Final Report:
The Practical Uses and Benefits of ePortfolios

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Background

Information and communication technologies (ICTs) have acted as a change agent in the provision of education, pushing the boundaries of innovation in teaching and learning. These technologies have contributed to the provision of a full range of pedagogical experiences for all learners, transformed by new platforms of delivery and accessibility (Gras-Velázquez, 2016; Makori & Mauti, 2016; Idowu & Esere, 2013; McLoughlin & Lee, 2010). Electronic portfolios (ePortfolios) are once such example, and they are a rapidly emerging, powerful, and iterative form for capturing student work including accredited evidence for lifelong learning in both academic and professional contexts. They are used by colleges, universities, and governmental agencies to facilitate lifelong and life-wide learning, capturing assessment, accomplishments, and accountabilities. They also provide individuals with opportunities to manage self-directed learning for personal and professional growth, helping with self-promotion and marketing to achieve meaningful employment. (Cambridge, 2008; Chambers & Wickersham, 2007; Ferns & Comfort, 2014; Jenson & Treuer, 2014).

Faced with the challenge of dynamic, unpredictable economies, both employers and employees face constant pressure to react and respond quickly to market changes. Employers must increase or decrease their workforce by adding or subtracting employees, some of whom may be in highly specialized roles. The employee is also under pressure to respond to market uncertainties; however, many mid-career workers are often unable to recover quickly, because they may lack the ability to re-image themselves so they appear attractive to employers. Merriam (2001) identifies continuing education (CE) learners as change-agents, seeking to improve their circumstances through self-directed learning which can promote emancipatory learning and social action. With a focus on personal and professional development, CE can provide flexible, relevant, and timey learning opportunities for individuals who require focused and applied learning. Many employers and their employees benefit from the flexibility CE courses and programs provide, within or outside of the workplace. As a result, it is assumed that higher education can play a role in helping individuals address the skills gap challenge by helping individuals create opportunities for themselves. They can enhance their employment marketability with ePortfolios, and Hasse (2016) offers various suggestions, such as connecting the ePortfolio within social media pages, adding a link to the ePortfolio on resumes, covers letters, and the e-mail signature. Referring to appropriate sections in the ePortfolio during job interviews, using iPad, tablet or a smart phone to "show and tell"; and referencing appropriate sections in thank-you notes and follow-up correspondence with prospective employers, providing evidence which strengthens the candidate's positon to obtain the job.

Methodology

The purpose of my research was to determine if and how ePortfolios can serve as a foundation for individuals to obtain, or enhance opportunities toward meaningful employment. The research questions that directed this undertaking are:

Primary Research Question:

What are the practical uses and benefits of ePortfolios for employment purposes among undergraduate and continuing education students?

Secondary Research Questions:

What are the factors that influence undergraduate and continuing education student's beliefs that ePortfolios may/may not enhance their employment opportunities?

Given the variety of influences and options that learners and workers have to improve and showcase their skills, knowledge and experience, what is the best method or tool individuals should use to showcase their skills, competencies and knowledge?

Can ePortfolios become the new replacement for the resume and curriculum vitae?

Data Collection

Data collection in this study was based upon a mixed methods approach, using a convergent parallel design that entailed analysis that identifies common patterns or distinct contradictions within the results. Mixed methods research "provides the opportunity for an assortment of divergent views in conclusions and inferences due to the complexity of the data sources and analysis" (Teddlie & Tashakkori, 2011, p. 287). Students and employees are represented in the descriptive design through a Web-based survey that highlights the scale, scope, awareness and use of ePortfolios, as well as semi-structured interviews.

Participants were provided with the following definition of an ePortfolio, including examples of ePortfolio's:

For the purposes of this research, the term "ePortfolio" is defined as an electronic collection of artifacts that individuals assemble to provide evidence of skills acquired through educational and extra-curricular activities. This also includes work and life experience, knowledge and accomplishments, and work-integrated learning.

Examples of ePortfolios include personal web page or blog, LinkedIn profile, or an ePortfolio within a Learning Management system, such as Desire2Learn.

Both credit and non-credit students were surveyed. The credit students were made up of 3rd and 4th year Education and Nursing students. The non-credit students were in various stages within their program of study, generally within business management certificate programs in the following disciplines: Construction, Risk, Project Management, Human Resource, Change Management, Health & Safety, Environmental, Hospitality and Supply Chain.

The survey was designed to capture a broad overview from a wide sample of participants and to collect descriptive, behavioral, and attitudinal information from the participants. Using a Likert

scale, the perceptions that participants held regarding their ePortfolio experiences were captured. The survey also captured qualitative data sets, which define participants' demographic characteristics such as age, gender, employment status, academic status, and academic program of study. The questions were designed to be short, with opportunity for participants to provide additional elaboration and qualitative data through open-ended questions.

The design of the semi-structured interview questions was based on replicating the main objectives of the survey to elicit detailed and descriptive responses from the participants. The participant interviews allowed for deep questioning by the researcher and deep reflection by the participants as compared to the survey which presented a high-level overview of participant perceptions. The semi-structured interview data was collected in order to confirm or contradict the web-based survey results while providing expanded validation and reasoning behind the participant's responses. This method also uncovered rich, descriptive data about the personal experiences of participants relating to the use of ePortfolios and to clarify the research direction.

Analysis

The analysis of the data gathered in this study was focused on comparing patterns of similarities and divergences between the individuals who participated in the study. The data analysis summarized the key findings obtained from 209 survey responses and 12 semi-structured interviews to identify the key variables of the study. Background factors that determine the students' use of ePortfolios include demographics and socioeconomic variables, the levels and extent of support available in developing an ePortfolio, and general academic characteristics of the participant. These background factors are key variables because they can also influence the outcomes experienced by students, including perceptions of value that ePortfolios may provide them. The beliefs that students hold regarding ePortfolios may be positive or negative, thus influencing the nature and extent of use of ePortfolios.

The survey results were structured, analyzed and presented with graphs and data tables to express total number of responses, including rankings of the responses based on percent and weighted overall average for each question. Textual data from open-ended questions was also presented in the survey and the participant responses were coded, analyzed and categorized by major themes. The semi-structured interviews were transcribed from the digital voice recordings of the interviews, reviewed, analyzed, coded and organized into five major findings.

Holistic, interpretivist coding techniques were applied to the questionnaire and semi-structured interview data to retrieve and categorize similar data chunks, which were formed into patterns and major findings. Overuse of common verbal phrases and expressions were removed in order to present clear and comprehensive thoughts, experiences and opinions. High-inference levels of judgement were necessary when interpreting responses for several reasons, ranging from English as a second-language to excessive use of slang words. Consideration for maintaining reliability without sacrificing validity was at the forefront of the analysis. Responses were colour-coded and grouped within various themes and major findings.

Findings

The findings identify the perceptions students have regarding ePortfolios in showcasing their skills and knowledge, and potentially improving their employment opportunities. The qualitative data collected from the open-ended survey questions and the semi-structured interview questions formed the basis of major findings, which are presented as representational groupings of the common perceptions that relate to ePortfolios and employment.

Finding 1: Participants successfully obtained employment as a result of having an ePortfolio
Participants described their experiences using LinkedIn as their ePortfolio to make professional connections with an employer, leading to employment opportunities. Participants also identified how LinkedIn provides functionality to target individuals that meet certain qualifications for specific jobs.

Finding 2: ePortfolios provide indirect leads and opportunities for employment.
In this theme, participants described how their ePortfolio provided indirect connections and market knowledge that was beneficial in finding and obtaining employment. Employer market knowledge was identified as using the ePortfolio to understand the skillsets that employers are looking for. For the individual, the ePortfolio is regarded as a supplemental resource, to aid in reminding and affirming themselves of their skillsets.

Finding 3: Participants had positive experiences, and place high value in their ePortfolio.
The primary finding of this theme is that participants placed high value in their ePortfolio, regardless of whether it played a role in helping them improve their employment opportunities or prospects. Several participants had both a LinkedIn ePortfolio and a personal ePortfolio, and they used both to network with other individuals. Using ePortfolios to learn about different companies was regarded as providing high gratification for participants.

Finding 4: LinkedIn and/or personal web pages are the ePortfolio platforms utilized, with recognition that time and effort invested in the ePortfolio is related to successful employment, networking, marketing, and personal growth opportunities.
Participants were asked about the time and effort invested in creating and maintaining their ePortfolios, and they expressed that the time investment was worth it. The greatest discovery in this theme is the expressions of personal value and personal growth that the ePortfolio provides to some of the participants.

Finding 5: The majority of participants believe their ePortfolio will play an ongoing and integral role in helping them to seek or obtain employment in the future.
Participant were engaged and happy with the opportunity to comment on current applications of their ePortfolio, including their vision of how they will use it in the future. These comments reveal participants believe there is a longevity in maintaining an ePortfolio, which includes using the ePortfolio to apply for jobs and prepare for interviews.

Discussion

Advancing the results of the analysis and findings, I further considered the implications for individuals who have, or are considering integrating an ePortfolio into their networking and employment seeking endeavors. Grouped into discussion categories, each category captures the overarching opinions and perception of the research participants, providing insight into how the results of the research can be applied for individuals, helping to inform future actions and activities with ePortfolios.

Varied opinion as to whether or not the ePortfolio helps with employment.

The research confirms the majority of respondents (73%) identify a primary reason for creating an ePortfolio was to increase employment opportunities. The undergraduate population of students who participated in the research had limited experience or opportunity to prove or disprove if their ePortfolio could assist in obtaining employment because they were mostly focused on completing their program of study. The study revealed that these students were able to express their hopes and expectations of how ePortfolios could serve them after graduation. The part-time continuing education students were more actively engaged in the workforce, with one individual describing how he utilized his ePortfolio to make connections with employees who worked in a company that he wanted to work in. The participant described a situation where the ePortfolio was used to obtain, or at least enhance success in obtaining employment, and it supports the argument that ePortfolios can help individuals achieve or improve employment success. It is important to understand that in this example the ePortfolio itself was not the measure of success, it was the use and application of the ePortfolio platform (LinkedIn), and the tenacity of the individual who established professional connections within the company.

The research also identified greater than 50% of students indicated they are willing to share their ePortfolio with an employer as part of the job application process. What is not identified are the number of students who actually did share their ePortfolio with employers, or why an almost equal number of students were unwilling to share their ePortfolio with employers. Some students questioned the value of investment of time in creating and maintaining an ePortfolio, with one respondent commenting "not knowing what employers want to see in an ePortfolio, or if they want to see it, it is hard to decide how much effort to put into it." This uncertainty is further supported by 67% of survey respondents agreeing or strongly agreeing with the statement: "I am unsure if employers will look at my ePortfolio". This uncertainty can potentially manifest itself as reluctance to share with prospective employers if individuals have unfinished or poorly developed ePortfolios. Traditional recruitment practices do not utilize ePortfolios in any substantive manner as part of the hiring process, although LinkedIn is used by some individuals to help obtain employment, and by some recruiters and employers to help find the optimal applicant for a job. Over 54% of students acknowledge the ePortfolio is a helpful tool in the employment application process, and that artifacts they collect in their ePortfolio help them to customize their resume or CV to the job they are applying for.

Motivations for owning and maintaining an ePortfolio.

It is important to understand the motivations that students have for creating and maintaining an ePortfolio because they reveal the psychological or existential needs that drive individuals to reach for personal or professional achievement. The research suggests there is a psychological line individuals straddle between necessity and conformity in possessing and maintaining an ePortfolio. With 42% of Canada's population owning a LinkedIn ePortfolio, it seems reasonable that some individuals conformed to create an ePortfolio because so many others have one. Participants describe conformity as a motivating factor, with one individual commenting: "my peer group was doing it [creating ePortfolios] and I thought it was something I should look at…it was not spurred by work or school or a desire to catalogue my education." Another participant makes a similar comment relating to conforming as a motivating factor to create a LinkedIn ePortfolio: "I think I succumbed and created one [LinkedIn profile] in 2009, and then I – you know, I became convinced that yeah, this was the right thing to do."

Other participants were motivated to possess and maintain an ePortfolio because they believe it is a necessary tool in the employment search process, as described by one participant as "a necessity for many jobs to even be considered"; and by another participant as a "necessary component of marketing oneself." However, this study also identified that having an ePortfolio on the platform (LinkedIn) does not guarantee employment success. It is the quality of one's ePortfolio that matters, and the manner in which the LinkedIn platform is utilized which plays a role in achieving employment opportunities.

It is also important to understand that LinkedIn is not the perfect platform for all individuals. As with any medium where identities are shared on a large scale, it is important to understand the risks and limitations of engaging in these type of global platforms. Santiago (2018) does not like LinkedIn, citing personal beliefs and reasons, such as people who are viewed as "better candidates" because they have a more impressive and sophisticated LinkedIn profile, when people list skills they do not actually have just to make themselves more impressive. Santiago does not like it when LinkedIn users post photos of themselves and associates this to risk of stalking, where she identifies receiving connection requests from older men she has never heard of before. She also provides reference to the argument of conformity to use LinkedIn, where "not having a LinkedIn profile is assumed to be unprofessional", and does not like feeling as if she has to go along with something just to show she "play's the game".

Purpose, design and application of the employment ePortfolio.

Both the literature and the data analysis identify the merits of creating and maintaining an ePortfolio for employment purposes, including examples of the types of artifacts to include in the employment ePortfolio. The data analysis also provides a synopsis of the major categories that describe the perceptions that participants have for their intended or current use of the ePortfolio. Examples of the research participants' rationale, intention, and perseverance in using and maintaining an ePortfolio are captured and presented in the analysis. Over 62% of respondents agree or strongly agree with the statement that a decision factor in creating their ePortfolio was they wanted a complete record of all formal and informal learning, knowledge and skills. This identifies the ePortfolio as providing those who posses an ePortfolio an ability to maintain a

repository that goes beyond what the resume or CV can offer. In addition, over 80% of respondents agree or strongly agree with the statement: An ePortfolio is a useful means to summarize ones work experience and achievements. The majority of participants (62%) also believe that ePortfolios can help them gain advantage over other candidates when used as part of a job interview.

The ePortfolio is an expression of both the human being and the professional being. Not all ePortfolios should look or read exactly the same because we are all unique individuals, and it is our uniqueness which defines our strengths and our weaknesses. Individuals should create their e-Portfolio themselves, including a self-composed description of their personal and professional summary. This will give viewers a glimpse into the personal style of the ePortfolio owner, and allow viewers to make their own related connections. The work displayed on the ePortfolio should be the best examples of work which provide the widest example of the diverse abilities the individual has, and the examples should be presented in the highest definition and quality.

Conclusions

Three main concluding categories were identified from the research. The first category recognizes the perceptions individuals have regarding the use and value of ePortfolios. This is described through the motivations they have in owning and maintaining an ePortfolio, the beliefs they have relating to the value employers place on ePortfolios, and the value they realize from engaging in communities of other ePortfolio owners.   The second concluding category is a grouping of participant beliefs toward the use of a common or popular ePortfolio platform, characterised by high adoption of ePortfolios, although participants perceive there are gaps in the ePortfolio support available to them. The third concluding category identifies the benefits participants describe from ePortfolios serving as an employment assistance tool.

Perceptions individuals have regarding the use and value of ePortfolios

The conclusion drawn from this finding uncovers the motivations ePortfolio users have, and how those motivations cross over multiple motivating categories. The primary motivating category is employment-related, where the perceptions students have relating to ePortfolio's and employment outcomes are both definitive and doubtful. The definitive perceptions are described by the successes students have experienced in obtaining employment opportunities with the aid of their ePortfolio. While there is some evidence that a few students who use ePortfolio's have realized success related to employment opportunities, there is also uncertainty and doubt as to employer adoption and use of ePortfolios, so why invest the time and effort? Not all participants had direct employment success with ePortfolios, yet they still maintained positive affinity toward having an ePortfolio. This is where other motivating factors became apparent, providing an understanding that individuals who expressed higher satisfaction with ePortfolios consider employment outcomes as only one factor of success from owning and maintaining an ePortfolio.

A conclusion from the literature review, and as evidenced from the study is over time, employers will see an increase of applicants' reference to their ePortfolios as links embedded in resumes and CV's. There will also be an increase of referrals of applicants and employers through

ePortfolio technologies and platforms. I predict a grassroots movement of increasing ePortfolio growth through innovative uses of technology will encourage employers and agencies to recognize and adopt ePortfolio's in the recruitment process and employee development programs.

Growth of ePortfolio use although perceived gaps in ePortfolio support exist

This research identified the majority of participants' use LinkedIn as the primary ePortfolio platform, with some who also have a personal ePortfolio; typically a personal web page or blog. The wide acceptance and use of LinkedIn is attributed to users' perceptions of necessity and/or conformity. Perceptions of necessity exist because of requirements of academic programs, recruitment, and perceptions that an ePortfolio is a must-have for marketing and networking opportunities. Perceptions of conformity is the other driver for adoption and use of ePortfolios, originating from the substantial use of LinkedIn by a large percentage of the population, and perceptions of "missing-out" if one does not have an ePortfolio. A conclusion from this finding is the adoption and use of ePortfolios will propagate over time because they are perceived as an important and/or necessary requirement of the employment seeking process.

The majority of participants identified with having positive experiences from their ePortfolio, however this study also identified students perceive a significant gap exists regarding ePortfolio training and support provided by their institution. There are number of factors that influence this perception, one of which is lack of awareness of resources available to help with creating and managing their ePortfolio. A conclusion from this is there may exist a general lack of understanding of ePortfolios across the university, and a low adoption rate of ePortfolio in the curriculum. This potentially places students at risk of not obtaining the same or similar opportunities as those students who have a robust ePortfolio.

Embrace and promote the ePortfolio as an employment assistance tool
The last major finding from this research describes student perceptions regarding the longevity that ePortfolios will have in helping them seek employment. ePortfolios can play a role in not only finding employment opportunities, but helping individuals better prepare for the interview so they successfully obtain the job. A number of participants indicated that there is a connection between the ePortfolio and being organized and prepared for the job interview. Similarly, there is some evidence from the literature that employers have a positive outlook on ePortfolios and recognize the value-add they can provide to the recruitment process (Heinrich et al., 2007). The conclusion from this finding is I predict ePortfolios will grow in use, application and longevity, both on campus in undergraduate programs and by employers in the job market.

Recommendations

The first recommendation is that all graduates seeking employment should consider possessing an ePortfolio. Based on the research from this study, a significant number of participants are LinkedIn users who have positive perceptions, and have had positive results from maintaining an ePortfolio. They believe the ePortfolio can play a role in helping them obtain direct and indirect employment opportunities. Careers within artistic or literature fields can realize the benefits of having an ePortfolio, where they can retain and quickly retrieve examples of previous work or accomplishments.

Continuing Education should develop ePortfolio short courses, with a particular emphasis on professional networking through LinkedIn. As evidenced within the college sector, courses and programs which focus on skills training and professional development are intended to help the individual enhance their employment outlook. These courses can help the student enhance the possibility of success by teaching them to maintain a robust, professional networking ePortfolio.

It is also recommended that LinkedIn members ensure they are maximizing the features which are available to them within LinkedIn. A complete and robust ePortfolio that is setup with the appropriate and relevant notifications and features enabled will help individuals to be recognized and successful. It is possible that Continuing Education could develop introductory and advanced ePortfolio short courses, with the advanced course focussing on the advanced features of LinkedIn.

The final recommendation is that government, industry and post-secondary education work together in utilizing ePortfolios as an employment tool for students to assist in closing the skills gap. As far back as 2006, The Learning Innovations Forum (LIflA) proposed to develop and stimulate support for an ePortfolio environment that targeted skilled immigrants and potential employers. The vision of LIflA was to ensure all Canadians had access to a digital identity and a digital record of formal and non-formal learning, calling on government to initiate a national funding strategy to establish a program that would achieve "an ePortfolio for every citizen" and "one ePortfolio for life" (Barker, 2006, p. 5). I suggest there is opportunity for government, industry and post-secondary to work together to improve the marketability of workers, and benefit society.

The full dissertation can be found at: https://www.robertwensveen.com/research-interests

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