Winter 12-31-2018

"Tell Me About Yourself" - Using eportfolio as a Tool to Integrate Learning and Position Students for Employment, a Case from the Queen's University Master of Public Health Program

Brenda Melles
Queen's University, brenda.melles@queensu.ca
Andrew B. Leger
Queen's University, al7@queensu.ca
Leigha Covell
Queen's University, leigha.covell@queensu.ca

"Tell Me About Yourself" - Using eportfolio as a Tool to Integrate Learning and Position Students for Employment, a Case from the Queen's University Master of Public Health Program

Abstract

This paper explores the use of eportfolio to develop, demonstrate and promote core competencies in a Professional Master of Public Health (MPH) program at Queen's University in Kingston, Ontario, Canada. Piloted in 2016, the MPH Competency eportfolio is described as a purposeful collection of electronic evidence that demonstrates learning and achievement in public health over time. The eportfolio was framed both as a reflective learning process and a showcase product to demonstrate skills and competencies to potential employers. The eportfolio was implemented using an available tool on Queen's University's Learning Management System. To understand the impact of the eportfolio, students responded to a questionnaire and participated in a focus group.

Themes identified from the student responses were:

1. eportfolio helped students integrate and reflect on their learning and experience.
2. eportfolio helped students to position their professional identity and experience for employers.
3. Students were more convinced of the value of eportfolio as a reflection tool than as a showcase product for a professional setting.
4. Students were not convinced that employers will actually look at an eportfolio.
5. The technology used in this study was limiting for students.
6. Students were interested in using other established and more user-friendly platforms.

The findings of this study will benefit any program or course of study seeking a means to help students integrate their learning and demonstrate their accomplishments, skills, and competencies. This paper addresses how to integrate eportfolio at the program level and also provides insight into the student experience of their use.

Cet article explore l'emploi d'un eportfolio pour développer, démontrer et promouvoir les compétences de base offertes dans un programme de maîtrise professionnelle en santé publique à l'Université Queen's, à Kingston, en Ontario, au Canada. Le programme pilote, un eportfolio des compétences pour la maîtrise en santé publique, a été lancé en 2016. On le décrit comme un recueil ciblé de preuves électroniques qui démontrent l'apprentissage et les réussites en santé publique au fil des ans. On dit également que le eportfolio est à la fois un processus d'apprentissage par la réflexion ainsi qu'un produit phare qui permet de démontrer les aptitudes et les compétences aux employeurs potentiels. Le eportfolio a été mis en oeuvre grâce aux outils disponibles dans le système de gestion de l'apprentissage de l'Université Queen's. Afin de comprendre l'impact du eportfolio, les étudiants ont répondu à un questionnaire et ont participé à un groupe de discussion.

Les thèmes identifiés à partir des réponses des étudiants sont les suivants :

1. Le eportfolio a aidé les étudiants à intégrer leur apprentissage et leurs expériences et à y réfléchir.
2. Le eportfolio a aidé les étudiants à positionner leur identité et leurs expériences professionnelles à l'intention des employeurs.
3. Les étudiants étaient davantage convaincus de la valeur du eportfolio en tant qu'outil de réflexion plutôt qu'en tant que produit phare pour un milieu professionnel.

4. Les étudiants n'étaient pas convaincus que les employeurs allaient réellement examiner un eportfolio.
5. La technologie employée dans cette étude était limitative pour les étudiants.
6. Les étudiants étaient intéressés à utiliser d'autres plate-formes établies et plus faciles à employer.

Les résultats de cette étude seront utiles pour n'importe quel programme ou n'importe quel cours qui vise à trouver un moyen d'aider les étudiants à intégrer leur apprentissage et à démontrer leurs réussites, leurs aptitudes et leurs compétences. Cet article explique comment intégrer un eportfolio dans un programme et fournit également des renseignements sur l'expérience des étudiants qui l'ont utilisé.

Competencies Matter More to Employers Than Credentials

Competency-based education is a major movement in higher education, reflecting the drive to more effectively achieve and measure student outcomes. Competencies are the essential knowledge, skills, and attitudes necessary for the effective practice of any profession or pursuit. Various disciplines, including engineering, medicine, public health and more, have defined a list of specific competencies necessary for their practitioners. Competency-based education is also closely tied to more effectively preparing students for the labour market. Employers want to hire candidates not only with relevant disciplinary knowledge, but also with the necessary skills and competencies to succeed in their workplace.

A 2013 Gallup poll surveyed a nationally representative sample of 623 US business leaders on the importance of various factors for hiring (Calderon & Sidhu, 2014). Technical knowledge and applied skills came out on top, far outweighing the importance of a candidate's college major or college pedigree. The same is true in Canada. The March 2016 report Developing Canada's Future Workforce surveyed 90 leading Canadian private-sector employers. When asked which capabilities matter most when evaluating entry-level hires, respondents emphasized soft (or non-cognitive) skills including collaboration and teamwork, communication, problem-solving, and people and relationship-building skills. Importantly, "while grades and educational credentials are certainly important to recruiters, companies are increasingly focused on finding people who can work in teams, solve complex problems and show a willingness to learn" (Business Council of Canada & AON Hewitt, 2016). Results from the 2013 Canadian National Business Survey echo these findings. Employers are prepared to offer significant technical training so long as employees have the appropriate "soft skills" (Canadian Education and Research Institute for Counselling and Environics Research Group, 2013).

Current Use of eportfolio in Higher Education Settings

eportfolio technology emerged in the late 1990s with the dawn of the personal computer. In its simplest form, eportfolio technology allows users to retain artifacts that can be arranged and shared at a future date (Avraamidou & Zembal-Saul, 2002). It is estimated that over half of higher education institutions in North America use eportfolio (Dalhstrom, Walker, & Dziuban, 2013) with over one-third of faculty agreeing that eportfolio could help them become more effective instructors if they knew how to integrate them into their courses more effectively (Pomerantz & Brooks, 2017). While eportfolio pedagogy is more important than eportfolio technology, there are a number of options available for offering eportfolio platforms on-campus, including commercial applications (stand-alone software or software integrated into a learning management system) or free Web 2.0 programs that are available on the internet (e.g. WordPress, Wix, Weebly). The success of an eportfolio initiative hinges upon the type of technology used, its user-friendliness and services available (Wepner, Bowes, & Serotkin, 2005) and ultimately, the selection of an eportfolio technology should be driven by the type of eportfolio pedagogy that is required (Bernander, O'Laughlin, Rodrigo, Stevens, & Zaldivar, 2017).

There are two common forms of eportfolio: Developmental and Showcase (Barrett, 2010). Developmental eportfolio place an emphasis on reflection and individual growth in a particular area or on a piece of work over time, whereas Showcase eportfolio display artifacts that demonstrate ability or work. Beyond improving reflection, increasing integration of knowledge, encouraging self-regulated learning and improved student engagement, developing a portfolio

offers a powerful opportunity for students to achieve competencies and outcomes in ways other than standardized measures (Abrami, et al., 2009; Jenson, 2011).

Although there is a sizeable body of literature and over a decade of use, the eportfolio conversation has shifted in recent years. There is a trend toward blending of the two common eportfolio formats (developmental and showcase) with the intention of shifting from merely collecting artifacts to more meaningful reflection and curation of artifacts over time (Buyarski, Oaks, Reynolds, & Rhodes, 2017; Chen & Penny Light, 2010). Merging these two styles works to achieve multiple aims (Cambridge, 2010), whereby students can blend their curricular and co-curricular experiences to create a more significant learning experience, and share their contextualized learning with multiple audiences (Enyon, Gambino, & Török, 2014). Through reframing eportfolio as part of the learning process and as a facilitator of the process, we can achieve an optimal learning zone which allows us to better "support the collaborative, relevant, reflective, integrative, and multiple-perspective aspects of authentic learning" (Buyarski et al., p. 11). This more robust eportfolio movement that describes the learner from multiple perspectives has encouraged their classification as a high impact practice for post-secondary learning (Harring & Luo, 2016; Hubert, Pickavance, & Hyberger, 2015; Kuh, 2016).

eportfolio as Online Tool to Showcase Professional Competencies

eportfolio have also emerged as a leading pedagogical approach for helping students to articulate and demonstrate their professional competencies (Ambrose, Delaney-Klinger, Hoeppner, Ngo & Polly, 2017). A recent investigation of the usefulness of eportfolio to develop reflective skills and demonstrate competency development in a dentistry program out of the University of British Columbia found that eportfolio grades significantly correlated with faculty rankings of student clinical performance, and students valued an opportunity to reflect on their skills in a personal format (Walton, Gardner, & Aleksejuniene, 2015). Likewise, success from students and instructors was reported from researchers investigating the use of an eportfolio component in the undergraduate medical education curriculum at the University of Ottawa (Hall, Byszewski, Sutherland, & Stodel, 2012). Students used eportfolio to align their experiences and skills with the eight CanMEDS competencies set out by the Royal College of Physicians and Surgeons of Canada, ultimately growing the eportfolio program enrolment from 154 to over 600 students.

Although the value and use of eportfolio from an employer's perspective is still under investigation, studies indicate a high-level of interest expressed by employers and willingness to review an eportfolio as part of a job application should it be made readily available (Ambrose, 2013; Hart Research Associates, 2013; Ward & Moser, 2008; Yu, 2011). Some professions are now requiring practitioners to provide evidence of competence and continued professional development in the form of a portfolio (Kardos, Cook, Butson, & Kardos, 2009). Early findings indicate that eportfolio are an effective way for students to communicate professional identity, competency, organize and reflect on experience, and show alignment to selection criteria to employers and ultimately moving beyond simply listing degree credentials and employment experience on a résumé (Emmett, Harper, & Hauville, 2006; Kryder, 2011; Lievens & Wesseling, 2015; Moretti & Giovannini, 2011; Pitts & Ruggirello, 2012; Ward & Strivens, 2010). eportfolio artifacts blend discipline-specific technical knowledge and other important competencies that employers value, such as communication, critical analysis, leadership, or team building to demonstrate "what can you do," rather than "what courses have you completed on your transcript."

Artifacts can be drawn, not only from formal academic work, but also from previous employment, volunteer experience, practicum placements, internships and co-curricular activities, thus integrating student learning and accomplishment. More than just a showcase product for employers, the process of putting together the eportfolio can also be a powerful learning experience for students, allowing them to actively reflect on their competency growth and achievements, articulate their professional mission and ultimately instill a continued professional development practice for health professionals (Gordon & Campbell, 2013).

eportfolio Initiative in Queen's University Master of Public Health Program

Queen's University's MPH program introduced the use of eportfolio at the program level in 2016 as a required assignment for all students. Early in the initiative, all core instructors in the MPH program were introduced to the purpose of the eportfolio and encouraged to integrate the concept of eportfolio within their course and assessment requirements. The eportfolio initiative is hosted within a mandatory course for all MPH students called Public Health Professional Development. This host course provides support to students in the process of developing their eportfolio including workshops on required elements of the eportfolio, two peer feedback clinics, and other technical support. The host course runs in both the fall and winter terms of year one of the 16-month program.

The MPH Competency eportfolio is defined as a "purposeful collection of electronic evidence that demonstrates learning and achievement in public health over time." The MPH program tells students: "Imagine that all of your life's experience and accomplishments filled an Art Gallery. Your MPH Competency eportfolio would be like a Special Exhibit." Students are given a detailed eportfolio handbook, which spells out the shape and purpose of the eportfolio, required components, and "how to" technical instructions. Required components include a professional mission statement, résumé, and artifacts and reflections grouped under three theme areas of student-defined professional interest. Artifacts can be drawn from course assignments, co-curricular activities, practicum placement, community involvement or employment.

In order to be included in the eportfolio, artifacts must concretely demonstrate one of seven core competencies of public health or 36 competency statements defined by the Public Health Agency of Canada. These competencies "transcend the boundaries of specific disciplines and are independent of program and topic" and include: public health sciences; assessment and analysis; policy and program planning, implementation and evaluation; partnerships, collaboration and advocacy; diversity and inclusiveness; communication; and leadership (Joint Task Group on Public Health and Human Resources, 2005). Because public health practice is highly inter-professional and many public health providers have overlapping competencies, the Canadian government has recommended a competency-based rather than discipline- or profession-based approach to public health workforce planning (Public Health Agency, 2008)

The program uses a scaffolded approach to developing the eportfolio with students. By week two in the host course, students are introduced to the eportfolio's broad purpose as a job seeking tool to help students clarify and articulate their professional identity and demonstrate their accomplishments and competencies to potential employers. That same week, students also receive training on the eportfolio technology by an Educational Technologist based at the Centre for Teaching and Learning. Throughout the first fall term, students are encouraged to collect and reflect on relevant artifacts. Two class sessions in the host course—one in the fall term, and one in the winter term—are dedicated to required components of the eportfolio, the résumé and the

professional mission statement. Both of these elements are required for submission midway through the year, and students are given instructor feedback. Further training from the Educational Technologist happens at the beginning of the winter term, where students are coached on how to create and design an eportfolio presentation. At the end of both fall and winter terms, the instructor of the host course leads a peer feedback clinic, where students assess their progress on eportfolio to date, including their identified themes of professional interest and their supporting artifacts and reflections.

Students submit a working draft eportfolio at the completion of their first eight months of coursework, before their four month practicum placement. This submission is assessed as a pass-fail assignment—if submitted with the required elements, a pass is granted. In their final term of study, students are encouraged to continue to add to their eportfolio, although there is no required resubmission of the eportfolio when the 16-month program is completed. This scaffolded approach means that students submit required components of the eportfolio gradually throughout the program and they are regularly invited to discuss their progress with peers and the instructor.

The MPH Competency eportfolio blends both the developmental and showcase functions, and is designed as both process and product. Putting together the eportfolio is an exercise in reflective practice for students. As students collect, reflect and select artifacts for their eportfolio, they clarify and articulate their professional identity, what they can do, and what they would like to further develop. More than just a reflective learning process, however, the MPH Competency eportfolio is also intended as a showcase product—a flexible job seeking tool that clearly and concretely demonstrates skills and competencies to a potential employer.

Method

Purpose of the Study

The overall purpose of this study was to examine the use of eportfolio to develop, demonstrate and promote core competencies in a Professional MPH program at Queen's University in Kingston, Ontario, Canada. The focus of the study was to explore the effectiveness of using eportfolio as a tool to help position students for employment as they transition from graduate studies to professional employment in the field of public health.

Participants

Participants were a convenience sample of 30 full-time MPH students from Queen's University. The Queen's University MPH program is a professional, course-based degree whose mission is to educate, equip and inspire students to take Evidence-Informed Action for Public Health. The degree is 16 consecutive months in duration and attracts undergraduates from a range of disciplines. Virtually all students go on from the degree to pursue a profession in public health settings including local public health agencies, research institutes, provincial or federal government health agencies, and community organizations.

Queen's University's General Research Ethics Board granted ethics clearance for the study. Each participant reviewed a letter of information and signed an individual consent form.

Approach

The following questions guided this research study:

1. How effective was eportfolio as a developmental tool for reflective practice to help students integrate their learning and clarify their professional goals?
2. How effective was eportfolio as a tool to help students develop a showcase product to share with potential employers?
3. What was the student experience with the eportfolio technology platform?
4. In what ways could the experience of developing an eportfolio be improved for other students?

"Effectiveness" in this study is measured by self-reported student perceptions. In order to answer these questions, data were collected by an online survey and an in-person focus group. The online survey was designed by the instructor of the eportfolio host course, Public Health Professional Development, using FluidSurvey and administered one month after course completion. The 10-question survey used a combination of multiple choice and open text response questions. Students ranked various aspects of the eportfolio technology platform, as well as the perceived usefulness of the eportfolio process for various purposes, including clarifying professional identity and integrating their learning across various spheres. Open questions asked about the most valuable and most difficult things about developing the eportfolio, and student suggestions for improvements. A survey link was distributed by email to all (n=30) participating MPH students in May 2016. In total, 22 survey responses were received, for a response rate of 73 percent. The survey collected 88 unique text comments, analyzed using thematic analysis. Detailed responses were examined by each of the three researchers.

In addition to the online survey, all study participants (n=30) were invited to participate in a focus group to further discuss the survey findings, with over half (n=18) expressing interest. The focus group was conducted five months after completion of the eportfolio host course, after the students' practicum placement and during their final fall term of the MPH degree. Based on scheduling availability, nine (n=9) study participants participated in a 1.5 hour focus group. A focus group guide was prepared by the three researchers, made up of nine questions to guide discussion. Questions explored the students' experience of the value and challenges of the eportfolio process, their perceptions on the usefulness of the eportfolio for employers and the MPH program, and their future plans for eportfolio. During the focus group, researchers were able to explore more deeply some of the findings of the survey data, as well as surface new themes, particularly around the actual practice and perceptions of sharing eportfolio with employers. One researcher facilitated the focus group discussion while another researcher took detailed notes. The focus group was audio recorded. The focus group discussion was analysed by theme and quotes that illustrated the dominant themes were transcribed.

Results

Effectiveness of eportfolio as a Developmental Tool for Reflective Practice

The MPH Competency eportfolio was an effective developmental tool for reflective practice. Online survey responses (*n*=22) revealed that the majority of students "agreed" or

"strongly agreed" that developed an eportfolio had helped them integrate their learning from various sources (73%), reflect on their achievements (68%), understand and articulate the skills they developed during their time at Queen's (64%), and clarify their professional goals (59%) (see Table 1).

Table 1
Percent Agreement of Online Survey Responses

	% Strongly Agree	% Agree	% Neither Agree nor Disagree	% Disagree	% Strongly Disagree	% Not Sure
Please rate your level of agreement with the following statements. Developing an eportfolio has helped me....						
Clarify my professional goals	4.5	54.5	22.7	9.1	9.1	0.0
Articulate my professional identity	4.5	36.4	31.8	13.6	9.1	4.5
Integrate my learning from various sources - including courses, co-curricular activities, employment etc.	9.1	63.6	13.6	4.5	4.5	4.5
Reflect on my achievements	4.5	63.6	27.3	0.0	4.5	0.0
Create a showcase product to demonstrate my skills and competencies to potential employers	0.0	45.5	22.7	18.2	9.1	4.5
Collect and store important documents, images, assignments etc.	13.6	45.5	27.3	9.1	4.5	0.0
Understand and articulate the skills I have developed during my time at Queen's University	4.5	59.1	22.7	9.1	4.5	0.0
I would recommend the MPH eportfolio to future students as a valuable use of their time	0.0	22.7	18.2	40.9	13.6	4.5

When asked what was the most valuable part of developing their eportfolio, students emphasized the value of reflecting on artifacts and curating them into a cohesive picture of themselves as a public health professional. By contrast, simply collecting artifacts without purposeful reflection, was not seen as useful. This theme was particularly strong in the focus group, where participants

tended to conflate reflection on achievements with helping them articulate their professional identity, rather than seeing these as separate tasks.

> I thought the most valuable part of it was the self-reflection exercise… thinking through what you've done, what you feel your strengths are, what you want to highlight about yourself, and also things that you don't want to highlight, and what you want to improve. (Focus group participant)

Both online survey responses and focus group responses emphasized how sorting through and integrating experience increased the students' sense of confidence and legitimacy as public health professionals.

> The most valuable thing so far has been analysing the work we have done in our courses and sorting it into concrete evidence for skills attained. I felt more confident by having thought of evidence for certain themes, as well as looking back on assignments as truly constructive toward our professional goals. (Survey response)

> It gave me that confidence that, well, I did do it! …You have these competencies that you list…and sometimes it felt like, I have no idea what this even means. Then I would look at the work I would put in that eportfolio… .It made me feel a lot more valid // Ya, as legit. // It didn't feel like I was false advertising anymore. (Focus group participants)

Creation of the professional mission statement, and the accompanying reflection and integration of learning also helped clarify professional identity.

> Going through my work I think highlighted some patterns that I hadn't previously seen. I think it kind of helped me find myself again if that makes sense. In that in the chaos of finding jobs, and applying for jobs and wanting to be employable, I think I lost my own…why I started this and what I am really passionate about. So I think that process really helped me look through my work…" (Focus group participant)

> It validated the mission statement. At first the mission statement felt like I was just pulling words to make a sentence, but then you look at what you've done and then you're like, ok no, I'm not wrong… // This is a story, this is a narrative. (Focus group participants)

Finally, a distinctive theme in the focus group conversation was that the reflective practice function of the eportfolio had strong value, even in the absence of a showcase function or showing your eportfolio to anyone else.

> I might not show it to someone, but the exercises, going through that, and reflecting and organizing everything - that helped me make my résumé, that helped me guide what I would say in an interview. That was valuable for me. (Focus group participant)

> To be honest, I'm still not sold on the utility of an eportfolio in the professional space. I do appreciate the value it has as a tool for self-reflection and professional identity shaping. (Survey response)

Effectiveness of eportfolio as a Showcase Tool for Potential Employers

The Queen's University MPH eportfolio initiative had limited effectiveness in terms of helping students create a showcase product for potential employers. Less than a fifth of students surveyed (18%) expressed satisfaction that the eportfolio tool/technology could create a showcase product they would be enthusiastic about sharing with a potential employer (See Table 2).

Table 2
Student Responses about Satisfaction with eportfolio Tool/Technology

	% Very Satisfied	% Satisfied	% Unsure	% Dissatisfied	% Very Dissatisfied
How satisfied are you with the potential of the eportfolio <u>tool/technology</u> to create a showcase product you would be enthusiastic about sharing with a potential employer?	0.0	18.2	40.9	27.3	13.6

An important theme from open text responses was that students were not convinced that public health employers would actually look at eportfolio. Further, this skepticism about the utility of eportfolio for potential public health employers negatively impacted student motivation to invest in their eportfolio.

I'm not convinced on exactly how an eportfolio will be integrated into a job application process, nor how effective it will be for potential employers, as often they only want to look at exactly what they requested. I think the trouble I have in developing the eportfolio is the time spent doing it, while at the same time wondering how much time someone will actually look at it. It makes it less enticing to work on. (Survey response)

I'm still skeptical about its practicality and that totally affected the amount of effort and time I put into it. (Focus group response)

Depending on the student, a range of time was spent on developing a working draft eportfolio which consolidated artifacts and reflections, and might be shared with others, including potential employers. The majority of students spent 4-6 hours on their eportfolio assignment (see Table 3).

Table 3
Student Responses about Time Commitment

	% of Students				
	Less than 1 Hour	1-3 Hours	4-6 Hours	7-9 Hours	10 Hours or More
How much time have you spent so far developing your working draft eportfolio?	4.5	22.7	36.4	22.7	4.5

The focus group discussion was able to explore more deeply student practices and perceptions of sharing the eportfolio with employers as a showcase tool. By the time the focus group was conducted, participants had completed a 400-hour workplace practicum placement and were in their final term of coursework and looking ahead to potential employment. None of the focus group participants had shown their eportfolio to potential employers. Students believed that the job application process, particularly in larger public service organizations in public health, is too prescribed and rigid to welcome the submission of an eportfolio. Online job application processes typically invite a résumé and cover letter only. Focus group participants did note that there may be other opportunities beyond the job application process to share an eportfolio, including after an interview, or after a networking conversation. This team was echoed in a survey response, which stated:

> It is a useful technology to gather past ideas/project/presentations into one location. However, the broader goal in using the eportfolio to showcase our work to future employers is not well articulated. In my opinion it lacks the efficiency and popularity that would encourage future employers to peruse our curated presentation. Given that employers look at our résumés and cover letters for such a short period of time, the likelihood of employers going through our eportfolio seems even smaller. Additionally, if employers are interested in what they might find on potential candidates on the internet and do a google search, it may be difficult for employers to find our published presentations and navigate the resulting webpage that comes with the technology.

Focus group participants also observed that sharing eportfolio is not common practice for public health professionals in Canada, and thus, not expected or invited by potential employers. They also noted the generation gap between people who are in hiring positions in public health organizations, and new MPH graduates, with the older generation not yet exposed to eportfolio technology.

> Right now, the people who are hiring us are of a generation where the eportfolio doesn't make sense to them. If you are working in public service where the people you work for are clearly a different generation from you, then [a more well known platform like] LinkedIn is a pivotal tool. (Focus group response)

Student Experience with eportfolio Technology Platform

The Queen's MPH eportfolio initiative was implemented using the eportfolio tool on the Queen's University Learning Management System (LMS). Students were given training on how to use the LMS eportfolio tool through two in-class workshops, as well as given access to extra technical support if desired.

Student feedback on the LMS eportfolio tool they were required to use was almost uniformly negative. Zero students rated overall user friendliness as excellent; over 70% rated the user friendliness and the overall look and feel as poor or fair. Only four students (18%) were satisfied with the potential the eportfolio tool to create a showcase product they would be enthusiastic about showing to an employer.

> I have not enjoyed using the platform at all. It does not feel very user friendly. For example, I wasted about an hour just formatting the text in my résumé...I found that I would often compromise what I wanted my portfolio to look like with what I felt reasonable/achievable in the available time. (Survey response)

> The technical aspects (embedding, linking, page layout) aren't very intuitive at all. I stumbled my way through it and ended up giving up most of the way through because I ran out of time. It often took upwards of 10-20 clicks before I could do something as simple as upload my picture (which ended up losing a lot of resolution when I posted it). (Survey response)

Focus group participants commented on the lack of modern visual appeal of the available eportfolio templates, with one participant noting they "did seem to have a childish set-up." Students were frustrated with the limited options to customize their eportfolio presentations, and the lack of user-friendliness for basic functions including adding and formatting documents and images. One survey respondent stated, "The outdated template doesn't leave much room for personalization." Another stated, "Moving forward as a professional, I just think I would want it to look more professional."

Survey and focus group responses emphasized that ease of use and customizable templates with flexible modern design are top values for students in terms of an eportfolio technology platform. Students are interested in using other established and more user-friendly platforms. Not all study participants, however, were willing to invest their time and energy in creating an eportfolio in a personal website style. Study participants from both the online survey and the focus group noted integrating artifacts and reflections into a more well-known and available platform like LinkedIn may be more effective as a job-seeking tool.

Improving the eportfolio Experience for Students

Study participants had several recommendations on how to improve the experience of developing eportfolio. Only 22% of survey responses agreed that they would recommend the MPH eportfolio in the same format to future students as a valuable use of their time. A large number of recommendations for improvement centred on changing the technology platform to a more user-friendly design interface—a relatively easy "fix" given the number of other freely available website building tools.

I would recommend the process of creating the eportfolio, as it was a useful exercise to explore my professional identity and to gather the documents that provide supporting evidence for that identity. I would strongly recommend switching platforms, as I feel like I wasted time trying to format my portfolio that could have been better spent on tweaking/determining content. (Survey response)

However, the more substantial suggested theme for change is to reposition the emphasis on the eportfolio to be stronger on the developmental function, and less on the showcase function. In other words, the focus would be more on student learning through reflective practice, and less on producing something to show a potential employer. This recommendation grows from the skepticism that study participants have about the likelihood that public health employers will actually look at eportfolio. While study participants did not preclude the option of showing an eportfolio to a potential employer, they did not want that to be the centerpiece of the effort. As one focus group participant said, "The way you position it, the ultimate end goal, would have to change. It's more for the student, but it could be a good tool to have for an employer."

Discussion

This study focused on the use of eportfolio to develop, demonstrate and promote core competencies in a Professional MPH program. Results of the study suggest that the most effective use of eportfolio in the Queen's MPH program was as a developmental tool for students rather than a showcase tool for potential employers. Students consistently expressed that the primary value of developing their eportfolio was to intentionally integrate and reflect on their learning and accomplishments. This eportfolio process also had an unanticipated result of increasing students' sense of confidence and legitimacy about their competencies as emerging public health professionals. Students' perspective is that the value of reflective practice persists, even in the absence of showing an eportfolio to another audience beyond self. Though developing the eportfolio helped students both clarify and articulate their professional identity, participants were skeptical about the use of eportfolio in a Canadian public health setting as a hiring tool. In short, the main benefit of the eportfolio in this study was for the student, not the employer.

Despite some success, particularly in terms of promoting learning and self-reflection on public health competencies, this study also revealed that the eportfolio technology used in this initiative was limiting for students. Students wanted a more user-friendly platform that would allow them to customize the look and feel of their eportfolio presentations. Wrestling with the technology decreased student motivation to create a showcase product. Students highly value the ability to easily create and customize an eportfolio presentation that reflected their own unique creativity and competencies.

The study found that the implementation strategy for the eportfolio initiative—launching the eportfolio as a program-wide initiative, and hosting it within one required program course—was an effective approach. Study participants emphasized the importance of a faculty point-person who could coordinate and provide ongoing coaching and feedback. Scaffolding the required components of the eportfolio within the host course—regularly providing training, support and peer feedback on individual elements of the overall product—created a context for success. All study participants created working draft eportfolio where they can continue to add artifacts and reflections from their practicum placement, further coursework, co-curricular activities, community volunteer experience or employment. Focus group participants, still in the midst of

completing the MPH program, shared their future plans for their eportfolio. Several planned to use it as a reference tool before job interviews—a way to refresh their memory on their professional mission, professional areas of interest and accomplishments. Others plan to migrate the contents into their established LinkedIn profile. And still others plan to move the contents of their eportfolio into a different technology platform.

Study participants recommend continuing to use the eportfolio in the MPH program, so long as its primary goal is self-reflection to help integrate learning, clarify professional goals and position students for employment. Learning from this study has already informed how eportfolio will be implemented for future classes of MPH students. New students will be required to submit four reflective practice narratives using a new framework for reflection—two in the fall term, and two in the winter term—each based on an eportfolio artifact. This prioritizes the reflective value of eportfolio and increases the opportunity for instructor and peer feedback. It also means that students will have completed at least four eportfolio submissions well before the final due date. Further, an additional assignment will require students to write their response to a selection of standard interview questions, using one of their eportfolio artifacts as an illustrative example. Timing for this assignment is staged to be right before interviews for their practicum placement, and thus increases the eportfolio's relevance and timeliness. Finally, students will be given the choice of which technology platform they wish to use for their eportfolio (including a free website building tool, LinkedIn, or other platform), rather than being required to use the embedded eportfolio tool in the Learning Management System.

Conclusion

Using eportfolio in a Professional MPH program has high potential to integrate learning and position students for employment. Programs can use eportfolio to create a significant opportunity for students to collect, reflect, and curate accomplishments that demonstrate their competencies. When choosing a technology platform, students want a user-friendly tool with the flexibility to customize the design of an eportfolio presentation so that it reflects their own individual professional identity. For participating students in this study, the intrinsic value of learning and reflection outweighed the extrinsic value of creating a product for an employer. At this stage of eportfolio evolution, the developmental or learning function of eportfolio may carry more value than their showcase function in the professional public health context. This study has important insights for other programs or courses of study seeking a means to help students integrate their learning and demonstrate their accomplishments, skills, and competencies either to themselves, their instructors, or employers.

References

Abrami, P., Wade, A., Pillay, V., Aslan, O., Bures, E., & Bentley, C. (2009). Encouraging self-regulated learning through electronic portfolios. *Canadian Journal of Learning and Technology / La Revue Canadienne de L'Apprentissage et de la Technologie, 34*(3). https://doi.org/10.21432/T2630W

Ambrose, A. (2013). *Focus group report: What do ND's top recruiters say about career eportfolio? eportfolio@ND* Retrieved from https://eportfolio.nd.edu/news/focus-group-report-what-do-nd-s-top-recruiters-say-about-career-eportfolio/

Ambrose, J, K., Delaney-Klinger, K. A., Hoeppner, K., Ngo, L., & Polly, P. (2017). Chapter 8: Transition to career and career development. In T. Batson, K. S. Coleman, H. L. Chen, C. Watson, T. L. Rhodes, & A. Harver (Eds.), *Field guide to eportfolio* (pp. 60-70). Washington, DC: Association of America Colleges and Universities.

Avraamidou, L., & Zembal-Saul, C. (2002). Making the case for the use of web-based portfolios in support of learning to teach. *The Journal of Interactive Online Learning, 1*(2), 1-19.

Barrett, H., 2010. Balancing the two faces of eportfolio. *Educação, Formação, & Technologias 3*(1), 189-198. Retrieved from http://electronicportfolios.org/balance/Balancing2.htm

Bernander, R., O'Laughlin, N., Rodrigo, R., Stevens, C., & Zaldivar, M. (2017). Chapter 12: How important is the technology? In T. Batson, K. S. Coleman, H. L. Chen, C. Watson, T. L. Rhodes, & A. Harver (Eds.), *Field guide to eportfolio* (pp. 99-105). Washington, DC: Association of America Colleges and Universities.

Business Council of Canada and AON Hewitt. (2016). *Developing Canada's future workforce: A survey of large private-sector employers* (p. 4). Retrieved from http://thebusinesscouncil.ca/wp-content/uploads/2016/02/Developing-Canadas-Workforce-March.pdf

Buyarski, C., Oaks, S., Reynolds, C., & Rhodes, T. (2017). Chapter 1: The promise of eportfolio for student learning and agency. In T. Batson, K. S. Coleman, H. L. Chen, C. E. Watson, T. L. Rhodes, & A. Harver (Eds), *Field guide to eportfolio* (pp. 7-13). Washington, DC: Association of America Colleges and Universities.

Calderon, V., & Sidhu P. (2014). *Business leaders say knowledge trumps college pedigree*. Retrieved from http://www.gallup.com/poll/167546/business-leaders-say-knowledge-trumps-college-pedigree.aspx

Cambridge, D. (2010). *E-portfolios for lifelong learning and assessment*. San Francisco, CA: Jossey-Bass.

Canadian Education and Research Institute for Counselling (CERIC) and Environics Research Group. (2013). *Career development in the Canadian workplace: National Business Survey*. Retrieved from http://ceric.ca/career-development-in-the-canadian-workplace-national-business-survey/

Chen, H. L., & Penny Light, T. (2010). *Electronic portfolios and student success*. Washington, DC: Association of American Colleges and Universities

Dalhstrom, E., Walker, J., & Dziuban, C. (2013). *ECAR study of undergraduate students and information technology*. Louisville, CO: EDUCAUSE Center for Analysis and Research. Retrieved from https://net.educause.edu/ir/library/pdf/ERS1302/ERS1302.pdf

Emmett, D., Harper, W., & Hauville, K. (2006). Creating a strategy for the implementation of the QUT eportfolio. In A. Jafari & C. Kaufman (Eds.), *Handbook of research on eportfolio* (pp. 410-419). Hershey, PA: Idea. https://doi.org/10.4018/978-1-59140-890-1.ch037

Enyon, B., Gambino, L., & Török, J. (2014). What difference can eportfolio make? A field report from the connect to learning project. *International Journal of eportfolio, 4*(1), 95-114.

Gordon, J., & Campbell, C. (2013). The role of eportfolio in supporting continuing professional development in practice. *Medical Teacher, 35*, 287-294. https://doi.org/10.3109/0142159X.2013.773395

Hall, P., Byszewski, A., Sutherland, S., & Stodel, E. (2012). Developing a sustainable electronic portfolio (eportfolio) program that fosters reflective practice and incorporates CanMEDS competencies into the undergraduate medical curriculum. *Academic Medicine, 87*(6), 744-751. https://doi.org/10.1097/ACM.0b013e318253dacd

Harring, K., & Luo, T. (2016). Eportfolio: Supporting reflection and deep learning in high-impact practices. *Peer Review, 18*(3). Retrieved from http://www.aacu.org/peerreview/2016/summer/Harring

Hart Research Associates. (2013). It takes more than a major: Employer priorities for college learning and student success. *Liberal Education, 99*(2). Retrieved from https://www.aacu.org/publications-research/periodicals/it-takes-more-major-employer-priorities-college-learning-and

Hubert, D., Pickavance, J., & Hyberger, A. (2015). Reflective e-portfolios: One HIP to rule them all? *Peer Review*, *17*(4). Retrieved from http://aacu.org/peerreview/2015/fall/hubert

Jenson, J. (2011). Promoting self-regulation and critical reflection through writing students' use of electronic portfolio. *International Journal of eportfolio*, *1*(1), 49-60. Retrieved from http://www.theijep.com/pdf/ijep19.pdf

Joint Task Group on Public Health Human Resources, Advisory Committee on Health Delivery and Resources and Advisory Committee on Population Health and Security. (2005). *Building the public health workforce for the 21st century*. Retrieved from http://publications.gc.ca/collections/collection_2008/phac-aspc/HP5-12-2005E.pdf

Kardos, R. L., Cook, J. M., Butson, R. J., & Kardos, T. B. (2009). The development of an eportfolio for life-long reflective learning and auditable professional certification: An eportfolio for life-long learning and certification. *European Journal of Dental Education*, *13*(3), 135-141. https://doi.org/10.1111/j.1600-0579.2008.00551.x

Kryder, L. (2011). Eportfolio: Providing competency and building a network. *Business Communication Quarterly, 74*(3), 333-341. https://doi.org/10.1177/1080569911414556

Kuh, G. (2016 July 27). *On eportfolio as high-impact practice*. Retrieved from https://youtu.be/5r9WuHB_Yo0

Lievens, R., & Wesseling, W. (2015). Relevant information in the recruiting process: Perspectives of students and recruiters. *The International Journal for Recording Achievement, Planning and Portfolios, 1*(2), 22-26.

Moretti, M., & Giovannini, M.L. (2011). eportfolio as a job-seeking tool for universities. *Journal for Perspectives of Economic, Political, and Social Integration, 17*(1-2), 87-104.

Pitts, W., & Ruggirello, R. (2012). Using the eportfolio to document and evaluate growth in reflective practice: The development and application of a conceptual framework. *International Journal of eportfolio, 2*(1), 49-74.

Pomerantz, J., & Brooks, D. C. (2017). *ECAR study of faculty and information technology. Research report*. Louisville, CO: ECAR. Retrieved from https://www.educause.edu/ecar/research-publications/ecar-study-of-faculty-and-information-technology/2017/introduction-and-key-findings

Public Health Agency of Canada. (2008). *Core competencies for public health in Canada.* Retrieved from http://www.phac-aspc.gc.ca/php-psp/ccph-cesp/pdfs/cc-manual-eng090407.pdf

Walton, J., Gardner, K., & Aleksejuniene, J. (2015). Student eportfolio to develop reflective skills and demonstrate competency development: Evaluation of a curriculum pilot project. *European Journal of Dental Education, 20*, 120-128. https://doi.org/10.1111/eje.12154

Ward, C., & Moser, C. (2008). E-portfolios as a hiring tool: Do employers really care? *EDUCAUSE Quarterly*. Retrieved from https://er.educause.edu/articles/2008/11/eportfolio-as-a-hiring-tool-do-employers-really-care

Ward, R., & Strivens, J. (2010). How e-portfolio technologies can support the employer engagement agenda. *Assessment, Teaching, and Learning Journal, 10*, 44-47.

Wepner, S., Bowes, K., & Serotkin, R. (2005). Lessons learned from implementing technology in an undergraduate elementary education program. *Journal of Computing in Teacher Education, 21*(4), 111-119.

Yu, T. (2011). E-portfolio, a valuable job search tool for college students. *Campus-Wide Information Systems, 29*(1), 70-76. https://doi.org/10.1108/10650741211192064