E-Portfolio as Learning and Performance Tool: Values and Challenges in Korea’s Higher Education Context

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Abstract: There are increasing needs for holistic inquiry on potential opportunities as well as challenges in higher education for successful experiences in the context of South Korea. The current research attempts to examine e-portfolio’s roles and potentials as learning and performance tool, required challenges, and directions in institutions of higher education. These research goals are pursued by literature review and focused group interview with faculty member operating engineering accreditation programs. The conclusions are introduced in terms of institutional visions and goals, instruction and learning services, professional development, administrative concerns, information infrastructure, and demands from outside the academia.

Keywords: e-portfolio, learning and performance, higher education, engineering accreditation program

Introduction

Higher education having its extraordinarily long history of success has faced multifaceted challenges nowadays (Egol, 2006). Some of those challenges include formulating a vision for achieving educational goals in the Information Age, redesigning the lecture-based learning model to meet very different needs of the Information Age, redesigning systems and services to meet the ever-changing needs of students and society, and developing educational processes and tools required with redesign of the education system. In that case, higher education institutes especially might need changes in the ways which can satisfy individual learner’s educational demands. ‘Portfolio’ has been discussed as one of the ways which enhance self-directed learning, open learning environment, integration of learning and assessment, competency-based curriculum (Ward & Moser, 2008) and meaningful task performance, lifelong learning, and economic operation of curriculum.

In the same breadth, with increasing demands for authentic evaluation associated with performance competency required in real life, limitation of traditional portfolio and alternative evaluation has been aroused in educational community. E-portfolio as an alternative way since 2000 rises as technological development and constructive education have expanded (Gaide, 2006). Namely, e-portfolio not only for learning assessment, has been introduced as a solution of educational problems such as learning achievement, learning criteria, learning support, and job seeking activities (Ayala, 2006). Research has been increasing on e-portfolio in spite of few real experiences in higher education institutes. However, those existing research appears to be done in a very piecemeal sort of fashion.

Research Goals

There are increasing needs for holistic inquiry on potential opportunities as well as challenges in higher education for successful experiences in the context of South Korea (Kwon, 2002; Kim, 2006; Choi, Choo, & Han, 2005). The current research attempts to examine e-portfolio’s roles and potentials as learning and performance tool, required challenges, and directions in institutions of higher education. Interview items are comprised with institutional
visions and goals, instruction and learning services, professional development, administrative concerns, information infrastructure, and demands from outside the academia.

Research Methods

These research goals are pursued by literature review and focused group interview. Literature review includes various resources regarding e-portfolio related research. FGI are held with 3 engineering faulty members and 1 program manager in one Korean university operating engineering accreditation programs.

Literature Review

e-Portfolio Defined

E-portfolio can be defined as ‘a sharable collection of digitalized learning works and results’. Each work and result represents personal efforts and development, knowledge, reflection and competencies which have been generated and developed through learning. E-portfolio features flexibility, openness, and multiplicity comparing to traditional portfolio (Lankes, 1995). As traditional portfolio implies structural problems in ‘saving’ and ‘storage’, computer-based portfolio or ‘electronic portfolio’ has captured interests of educational community as a realistic problem solving approach. E-portfolio which is based on technology can overcome time-space limitation and ease storing problems: easing the stress of editing, revising, and collecting and cut down storage space and budgets; allowing multiple representation models though computer based multimedia tools.

Educational Values of e-Portfolio

E-portfolio stores and shares learning results such as personal achievement, goals, and reflections in web space so as to present a collection. It demonstrates learners’ competencies, skills, growth rates, and potentials with digitalized learning products. It is used as self-reflection tool for learners (Barton & Collins, 1993; Wood, 2000). In these manners, portfolio transmission and sharing are smoothly worked out among instructors, educational institutes, and learners.

As results, e-portfolio facilitates authentic evaluation, learners’ accountability, learner motivation, and learner information transmission. E-portfolio as a learning and instructional tool expands its roles to learner-centered lifelong education (e.g. The Department for Education and Skills (DfES)), web-based education, and alternative evaluation, and self-development (Quality Assurance Agency). Some true values of e-portfolio are as follows:

1. Developmental portfolios: demonstrating developmental process such as learners’ self-evaluation and self-reflection
2. Teacher planning: enabling teachers/instructors to identify learner information and knowledge level as well as to plan curriculum.
3. Proficiency portfolios: providing evaluation information to show learners’ subject proficiencies
4. Showcase portfolios: exhibiting completion products carefully selected during learning processes
5. Employment skills portfolios: presenting and proving employees learners’ competencies and readiness. In the context of job searching (e.g.: East Syracuse-Minoa High School in East Syracuse)
6. College admission portfolios: applying for school admission as entrance assessment resources in college admission process (e.g.: East Syracuse-Minoa High School in East Syracuse)

Expected Challenges

Standardization of software and systems to share learner information smoothly

The expanded use of computers in learning has occurred as an interactive byproduct of ongoing developments in psychology. Specifically, cognitive psychology has made considerable contributions toward developing better
solutions for the use of computers in education. For instance, the use of computers in education has shifted toward
design principles to assist the learner in selecting appropriate information, organizing information into internally
consistent concepts, and integrating new with existing knowledge. The result is a personally relevant and meaningful
learning experience (Hannafin et al., 1996).

Especially the following elements (Stefani, Mason and Pegler, 2007) should be the basic requirement to be primarily
standardized and well established:
- Assessment: achievement evaluation based on well established criteria
- Presentation: evidence to prove educational achievement (professional competencies)
- Learning: guide of educational processes.
- Personal development: personal achievement management and employment promotion
- Multiple owner: sharing outcomes in the case of collaborative process
- Working: using learners’ post work achievement for the current work

**Introducing and running of learner-centered e-portfolio**

An eventual goal of e-portfolio is to provide learners with opportunities to prove their achieved knowledge and skills.
Nonetheless, most the existing e-portfolios are educational process centered rather than ‘learners’. In designing and
developing e-portfolios, we need more efforts and consideration to make e-portfolios more learner-centered (Ayala
(2006):
1. To slow down the portfolio development process. It might allow involving more students and faculty in the
process, not just the enthusiasts.
2. To privilege students’ needs and concerns in the electronic portfolio development process
3. To acknowledge that e-portfolios might not be necessary for the institution right now. Serous, thoughtful
discussion about why electronic portfolios are valuable.

**Institutional engagement**

In spite of its high potentials, e-portfolio has its drawback such as the demands for technology literacy and long term
efforts in various ways. There are challenges especially on the part of institutions to provide new support in the
following areas:
1. Evaluation procedures: submitting learning assignments, grading, and correction; and providing assignment
copies through systems.
2. System: stability, privacy, and authentication procedures
3. Software competency training: confidence about educational impact of new technology, resolving anxiety toward
new technical adaptation, proactive attitude toward new technical environment, and practical information
technology management proficiencies
4. Interface flexibility and accessibility
5. E-administration: time flexibility and seamless contact points with staff through the system for adult learners

**Findings**

**e-Portfolio Defined**

E-portfolio is mainly defined as ‘an accumulated and digitized sample collections of learning works and results
along with program goals and professors’ evaluation reports’. Each work and result represents personal efforts and
development, knowledge, reflection and competencies which have been generated and developed through learning.
However, e-portfolio features merely digitized (scanned) version of traditional portfolio and paper-based
examinations, which can overcome time-space limitation and ease storing problems.

**Educational Values of e-Portfolio**

E-portfolio is expected to facilitate the data collection in order to prepare for the program evaluation by ABEEK
(Accreditation Board for Engineering Education of Korea), instead of authentic evaluation, learners’ accountability,
learner motivation, and learner information transmission. Three main values of e-portfolio are identified in this case university practices as follows:
1. Developmental portfolios: demonstrating developmental process such as learners’ self-evaluation and self-reflection
2. Proficiency portfolios: providing evaluation information to show learners’ subject proficiencies
3. Showcase portfolios: exhibiting completion products produced during learning processes
4. Professor planning: enabling instructors to establish educational goals and operate curricula based on those goals and reflect their teaching quality

**Faced with Main Challenges**

**Changing the mindset**

There is a critical challenge on the part of individuals of faculty members and students. Faculty members within the departments operating engineering accreditation programs lack the understanding of criticality of these programs. Moreover, the faculty members tend to feel high pressure due to extra work demand over their regular research and teaching conducts. Student themselves rarely use e-portfolio services in order to plan personal goals and save personal works.

**Institutional engagement**

There are challenges on the part of institutions to provide new support in the following areas:
1. Administration: time flexibility and seamless contact points with staff through the system for professors
2. Pedagogical support training
3. Technical support and software competency training

**Introducing and running of learner-centered e-portfolio**

The exiting e-portfolio has been designed, developed, and operated in educational process centered ways rather than ‘learners’. The university should realize the needs for learner-centered e-portfolio. For that, institution-wide serious and thoughtful discussion about why electronic portfolios should follow in their institution.

**Reflections**

There are still considerable gap between the existing practices of e-portfolio within the case higher education institute and the suggestions by literature. Among others, lack of the understanding of learner-centered and institutional-level support based e-portfolio practices are apparently identified as critical issues to be soon resolved.

**Reference**


