirely consistent with this shift. We use technologies at our disposal to better serve citizens and to provide better service to learners; therefore, we have to use the ePortfolios.

In its traditional format, the portfolio was already a popular and useful tool, but in the digital version, it is more able to fulfil the needs of the individuals in a society that sees learning as a lifelong process. In the context of development and enhancement of knowledge and skills, mobility of labor and accountability of individuals in relation to their personal and professional development, the ePortfolio is a tool called to be more increasingly integrated into our system. We have seen that the initiatives relating to ePortfolios spread in different learning environments and are increasingly part of the practice.

As part of our research project and to enjoy the various benefits of ePortfolio, we were able to integrate the Mahara system with Moodle LMS using the interoperability specifications supported by both systems. This allowed us to browse and retrieve files from the LMS Moodle and integrate them on Mahara and vice versa. Thus, it was possible to implement the integration of batch to automate the copy of student work Moodle "Training Master ISIF" to their ePortfolio Mahara "ISIFePortfolio".

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