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E-teaching Portfolio Implementation using Mahara Open Source Management System

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Abstract

Teaching portfolio has been widely used in higher education as a useful management tool for monitoring and improving teaching and learning process among academicians. The usage of portfolio methods to document professional development in teaching is well known by all. However, despite its proliferation, this issue is still dogged among academicians. Time pressure, data are not integrated and not easily accessible as well as paper-based portfolio seems to be the critical factors why teaching portfolio may become a burden for any academicians. E-teaching portfolio allows all academicians to be involved in the community over network technologies with the capability to store various types of media. E-Teaching Portfolio helps in preparing evidence in supporting teaching and learning processes, as a reflective tool in enhancing their capabilities and as a way in supporting their self-assessment review. Therefore, the aim of this paper is to create a basic understanding of e-teaching portfolio in higher education prior to replace the paper-based portfolio. An action research methodology was adapted consisting of four important phases diagnosing, planning action, taking action and evaluating action. A sample prototype was created using an open-source management tool, Mahara. Mahara is a fully featured open source electronic portfolio, which was developed in 2006 by the New Zealand e-Portfolio Project funded by the NZ Tertiary Education Commission. Mahara platform was chosen in compiling and integrating all files and academicians’ portfolios. Furthermore, this paper will deliberate discuss the implementation of an e-teaching portfolio using the Mahara platform to support teaching and learning.

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1. Introduction

In many professions, portfolios have been used as a primary method of evaluation of someone’s work. Portfolio is a unique compilation of an individual’s work and there are no two portfolios in this world that are exactly alike. It comprises personnel evidence to display someone’s accomplishments and referees for others. Portfolio documents compile an example of actual work that contains methods, skill, style, talent, creativity, and innovations in delivering a task. In higher education, portfolio has been widely used as a useful management tool for monitoring and improving teaching (Leggett & Bunker, 2006), as a way to preserve knowledge and growth and possibly even for purposes of certification (Chuang, 2010). In higher education faculty, it is one mechanism for explicating, communicating, enhancing the scholarship of teaching (Susan et al, 2001) and as a guidance to newbies staff through peer cooperation (Liao, 2011).

As teaching portfolio gained acceptance in its importance as a performance assessment tool (Freiberg & Driscoll, 2000), many other issues arise with the traditional method of compiling all the information. Either the teaching portfolio being prepared as a 3-ring filing, power point slides, a PDF file; blog has yet to appear not always as the best choice. 3-ring file may become a jumbled collection of artifacts, a single slide presentation might not be shared with others, a blog is more of a presentation, while a video clip may integrate with some extra creativity but does not allow changes done by others (Metz & Giordan, 2010). Though, despite all the exhortations to prepare a teaching portfolio, academicians are still struggling with their own motivations. Some of the critical factors are time pressure, work intensification and how far a teaching portfolio may help in their teaching evaluation process. Besides that, it is not important in job promotion or job application, hence affecting the portfolio preparation.

Various studies have been conducted on the use of the portfolio in the competencies including reflection, self-assessment, communication skills, and professional development but most of them failed to provide enough information on the implementation of the portfolio. Hence, this paper aims to explain the basic concepts of e-teaching portfolio and its implementation using the open-source management system, Mahara platform in higher education.

2. Literature Review

2.1. E-Teaching Portfolio

With today’s embryonic technologies, not only learning process has changed, but also teaching has revolutionized and the need for monitoring teaching quality and professional development has emerged (Rijdt, 2006; Smith & Tillema, 2001). The teaching process is now being more personalized, flexible, and transferable allowing all the academicians to be involved in the community over network technologies. A teaching portfolio or also called as a dossier, can be defined as a purposeful collection of example documents and reflections about a person’s teaching competences (Rijdt et al., 2006) that provides evidence of someone’s knowledge, skills, dispositions (Lin, 2008; Sherry & Bartlett, 2005). A portfolio has been used widely by various universities as a way of encouraging and reflecting teaching performance among academicians and also as a form of assessment.

Nowadays, portfolio implementation has fledged and changed to utilize the technology. E-Portfolio provided a multimedia space for systematic documentation for professional growth (Pitts & Ruggirello, 2012). E-portfolios offer various advantages over hard copy portfolios. E-Portfolios are reachable, having the capability to store various type media, easy to update, and allowing for research collaboration among the academicians. E-portfolios have been extensively used throughout all levels of educations in supporting continuous curriculum, allowing all academicians to share teaching and learning strategies,
teaching resources and publication materials with their colleagues. Muhamad Kamarul & Mahbub (2012) also reports that creating and maintaining e-portfolios are advantageous as it allows the academician to consciously monitor and assess their own current knowledge and to understand pedagogical and subject contents continuously and consistently.

2.2. Types and Items found in Teaching Portfolio

Apparently, various types of e-portfolio have been emphasized by researchers in the literature. Overall, an e-portfolio serves three main types as the showcase or presentation function, the assessment function, and the process or development function (Aalderink, 2007). Metz and Albernhe-Giordan (2010) highlighted e-portfolio to four different types namely as a learning portfolio which consists of a collection of knowledge; a presentation that contains individual's personal achievements and/or professionalism; an evaluation portfolio which includes a collection of product-related skills and lastly, a professional development portfolio contains all related compilations and construction of documents for the selection of a career path.

2.3. Items found in a Portfolio

Practically, preparing e-teaching portfolio is imperative for higher education in enhancing the quality of teaching among educators. There are five major processes in preparing an e-teaching portfolio which is to clarify, to collect, to reflect, and to present and finally to assess and evaluate the materials during the learning and teaching processes (Hilzensauer et al, 2007). Apart from these, Salend (2001) highlighted several important items to be included in preparing an individual e-teaching portfolio which covers Individual Information, Educational Philosophy and Teaching Goals, Educational Assessment Skills, Instructional Skills, Classroom Management Skills, Collaborative Skills, Commitment to Professional Development & Reflective Thinking Skills. A similar typology is presented by Urbach (1992) who recommended seven dimensions for documenting teaching which includes what and how one teaches, document changes teaching and course activities, rigor in academic standards, student impressions, efforts at developing teaching skills and assessments by other colleagues.

3. Methodology

This ongoing study adopts an action research methodology as a way to collect all data in corresponding to the research aims. Action research is defined as an emergent inquiry process in which applied behavioral science knowledge with existing organizational knowledge and applied to solve real organizational problems (Coghan & Brannick, 2005). This fundamental aim of action research is to provide collaborative and dynamic framework specifically in portfolio assessment. In addition, this method is chosen as it is also suitable in assisting the teaching process and support student centered learning (Smith & Tillema, 2001). Four major phases involved in this research consist of diagnosing, planning action, taking action and evaluating action.

3.1 Diagnosing

The initial diagnosing phase explores the notion of teaching portfolio from the literatures. The importance of preparing teaching portfolios, why an academician need to prepare one’s, what should be included and what are the issues and problems faced while preparing the portfolio. Most of these accounts indicated that the current practices in preparing a portfolio must be improved. Time constraints, hardly
accessible and not able to capture various digital content seem to be the major obstructive for academician to prepare a teaching portfolio.

3.2 Planning Action

During the planning action phase, three open source management tools were evaluated namely the Edu Drupal e-Portfolio platform, Wordpress weblog platform and Mahara social e-portfolio platform. The open sources were evaluated based on ease of installation, easy to use, ability to capture various media and consistency and standardization of producing portfolio. The e-teaching portfolio should emphasize not only a hazard collection of teaching materials, but also as a showcase of professional portfolio containing self-review evidence, allowing for reflection and contribution in their career enhancement. Besides that, standard contents of what should be included in the teaching portfolio were discussed among the team members and expertists.

3.3 Taking Action

During this process, Mahara platform has been chosen as the tools to implement e-teaching portfolio. This platform has been chosen as it provides all the necessary requirements needed by the academicians in supporting various format of files (text, graphic, video). A sample of portfolio has been created providing all important elements that should be put in a teaching portfolio. Mahara is an open source electronic portfolio, aimed to provide users with a user friendly tool to create an individual and professional learning. Mahara was developed in 2006 by the New Zealand e-Portfolio Project (Gerbic & Maher, 2008). Besides other tools provided in the market, Mahara is different from other e-portfolios as it allows users and learners to control which items and what information other users see. Mahara represents the most balanced product which is easy to install, easy to handle and used (Himpsl & Baumgartner, 2009). The speciality of Mahara open source tools is it allows academicians to control their own content, provides the ability to set permission to access or authenticate various nominated group and control which item can be viewed by other users (Brown, 2007).

3.4 Evaluating Action

Since this research is ongoing, the researchers are still conducting the evaluation process. At this phase questionnaire will be distributed and interview will be conducted to capture feedback from the academicians. Data will be analyzed and will be presented early next year.

4. Discussion

In today’s post-modern society, academicians are not only forced to be professional and expert in their own area, but they should also benefit in applying and using the technologies. The use of the e-teaching portfolio has become more popular as a way to collect all the evidence in teaching and supporting the reflective teaching. Blog, static web page, a power point or a pdf file is among the easiest and common way of preparing an electronic teaching portfolio among the academicians. From the positive perspective, by preparing their own teaching portfolio, academicians may express their own creativity and may also use it as professional portfolio in their career development. Yet, there are still lots of limitations in implementing the e-teaching portfolio among the academicians.

From the individual perspective, barriers in technology need to be considered as one of the important factors contributing to the success of the e-teaching portfolio implementation. No endorsement in the
management level may influence the low rates of updated information. Since the current practices are using the manual or paper-based portfolio, therefore the implementing force should come from the faculty first. Training should be provided in order to teach the academicians to use the system, and together providing them a help resource in terms of documentations or a help desk assistant.

Despite that an e-teaching portfolio should not oversee the real functions of a teaching portfolio. An e-teaching portfolio is not only about the technology. It is the evidences of someone teaching, a reflection on their past experiences, a self-assessment on what they have done before, a collaboration among their communities, a tool for future empowerment and also as an important tool to support lifelong learning.

5. Conclusion

This study aims to create basic understanding on the importance of implementing an e-teaching portfolio in higher education. Preparing an e-teaching portfolio will allow academicians to potentially deliberate themselves by evaluating their own strength and weaknesses through self-assessment in enhancing their teaching and learning skills. E-teaching portfolio helps an individual in building their self-assurance, commitment and enthusiasm which not only benefit themselves, but also bringing advantages to higher education itself. In this study, it shows that there is a high possibility that the higher education would transform a paper-based portfolio to electronic systems for betterment in the teaching quality. Mahara platform is one of the best tools that provides the capabilities in creating e-teaching portfolio. Easy to install, easy to manage, able to capture multiple format and allowing for sharing information among the communities seem to be the advantages of this tool. As this is still an ongoing research, therefore, there is still much to be done in evaluating and researching this work. The e-teaching portfolio prototype has to be tested and the effectiveness of e-teaching portfolio in enhancing academicians reflection need to be appraised. In addition, some initial guideline for the implementation a ePortfolio review process has been suggested.

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