

“Is the juice worth the squeeze?”: ePortfolios and the Experiences of Faculty at the University of Alberta

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Abstract: In recent years there have been a surge in the adoption of ePortfolios (EPs) in mainstream curriculum of higher education (HE), albeit at varying levels and for diverse purposes. The versatility and ability of EPs to enhance learning in the form of presentation, personal development, learning and assessment through the collection, selection, and reflection on best work over a period of time, have appealed to educators. This paper briefly discusses the developments and primary purposes of ePortfolios and their integration into curricula and presents the results and implications of a qualitative case study that investigated the experiences of faculty at the University of Alberta who use or are interested in using ePortfolios in teaching and learning. The findings revealed that although EPs are valuable educational tools, faculty members are challenged by the process of creating EPs with students. The insights gained have implications for the implementation and management of a campus-wide ePortfolio system.

Introduction

ePortfolios are creating a “tectonic shift” in teaching and learning (Clark & Eynon, 2009, p. 18). The recent surge in the adoption of EPs in the mainstream curricula of higher education, albeit at varying levels and for diverse purposes, is due to the versatility of EPs and their ability to demonstrate learning through the collection, selection, reflection, and presentation of best works over a period of time and in different formats. This pedagogy appeals to educators at all levels of the education system, and as impacted how teaching and learning is conducted in the classrooms of the 21st century. As Stefani, Mason and Pegler (2007) asserted, ePortfolios support “presentation, personal development, learning and assessment based on the constructivist paradigm (p.11). In addition to the pervasive technological advancement driven by the demands of the knowledge society, Clark and Eynon (2009) noted the pedagogical change in higher education. Learners in the 21st century expect more from their institutions. In addition to connectivity, there is increased need for learning from anywhere and at any time. There is also the increased fluidity between education and employment (Clark & Eynon, 2009). As the need for accountability in the education systems increased, universities are forced to incorporate innovative strategies in the classroom not only to ensure viability but “demonstrable value-added education” (Ring, Waugaman, Brackett & Jackson, 2015, p.311). The evaluation of students’ learning outcomes is one aspect that has come under rigorous scrutiny and been labeled as inadequate. Project-based activities and eportfolios are tools or strategies used to engage students in real-life experiences and at the same time provide them with valuable lifelong learning skills.

Review of the Literature

The portfolio trajectory dates back to the early 1900s with a history in the disciplines of arts, design and architecture. Prospective employees were expected to collate, select, and present their best work (in printed format) to employers to demonstrate their suitability for the job (Abrami & Barrett, 2005; Barrett, 2005; Cambridge, 2010; Penny & Kinslow, 2006). By the 1980s, a portfolio was accepted in education as a means of evaluating learners’ work. It subsequently gained recognition in the 1990s as an additional approach to learning (Cambridge, 2010; McWhorter, Delello, Roberts, Raisor, & Fowler, 2013). Its present web-based format – ePortfolio or web folios (Love, McKean Gathercoal, 2004) is an emerging and evolving pedagogical trend in academia.

Definition

The broader description by Stefani, Mason and Pegler (2007) provides a more comprehensive and all-inclusive definition of ePortfolios as:

A system which allows users to record any abilities, events, plans which are personally significant; which allows these records to be linked, augmented or evidenced by other data sources, and which promotes reflection on these entries. It allows the user to integrate institutional data with personal data, recorded and

reviewed overtime, which has been enriched by commentary and feedback from the recipients of shared assets. (p .9)

Four broad categories of EPs are repeatedly referenced in educational discourses - learning portfolio, presentation/employment/showcase portfolio, evaluation/assessment portfolio (Barrett, 2005; Penny & Kinslow, 2006), and personal development portfolio (Malita, 2011; Stefani et al., 2007). However, reference to professional development and orientation portfolio (Mohammed, Mohssine, M'hammed, Mohammed, & Abdelouahed, 2015), and reflective portfolio (Stefani et al., 2007) are indications that there are variations and these are determined by the needs of the individual or organization. The need can be as simple as a space for archiving artefacts - an "all-encompassing term used to describe any type of documentation that a student may have accumulated over time" (Scott & Kim, 2015, p. 785). It can also be a complex tool that has the students' success as priority and so seamlessly incorporates all four types in the design. The hybrid model is most widely used (Faulkner, Aziz, Wayne, & Smith, 2013).

Love, McKean and Gathercoal (2004) described the developmental stages of ePortfolios using a five-level taxonomy with each level being an incremental step to the ideal and of highest educational value. Beginning at level one, an ePortfolio is a scrapbook and is used mainly by student for the sole purpose of storing artefacts. In the second level - curriculum vitae - eportfolios are used as a compendium of best work, skills, and competencies for the prospective employer. Although faculty may add their comments and grades to the students' work, the educational value is still low. EPortfolios take on a more pedagogic role at the next level. Love et al. (2004) noted that at this stage there is curriculum collaboration between student and faculty and there is also communication between teacher and student resulting in constructive learning. Importantly, "work samples are arranged according to curricular framework and/or program standards, the student can select who can view what, and nominates who can provide formative and summative feedback" (Love et al., 2004, p. 29). EPortfolios at the fourth level provide for "mentoring leading to mastery" with multiple avenues for feedback, reflection and revision (Love et al., 2004, p. 29). At the fifth and highest level there is authentic evidence as authoritative evidence for assessment, evaluation and reporting. In addition to all that is discussed before, the educator connects standards, departmental and institutional goals, and other meta-tagged artefacts. Opportunities are there for learners to receive feedback, reflect on their (students) strengths and weaknesses and improve their work – the hallmark of success. "Web-enabled portfolios are the only type that are robust enough to support all five levels of taxonomy ... into their structure in a dynamic way" (O'Brien, 2006, p. 74).

Engagements with EPs in teaching and learning suggest a paradigm shift from teacher centered to learner centered. "Learners become the main actors of the learning process and acquiring new skills and knowledge" (Mohammed, et al., p. 328). Stefani et al. (2007) asserted that the student or learner is the focus, and the teacher moves from being a "sage on the stage to a guide on the side" (Miller & Morgaine, 2009, p.12); the locus of control moves from the teacher to the student (O'Brien, 2006). Good ePortfolios in teaching and learning are aligned to the "designing of authentic assignments, using engaging and active pedagogy, periodic self-, peer and teacher-formative assessments, and requiring students to reflect on their learning" (Miller & Morgaine, 2009, p.12). This is a space where knowledge is not transmitted but constructed in a creative and collaborative space and new models of learning are incorporated. A community of learners is infused with high levels of interactions and teamwork (Acosta & Liu, 2006).

The Study

Context

The University of Alberta is a comprehensive university with almost 50,000 students in 18 faculties. Mahara, an open-source platform, used exclusively for the development of ePortfolios, is among the latest addition to its fleet of educational technologies. Due to Mahara's interoperability and compatibility with the Moodle platform, there is seamless access to students' records in eClass by faculty. With this study being part of a larger project - *EPs: Making Teaching and Learning Visible*, the information gleaned will repurpose, customize, personalize and create a user-friendlier ePortfolio system that meets the needs of the users and facilitates an authentic assessment culture among the stakeholders. In 2015, a group of researchers led by Dr. Jennifer Branch-Mueller and Dr. Martine Pellerin undertook a small-scale case study of faculty's views and experiences using EPs.

Research Design

This study is positioned in the constructivist paradigm with an interpretive approach (Denzin & Lincoln, 2008). The researchers listened to the responses of the participants, interpreted their experiences and constructed meanings. Its exploratory nature within a designated boundary makes it a qualitative case study of which the purpose was to gain insights into the experiences of faculty who used or are using EPs for teaching and learning, and those who have not

begun using it.

Selection of Participants, Data Collection and Analysis Procedures

Having received approval from the U of A’s Ethics Committee for the research to be conducted, the 20 participants were selected on the premise that they fitted the criterion of being a faculty member who used or uses EPs in teaching and learning or who intended to use EPs in the future. An invitation to participate, along with the voluntary consent forms were emailed to each participant. Upon confirmation that they consented to participate (an affixed signature), the research team arranged for the interviews to be done at a mutually convenient time and place over a two-month period. Semi-structured, open-ended interview questions were administered to the 20 participants and each session was audio taped for easy retrieval of data and transcription. A two-phased, thematic data analysis exercise then ensued. In phase one, big ideas that expressed the respondents’ experiences and perceptions were extrapolated from the responses to each question (users and non-users). This was followed by a similar approach to identify possible themes that are unique to both groups and that these big ideas may fall under. Polkinghorne (1995) explained that this is a process of “pulling happenings together and integrating them into a temporally organized whole” (p. 5). The meanings, values, and beliefs (stories) constructed were based on the research team’s interpretations of the participants’ responses.

Discussion of Findings

This section discusses some of the overarching themes or big ideas, which emerged from the interviews of both the users and non-users of ePortfolios. The following two tables provide an overview of the data analysis.

<p>Purposes and Objectives</p> <ul style="list-style-type: none"> a. Evidence of students’ learning – repository, assessment of skills and competencies, reflection b. Showcase/presentation - c. Personal development d. Achievement of outcomes (course, program) – technology in education, transition, accreditation, capping exercise 	<p>Experience and Awareness</p> <ul style="list-style-type: none"> a. Faculty had diverse level of experience and earlier exposure – self-taught, trial and error, formal training, online tutorial, research consultation b. Awareness of other platforms – Google sites, WordPress, Weebly, Wikispaces c. Mahara
<p>Uses and Usability (real)</p> <ul style="list-style-type: none"> a. How it is used is same as objectives/purposes b. Features that support creating, gathering, and storing of artefacts easily c. Features that facilitate interaction, customization and self-expression d. Resume building 	<p>Benefits (Real)</p> <ul style="list-style-type: none"> a. EPortfolio mantra – collect, select, reflect b. Assessment, achieve outcomes (course, program) c. Develop reflective and lifelong learners d. Employers are able to see developmental path of prospective employee e. Great way for authentic assessment
<p>Challenges (Real)</p> <ul style="list-style-type: none"> a. Lack of intuitiveness, robustness, flexibility b. Analytics & rubrics for assessment c. Lack technical know-how d. Frustration with the software not EPs. 	<p>The way forward</p> <ul style="list-style-type: none"> a. Improved usability, and proof of mastery b. Access – after graduation c. Features – interface, rubric, exportability d. Access to best practices and technical support e. Holistic management and administration

Table 1: Big ideas from interviews conducted with Users of ePortfolios

<p>Possible Purposes and Objectives</p> <ul style="list-style-type: none"> a. Reflection b. Showcase students’ work c. Assessment and outcome 	<p>Awareness</p> <ul style="list-style-type: none"> a. From colleagues b. At staff meetings
<p>Perceived Uses and Usability</p> <ul style="list-style-type: none"> a. Showcase competencies and skills/Practicum b. Prepare students for career c. Link course and program outcomes d. Assessment tool – formative & summative f. Simplicity and ease of use 	<p>Perceived Benefits</p> <ul style="list-style-type: none"> a. EPortfolio mantra – collect, select, reflect b. Valuable tool c. Showcase students work d. Repository for students work e. Track students learning

g. Integration with LMS and other external software	f. "No advantage"
Perceived Challenges	The way forward
a. Accessibility	a. No time to take on additional task
b. Evaluation process	b. Need more information
c. Do not know enough about it	c. Training – demonstration, workshops, tutorials
	d. Knowledge about ePortfolios and Mahara
	e. Need 'evidence from research'
	f. Need to explore further

Table 2: Big ideas from interviews conducted with Non-Users of ePortfolios

Purposes and objectives

The purposes for which ePortfolios are used are often linked to the educational objectives of the faculty or department. To this end, faculty members host EPs as a space for evidencing students learning in different forms and for different reasons. The findings demonstrate a thread of similarity between the purposes for which users and non-users implement or would implement eportfolios respectively. Recurring terms such as repository, competencies, learning, self-reflection, evidence and skills clearly reflect the purposes and objectives. For instance, User 1 stated ePortfolios, "provide an opportunity for students to showcase the knowledge, skills, experience and competencies developed." User 2 emphasized that an ePortfolio is "more a repository ... resume, about themselves, previous experiences, what they hope to get out of the program, their learning plan - for every placement they have to complete a learning plan objective on that placement and what they hope to take forward."

One participant noted, "... the regulatory college requires a portfolio once they are a licensed member of the profession... Get them in the mindset for lifelong learning and aligns them with the regulations of the profession." One of the major underpinning of an ePortfolio is the need to demonstrate achievement of outcomes both at the course level and the program level. One respondent explained that the primary requirement for the use of ePortfolio is to introduce students to various educational technologies. The School of Library Information Studies stands out as one department in which the ePortfolio is seamlessly integrated in the program as a means of program accreditation. One user noted that "as a library and information school that is accredited by the American Library Association, we have to meet the requirements of the accreditation committee. One requirement is a capping exercise or ePortfolio to show and demonstrate the students' learning outcomes and skills – at the programme level, course level and student outcome level. Every course is required to have learning outcomes that are related to course and program."

EPortfolios serve multiple purposes. They serve as "an assessment tool, for marketing or employment, and document the learning process and growth for learners of all ages, from preschool through graduate school and into the professions" (Barrett, 2005, p.5). Although both groups of respondents concurred that eportfolios have the potential to help them achieve their teaching one participant stated, "... I would not use them at all. My courses don't lend themselves well to using ePortfolios. Furthermore, employers whom I have met with have repeatedly told me that they do not use, refer to or recommend ePortfolios with future teachers. They meet with them for interviews and prefer to have a regular CV for reference. Employers have told me that they do not have time to peruse ePortfolios."

Prior experiences and awareness

The level of experience participants had with eportfolios varied and so was their level of awareness. Some participants had earlier exposure through the use of Web 2.0 tools such as Google sites, WordPress, Weebly, and Wikispaces. The user interface and intuitiveness of some of these tools make them a favourite over Mahara. Mahara is described as dull and "not pretty". While some participants engaged in formal training sessions, others became an expert or novice user as the case maybe, through self-teaching, and trial and error. The Internet also served as an instructor for many who relied on online tutorials. Some sought and received assistance from Centre for Teaching and Learning and Information Services and Technology at the University of Alberta or other staff members who are more informed.

Use and Usability

There seemed to be a commonality between the views of the users and non-users on the use of ePortfolios and their usefulness. Both non-users and users suggested that they used or would use ePortfolios to achieve their educational goals and objectives. One respondent suggested, "... We want to use the ePortfolio to help students select evidences of their learning in relation with these competencies and reflect upon their learning."

For the most part, those who use the tool confided that it is a "valuable tool", but while some insisted that it is "easy to use" or "Easy to navigate", there are those who squealed at its challenges. User 5 said the tool is "used minimally, and not well ... students are asked to perform tasks and they do so through trial and error ... create a profile, respond to post, create attachment, share files." Both groups of participants valued features that

support creating, gathering, and storing of artefacts easily. They also expect the tool to facilitate interaction, customization and self-expression. “The digital format allows for portability and ease of handling ... expedites editing ... provides options that are either unavailable or awkwardly achieved in conventional portfolios” (Nicholson, 2004, p.52).

Challenges (real and perceived)

It is a given that challenges come with the introduction of any new technology. It is no different in the case of EPs. Participants concluded that the ePortfolio “*is a great tool*” but it lacked intuitiveness, robustness, and flexibility. Some participants also admitted that they “*lacked the technical know-how*”. This was one reason given by some non-users for not using the tool. Both students and staff often become frustrated with the process. Non-user 3 noted, “*when I went to the Mahara site to access the platform, I couldn't get past the first website page... unable to understand how to access.*” Another participant was quick to clarify that the frustration was not with the “*ePortfolio itself but with Mahara.*” Despite eportfolios growth in education, Abrami and Barrett noted that they are not “simple and easy to use tools” (2005, p.11), and may be expensive.

Benefits (real and perceived)

Despite the challenges, the benefits far outweigh the challenges. The ability for solid academic and professional development that comes with the ePortfolio mantra is addressed by both groups of participants. EPortfolios allow students to collect, select, reflect, (Clark, & Eynon, 2009, p.18) and present (Mohammed et al., 2015). The ability for ePortfolios to track students’ development is another high stake. User 3 explained that, “*you can see their work easily without tracking 60 or more emails ... by logging into Mahara you see all you need to know about them.*” There was one participant, who on the contrary, believed that there is “*no advantage*” in her using eportfolios.

Conclusions and Implications

It is evident from the discussion that the issues that surround ePortfolios are challenging, complex, global and political. Faculty used EPs for different purposes and their skill sets were at different levels. They all valued EPS but while some described the process as easy and straightforward others were exasperated by the process of manoeuvring the Mahara platform. Despite the challenges and complexities, ePortfolios will be central to the educational systems of now and the future. Their ability to revolutionize how teachers teach, how students learn, and how learning outcomes are assessed is the driver for the change. Since there is an assumed connection between what teachers know and do and what students know and do (Smits, Wang, Towers, Crichton, Field, & Tarr, 2005, p.111), every effort should be made to improve the usability of the tool for ePortfolios to make teaching and learning visible.

The fundamental ePortfolios principles – collect, select and reflect are the gateway to the development of 21st century workplace skills in students. Skills such as critical inquiry, communication, collaborative learning, technological competence, and creativity are essential to survival both inside and outside of the classroom. However, institutionalized successful ePortfolios is not as easy and Meyer and Latham (2008) advanced the notion that successful implementation “requires strong support from university administration and a broad spectrum of stakeholders involved in the decision making and planning” (p. 35).

The assessment elements of eportfolios cannot be over-emphasized. Faculty members should have easy access to generic rubrics that can be adapted in different departments/faculties. It is essential that there is access to interactive training materials and guides to best practices on how to frame ePortfolios and improve assessment of student learning. Tutorials and other training tools should provide strategies for motivating and encouraging other users (faculty and students). Once ePortfolios are seamlessly integrated with students’ online classes or grade book, where both the Learning Management System platform and the ePortfolio platform speak to each other, there are greater and easier possibilities for faculty to assess and map competencies to outcomes.

Recognizing that most participants believed in the value of eportfolios, it behoves educational institutions to select an ePortfolio platform that is user-friendly, flexible and aesthetically pleasing but also has a professionally satisfying ePortfolio interface. The functionalities should provide easy access to and manipulation of internal and external artefacts. At the same time, the ePortfolio should be exportable and sharable especially for postgraduate purposes. Going forward is important - stakeholders should be aware of the viability and possibilities of ePortfolios. At the same time they should be mindful of the challenges associated with them. This study is the first in a larger project to improve the experiences of faculty and students using ePortfolios at the University of Alberta.

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