

## **Communities of learning and support through eportfolios: Student empowerment, and lifelong learning for students AND teachers**

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### **Abstract**

During this pandemic, as educational institutions worldwide shifted their teaching approaches, the realization has strengthened of the need for flexible, learner-centred, authentic assessment. As learning interventions that promote reflection and self-regulation, ePortfolios are considered alternative methods of assessment in classrooms that are in-person, blended, or entirely online. In facilitated instruction, ePortfolios are deployed to enhance educational experiences since they enable students to express their learning in various modes – text, audio, video, visual. The flexibility that eportfolios offer: online and/or offline, on desktops, laptops, or mobile, make them accessible to learners worldwide, thus providing educators with a pedagogical approach that is inclusive, collaborative, and innovative. Critical elements of ePortfolios include students documenting and reflecting on learning of skills, knowledge and competencies, linking formal and workplace learning, participating in communities of learning, and developing multi-modal digital literacies and communication skills.

*Keywords:* eportfolios, lifelong learning, authentic assessment, learning communities, reflection, self-regulation, student empowerment, professional development, formal-workplace learning transition

### **Introduction**

With the shift to mainly online learning since spring 2020, commonly called Emergency Remote Teaching (ERT), educational institutions worldwide faced the need to adapt and use digital technology for instruction, interaction, and assessment with different degrees of success and forethought (Hodges et al. 2020). Online pedagogy became a salient topic when the upheaval caused by the pandemic thus forced institutions to find creative ways to maintain continuity in their programs. As a technology-mediated educational approach that fosters reflection, ePortfolios facilitate instruction, interaction, and assessment in courses that are in-person, blended, or entirely online. In contexts where Internet access is limited or non-existent, ePortfolios can be created using mobile devices, in Google docs, PowerPoint or Word with hyperlinks to other artifacts or resources within the same folder, and saved onto CDs, DVDs or Flash drives for sharing or distribution. This can all be achieved while retaining the essential elements of incorporating audio, video clips, images, and other graphics to demonstrate or illustrate learning with reflection on the learning. When Internet access is available, the additional element of a learning community created through peer-to-peer and instructor-to-student feedback further enhances learning, based on constructivist and transformational learning theories. Working and studying in an already fully online university, our research team formed to explore what characteristics of and professional development (PD) for instructors foster effective facilitation of ePortfolios as both pedagogy and an assessment vehicle in our online environment. This led to the qualitative research study discussed later in this paper.

### **Background Information**

Portfolios in the pre-digital educational landscape were used mainly for art, writing and composition, and in professional fields such as performing and visual arts, design, health disciplines, engineering, and architecture (Farrell, 2020). They were used as an instructional and assessment strategy that promoted a reflective, iterative process that culminated in the student curation and presentation of the final product, whether reflective journal, professional development documentation, technical writing or design piece, academic essay, artwork, or performance piece. Following the advent of the World Wide Web by the mid-1990s, there was an explosion of educational tools available for instructors willing to include innovation in their practice. This was a time when electronic portfolios (ePortfolios) emerged as an educational tool (Zuba Prokopetz, 2021) which led to adoption and associated research studies on their implementation in many nations including Australia, New Zealand, Canada, Ireland, and the United States.

### **Definition, Process, Purpose, and Uses of ePortfolio**

An ePortfolio is a collection of pages that contain student work selected for a specific purpose (assessment, showcase, learning growth). The artifacts selected by the student tell their story on topics of effort, progress, and attainment of learning objectives in one or more areas (Abrami et al., 2007; Arter & Spandel, 1992; MacIsaac &

Jackson, 1994, Wade et al., 2005). This collection of student work is evidence of what was taught in the course, how learning was demonstrated, and why attaining competencies matter. The pages contain artifacts aligned with course objectives that highlight learning and student growth on a personal, academic, and professional level. When implementing ePortfolios in their courses, instructors consider their purpose and intended audience – innovative assessment tool (instructors), showcase of achievements (employers), process of learning (academic institutions), or lifelong professional learning (professional associations). ePortfolios are a prominent example of learning interventions that promote reflection and self-regulation and have been effective in classrooms that are in-person, blended, or entirely online. As an instructional strategy, ePortfolios are considered alternative methods of assessment, for they enable students to express their learning in various modes – text, audio, video, and graphical or pictorial.

During the development of their ePortfolios, students ideally interact with each other to view and comment on various iterations of their work. Feedback interaction is a key component in the development of ePortfolios and, in addition to instructor-student feedback, this peer-review process is an inherent strength in courses that include ePortfolio activities. For these reasons, ePortfolio practices continue to “serve as powerful exemplar for global higher education” (Batson, 2018, p. 11).

As instructional strategies, ePortfolios are deployed to support learning and make learning and educational experiences visible, since they enable the expression of outputs in various modes, as mentioned earlier. ePortfolios thereby provide students with “possibilities for school and work contexts allowing the use of a variety of tools to demonstrate and develop understanding” (Abrami et al., 2007, para. 6). Originally regarded as digital containers where visual and auditory content could be stored (Abrami & Barrett, 2005), ePortfolios are more than simply data storage loci. They have become sites that house artifacts that tell stories of the learning of each individual student. They also embody the shift in thinking toward a more inclusive, open, and equitable form of education. The flexibility that ePortfolios offer: online and/or offline, on desktops, laptops, or mobile make them available to learners worldwide, thus supporting educators in their attempt to democratize education.

### ***Authentic Assessment***

During this pandemic, as educational institutions worldwide shifted their teaching approaches, the realization has strengthened of the need for flexible, learner-centred, authentic assessment. As digital tools, ePortfolios enable self- and peer-assessment evaluation of learning performance during an extended period within a course or program of study. This collaborative form of assessment is grounded on a social and ecological constructivist approach to learning and instruction (Hoven & Palalas, 2016). In addition, it shows evidence of attainment of competencies, thus indicating level of mastery to future employers. As suggested by Strada Institute for the Future of Work (2019, p. 14),

College transcripts in their current format, do little to inform employers of a candidate’s abilities; they serve as a rough sketch of a candidate’s potential and merely list the subjects to which a person has been exposed not necessarily mastered.

With the COVID-19 virus continuing to affect how universities teach, and the sudden increase in emergency remote teaching (Hodges et al., 2020), the need for authentic assessment models has increased (Conrad & Openo, 2018; Hoven, 2014). Also during this time of upheaval and uncertainty, the authenticity of student-owned, self-reflective ePortfolios serve as exemplars of an assessment mode that effectively addresses issues of maintaining academic integrity in online assessment for instructors new to online teaching. Furthermore, the “alignment between university study and the requirements of industry” clearly impacts assessment techniques in higher education, and an ePortfolio assessment approach gives students a chance to “become stakeholders in their own progress” (Pelliccione & Dixon, 2008, pp. 751-752). An ePortfolio community of learners, as described by Acosta and Liu (2006), promotes “new and authentic collaborations, and provides means to foster learning, accountability, and reflections across the spectrum of academia and society” (p. 19), thus fulfilling the mandate of both the academy and industry. As a pedagogical innovation that revolutionizes learning and instruction, this high-impact instructional tool is grounded in deep learning (Watson et al., 2016). As such, it enables learners to authentically present their artifacts as they articulate their learning to date, in a form that is of value to learners, while also demonstrating their processes of learning, as well as their current state of mastery or competence.

### ***Formal-Workplace Transition***

We see evidence in both our own practice and the research literature, that courses underpinned by ePortfolio pedagogy generate stimulating discussion on the implications for future scholarship and research. One area for further studies is how ePortfolios may help students identify and articulate to prospective employers the skills they have acquired in their courses – to link formal and workplace learning more explicitly. Technical skills, once considered the key factors for employment, are no longer among the “six most highly valued skill vacancies [that include] active listening, critical thinking, reading comprehension, speaking, monitoring” (The Conference Board of Canada, 2022, p. 4). Advances in technology and changes in the labour market resulting from the unprecedented shift during the pandemic are shaping the future of employment. Critical elements of ePortfolios include students documenting and reflecting on learning of skills, knowledge and competencies, linking formal and workplace learning, participating in communities of learning, and developing multi-modal digital literacies and communication skills. A more valued set of skills to complete a task, which includes human skills, is what employers see as missing from prospective candidates according to The Conference Board of Canada. In this context, ePortfolios may be viewed as “the passageway from demonstrating proficiencies in meeting academic programs” and employment requirements (D’Angelo & Maid, 2013, Abstract). As educational institutions return to a modified version of a pre-pandemic environment, they may consider adopting “pedagogies that build specific human skills, such as critical thinking or problem solving” (Berdahl, 2022, How Universities Can, para. 5) as experienced in ePortfolio learning communities

### ***Communities of Learning and Support through ePortfolios***

The sudden shift to online spaces revealed new training needs for academic staff and faculty who had not yet experienced instruction mediated by educational technology. Faculty using a learning management system (LMS) for the first time were able to see at a glance the content housed in their courses. Instructors who had been implementing paper-based portfolios in their practice were able to upload instructions to their institutional LMS to ensure students continued to submit evidence of their learning in the form of artifacts. Educational actors interacting with ePortfolios in the initial weeks of the upheaval were able to rely on their learning communities for support, guidance, and continuity. In our study discussed below, evidence for the evolution of ePortfolio practice in Canada was found in the number of university websites mentioning ePortfolios pre-pandemic; however, the availability of learning opportunities for faculty was under-documented (Hoven et al., 2021). This paucity of evidence-based practice in elements of selection or allocation of instructors to facilitate ePortfolios, in addition to the lack of research into successful PD activities for such instructors stimulated our research study.

### **Research Study and Recommendations**

The purposes of this exploratory interpretive research study of the 10 Canadian institutions identified as offering ePortfolios were 1) to learn about how faculty or instructors are selected to facilitate courses or programs in which ePortfolios are featured and 2) what PD opportunities they have experienced and consider successful or useful. The study involved a series of 5 phases:

- 1) a search of university websites across Canada to identify which ones offered ePortfolios and who were critical faculty or instructional staff involved;
- 2) a deep search of research literature for studies documenting PD activities for instructors of eportfolios;
- 3) conducting online recorded interviews with consenting ePortfolio faculty and instructional staff (11 individuals) identified in 1);
- 4) inductive analysis of transcripts of the recorded interviews to identify themes and categories of themes, using a *Miro* board<sup>1</sup>;
- 5) collaborative dialogic reflection among team members to reach agreement on answers to our research questions, producing recommendations.

As part of the interview process with participants, we explored their experiences of ePortfolio PD activities, the success or otherwise of these, what they learned and recommended as a result of these experiences, and what characteristics of themselves and other colleagues facilitating ePortfolios they recognize as being conducive to effective ePortfolio facilitation.

Through these processes, we were able to determine that across the Canadian universities identified, ePortfolio facilitators have experienced a distinct lack of formalized PD support. Common comments concerning the PD

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<sup>1</sup> *Miro* boards are digital whiteboards used to visualize themes and collaborate with others

activities offered by their respective universities were that these typically focused on the technology (i.e. the platform advocated or adopted) rather than the pedagogy of ePortfolio use, and that they were predominantly at an introductory level with little opportunity for staged or phased follow-up. The approaches to finding out about ePortfolios expressed to us included an emphasis on self-directed and self-initiated learning such as reading, attending conferences and workshops, and talking with colleagues. One experience that was repeated by several participants was learning alongside students. These last two approaches indicate a strong initiative on the part of ePortfolio instructors to use their ePortfolio instruction practices as a means of increasing their own professional and learning growth. This experience then had a washback effect on their teaching, their teaching philosophy, and their course and assessment design.

Although the main aim of our study was to explore the PD available for faculty integrating ePortfolio activities in their courses, participants often discussed the learning curve associated with the technological aspect of ePortfolios. For instance, one participant remarked, “I’m having to learn and develop my skills in [the platform], but even then, I have to finesse the tools. So, there is a significant learning curve”. Along the same line, another participant indicated that “there is a workload issue when it comes to ePortfolios from a technology piece”. To address such challenges, an educational technologist mentioned that, in their institution, they were having conversations around “formally identifying what are the core technologies [they] absolutely need to have to carry on with [their] learning and teaching model? And what are the nice-to-haves, but if push comes to shove, they might have to go”. This quote echoes notions expressed by other participants who considered pedagogical principles underpinning the use of ePortfolios as precursors for decisions around technologies.

The research findings showed that many participants appreciated technologies that were flexible and allowed learners to make connections between various types of their learning experiences, especially “because the ePortfolio belongs to the students” as one instructional designer confirmed. To illustrate this notion, a faculty member explained that “there’s such power when we give learners that control over telling their own story of their own learning”. Since this learning is not restricted to academic programs, the ePortfolio owners – i.e., learners – can choose to tell their stories of learning using the digital tools that meet their needs, including showcasing the outcome of their learning for career purposes. While acknowledging the benefits of showcasing achievements to employers, participants in this study valued ePortfolio technologies that allowed learners to reflect on their learning processes, as one participant clarified, “We began work on portfolios, marrying this notion of a multi-media container of students’ work and a process portfolio that supports the key elements of self-regulation”. Other participants highlighted the importance of using ePortfolios to make the invisible learning visible through reflective writing.

Turning to the characteristics of instructors or facilitators of ePortfolio activities, common participant responses included the importance of being reflective themselves, and taking a flexible, holistic, learner-focused stance in their teaching philosophy. Several participants also identified themselves as being risk-takers, by which they further elaborated as their willingness to try new teaching approaches and innovative technologies to improve their practice and their students’ learning. Others expressed the importance of being willing to go slow and experience ePortfolio development themselves.

Recommendations for ePortfolio introduction and implementation that emerged from this study, as communicated by participants, are stated as follows:

1. PD should take the form of a needs-based, in-practice approach;
2. on-going PD opportunities should be available as instructors’ experience and practice develops;
3. cross-fertilization practice-sharing opportunities need to be offered across disciplines and the campus as a whole;
4. ePortfolios need to be designed into programs from the initial curriculum planning stage; and
5. facilitators should create their own ePortfolios: to experience both the technical challenges and the process, to better advise students and to model the reflection process.

## **Conclusion**

Recognized as high-impact educational practices in 2016 (Watson et al., 2016), ePortfolios promote and manifest innovation in teaching and learning (Eynon & Gambino, 2017; Kuh, 2008; McNair & Albertine, 2012;). They also constitute an elegant research area in Internet spaces (Zuba Prokopetz, 2021), thus opening up opportunities for

practitioners and their students to develop research skills both individually (an autoethnographic account, for example) and in collaboration with like-minded colleagues around the globe. Findings of these studies would contribute to the shared knowledge of ePortfolios as a practical application (the product) and as a theoretical pedagogy (the process) in an open educational context. Another area for future development suggested by participants is the establishment of a Canada-wide Community of Support (CoS) for ePortfolio practitioners. While several Communities of Practice exist in various countries, there is not yet a CoS for novice practitioners to find answers to some of the questions they may have as they embark on creating their own ePortfolios or facilitating their implementation in educational environments. Our research team is currently exploring ways to fund such an ePortfolio CoS to include “how-to” resources, an annotated list of potential ePortfolio platforms, a discussion forum or collaborative blog, a Q&A section, as well as a webinar series conducted by invited experts in the area. Finally, ePortfolios represent a rich pedagogical vehicle for instructors/teachers to reflectively explore and document their professional and educational growth, foster transformation of teaching philosophies, and bring to conscious awareness their capacities and capabilities as lifelong and life-wide learners.

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