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# Assessing the Feasibility and Acceptability of ePortfolios in an Inclusive, Graduate-Level Interdisciplinary Training Program

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While the use of electronic portfolios has been thoroughly explored in undergraduate and discipline-specific graduate programs, less research has been conducted among interdisciplinary adult learners. This case study explores the feasibility and acceptability of ePortfolios across two years of implementation in an inclusive, graduate-level interdisciplinary training program. After initial implementation with cohort one, focus groups revealed the need for ongoing accountability and support, the importance of transparency and clarity, challenges related to buy-in, and unanticipated tensions between the personal and professional role of the ePortfolio. Between implementation years one and two, improvements were made to the ePortfolio process based on trainee feedback. Following implementation with cohort two, these changes and trainee perceptions of the ePortfolio process were assessed with open-ended surveys. Cohort two also identified personal challenges related to technology and endorsed the importance of accountability and support; however, they also identified a much greater appreciation for the ePortfolio as a new technology and the ways it helped them document, reflect on, and integrate their training experiences into their identity. These results indicate that the ePortfolio is a promising technology in interdisciplinary settings for integrative learning and holds potential for program assessment; however, accountability, support, and transparent communication are needed to realize its full potential.

The changing landscape of American health care requires collaboration to provide quality patient-centered care in an ever-changing world. The World Health Organization (WHO, 2010), the National Academies of Science (Institute of Medicine, 2015), and discipline-specific educational associations (Interprofessional Education Collaborative Expert Panel, 2011) all recognize and promote the value of interdisciplinary training and collaborative approaches to providing patient-centered care and improving population health. Despite these endorsements, interdisciplinary training remains difficult to evaluate, particularly when compared to traditional discipline-specific training programs. For example, interdisciplinary trainees bring their own discipline-specific competencies to inter-professional education in addition to a range of experiences. Furthermore, interdisciplinary trainees enter training programs with varying baseline knowledge, attitudes, and skills, which further complicates the ability to measure the value of inter-professional education.

Within the broader world of general undergraduate education, ePortfolios are promoted as a tool to assist students in tracking their learning and progress during their education (Peet et al., 2011; Watson, Kuh, Rhodes, Light, & Chen, 2016) and for program assessment (Ring, Waugaman, Brackett, & Jackson, 2015). Certain discipline-specific training programs also use ePortfolios at both the undergraduate and graduate levels (Lin, 2008; Vachon et al., 2018; Vance, Burford, Shapiro, & Price, 2017). ePortfolios have recently gained popularity throughout many interdisciplinary U.S. Maternal & Child Health Bureau-funded training programs and have been recognized as an emerging technology that complements such interdisciplinary training experiences (Wasko, Kiefer-O'Donnell, & Van Den Berg, 2015).

As both a product and a process (Barrett, 2011), ePortfolios can be helpful in assessing learner progress, development, and competency (Penny Light, Chen, & Ittelson, 2011); useful in facilitating integrated reflection (Wang, 2009); and a convenient way to showcase an individual's work, products, and experiences. As a learning tool (i.e., the process), ePortfolios have been used to promote reflective thinking and identity development among graduate students in diverse disciplines including engineering and science (Svyantek, Kajfez, & McNair, 2015), school counseling and school psychology (Wakimoto & Lewis, 2014), and nursing (Meek, Riner, Pesut, Runshe, & Allam, 2013). ePortfolio construction can help students reflect on their learning experiences and accomplishments while connecting those experiences to their competency development (Wakimoto & Lewis, 2014), which can result in improved reflective thinking (Meek et al., 2013). Students have credited ePortfolios for helping them identify areas for future development and think critically about how to portray themselves and their work to others (Svyantek et al., 2015).

In addition to their potential for aiding learning, ePortfolios have also been marketed to learners as a vehicle to showcase their skills, abilities, and competencies to others including university faculty, potential employers, or even the public (i.e., a product). ePortfolios have been frequently used as an evaluation

tool in academic programs to assess student outcomes and to determine if programs are effectively meeting the needs of their learners (Crowell & Calamidas, 2016; Richards-Schuster, Ruffolo, Nicoll, Distelrath, & Galura, 2014). As a student-centered learning approach, ePortfolios also have the potential to provide more authentic assessment of learner outcomes than traditional evaluation methods (Richards-Schuster et al., 2014). Because of these benefits and the versatility of ePortfolio technologies, the Georgia Leadership Education in Neurodevelopmental Disabilities (GaLEND) interdisciplinary training program adopted the ePortfolio as an individualized learning technology to help trainees integrate and document their learning and mastery of the Maternal and Child Health (MCH) competencies during their training year and to aid in program evaluation.

**Georgia LEND Program**

The GaLEND interdisciplinary training programs brings together professionals, graduate students, disability advocates, family members, and people with disabilities (i.e., *self-advocates*) to engage in didactic coursework and targeted training experiences related to the care and support of children with neurodevelopmental disabilities and their families. Trainees meet in class between three and six hours each week and are responsible for completing additional program requirements that take place outside the classroom. This graduate-level, non-credit bearing training program seeks to develop leaders who will make lasting change and impact on the lives of individuals with disabilities and their families. While GaLEND course content and experiences are graduate-level, trainees vary in their past educational experiences. Some trainees have completed graduate-level programs or are in the process of such programs, while other trainees have lower levels of educational attainment (i.e., undergraduate degrees, high school diplomas, or high school certificates of completion.)

GaLEND takes a holistic view of trainees and acknowledges the potential for both personal and professional growth during the training year. The program is designed to be a transformational learning experience that helps trainees grow both personally and professionally, regardless of discipline. As trainees have a variety of disciplinary and educational backgrounds, evaluating the program's impact on trainees' knowledge, attitudes, and skills in their daily lives in a systematic way can be challenging. Furthermore, because trainees come from such diverse backgrounds, and have diverse daily demands, it is crucial that GaLEND faculty and staff assist trainees in integrating their GaLEND experiences into their daily lives and their personal and professional roles. To accommodate the diversity of learners and to standardize assessment, the GaLEND program adopted a program-wide emphasis on reflection and integrative learning, choosing to use journaling and ePortfolios to aid trainees in curriculum integration and for program evaluation purposes.

While some international researchers have examined ePortfolio use in interdisciplinary contexts (Fu, Huang, Yang, & Huang, 2012; Mănucă, Alexandru, & Gavrilaş, 2009), and general undergraduate research could be considered interdisciplinary in nature, little formal research has documented the technology among adult interdisciplinary learners stateside (Bryant, Rust, Fox-Horton, & Johnson, 2017; Karsten et al., 2015). Evaluation of the GaLEND ePortfolio initiative has yielded valuable process data highlighting the use of this emerging technology with an interdisciplinary group of diverse adult learners.

**ePortfolios in GaLEND**

The purpose of the GaLEND ePortfolio is to assist trainees in integrating the Maternal and Child Health (MCH) leadership competencies learned in GaLEND into their personal and professional identities. Previously, the program required trainees to compile binder portfolios cataloging their training year; however, poor compliance and questions about the relevance of binder portfolios prompted the program to transition to an electronic portfolio. After researching several potential platforms, including platforms affiliated with learning management systems and free-standing programs, program staff chose to develop and implement a pilot ePortfolio using Edublog, which is a WordPress-based educational blogging system. This platform allowed the program to pilot its ePortfolio initiative using an existing technology that was already licensed at the university. Furthermore, this platform allows trainees to transition their Edublog to a free Wordpress.com site after completion of the training program to facilitate continued use.

To encourage compliance and buy-in, the ePortfolio was designed to be versatile. It is competency-based, which lends itself to assessment; however, its main purposes during initial implementation were as a "process" and as a "product" (Barrett, 2011). The ePortfolio was designed to facilitate meaningful reflection for trainees and to assist them with integrating the GaLEND curriculum and learning experiences into their identities (process). It was also designed with the capacity for showcase as an attempt to make the "product" aspect of the portfolio appealing to a wide variety of trainees including graduate students entering the job market or family or self-advocate trainees who may use the portfolio as a platform to share their skills and experiences with others.

To facilitate ease of use and reduce technological barriers, each trainee is provided a pre-populated Edublog site at the beginning of their training year. The visual aspects of the site are customizable, and trainees may include any information they wish as long as specific core components are included. The ePortfolio provides space for trainees to include artifacts that are traditionally part of showcase portfolios including (a) professional philosophy and goals, (b) CV/resume, and (c) products (e.g., papers, posters, speeches, videos). In addition to these elements, the ePortfolio includes a series of program-specific prompts asking the trainee to describe and reflect on his or her experiences (via written text, video, or audio) during the training program and to upload relevant links, photos, or documents related to the experiences. During their training year, trainees are also a required to submit separate monthly reflections to the university's learning management system, detailing their perceptions of program activities and self-reported changes in knowledge, attitudes, beliefs, skills, and perceptions. These journal questions were designed to encourage trainees to reflect on the ways that they are integrating their GaLEND experience into their lives, both personally and professionally, and trainees are encouraged to use their reflections as possible content for their ePortfolios.

This descriptive case study outlines the use of ePortfolios as an instructional technology to promote integrated learning and as a source of program evaluation data in an inclusive, non-credit bearing interdisciplinary leadership training program. Using process evaluation data, focus groups, and open-ended surveys, we assessed the acceptability and feasibility of ePortfolio implementation in the GaLEND program, which can inform ePortfolio implementation efforts in similar non-traditional settings and training programs.

## Methods

Implementation and data analysis occurred in two phases. Phase 1 documented the initial implementation and evaluation of ePortfolios with a cohort of trainees in an inclusive interdisciplinary training program using focus group methodology. Following initial implementation, improvements were made to the ePortfolio process based on Phase 1 data. In Phase 2, a new cohort of trainees constructed ePortfolios and completed open-ended surveys to evaluate the ePortfolio process during implementation year two. Between the first and second phases, GaLEND program staff transitioned all of their evaluation data collection from focus group discussions to paper surveys for feasibility purposes and to increase the ease of data analysis.

This study was approved by the university's institutional review board for human subject research. At the beginning of each training year, trainees choose whether or not they consent for the program to use their evaluation data for research purposes. All data presented in this study were obtained from trainees who consented to have their data evaluated for research and dissemination purposes. In Phase 1, 16 trainees (94%) chose to participate in the research study while 22 trainees (100%) in Phase 2 chose to participate in the study.

### Phase 1: Evaluating Initial Implementation

**Phase 1 participants.** Cohort 1 included 16 trainees from a variety of disciplines including speech-language pathology, public health, nutrition, medicine, psychology, social work, physical therapy, and youth advocacy. The cohort also included participants who identified either as an individual with a disability or a family member of an individual with a disability. Cohort 1 was also primarily female (81.3%) and identified as 63% White and 38% Black or Asian.

**Phase 1 data collection and analysis.** At the end of the first year's implementation, available trainees participated in one of two audio-recorded focus groups. These focus groups were part of regularly-scheduled program activities; as a result, no formal recruitment occurred. Trainees were sorted into focus groups based on their identity as either a family trainee ($n$ = 4) or a non-family trainee ($n$ = 12) to understand differential perceptions of the ePortfolio process. Using a seven-question interview protocol, researchers asked trainees about their impressions of the ePortfolio process, its challenges, its value, its helpfulness for reflection, post-program use of the ePortfolio, and areas for ePortfolio improvement within the training program (Appendix).

Focus groups ranged from 18 minutes for non-family trainees to 22 minutes for family trainees. A research assistant transcribed the focus group audio verbatim. The lead researcher coded each focus group using a general inductive approach, creating a codebook with accompanying definitions in Nvivo 11. A second researcher coded the focus group transcriptions using the codebook in Nvivo 11. Percentage agreement ranged from 89.8-100%. Researchers reviewed coding agreement, clarified discrepancies, and collapsed codes as needed. Relevant themes and subthemes were then identified and synthesized.

### Phase 2: Evaluating Improvements and Subsequent Implementation

**Phase 2 participants.** Cohort 2 consisted of 22 trainees. Disciplines in Cohort 2 included speech-language pathology, psychology, occupational and physical therapy, nursing, public health, social work, and nutrition, as well as individuals who identified as self-advocates or family advocates. Cohort 2 was also

primarily female (86.4%), and 64% identified as White, while 36% identified as Black or Asian.

**Phase 2 data collection and analysis.** Following the second year's implementation, 14 trainees completed paper-and-pencil, open-ended surveys during the last training session of the year as part of their regularly-scheduled program activities. These surveys included the same seven questions asked of trainees in the previous year's focus groups. A research assistant transcribed survey responses into an electronic format. Utilizing the codebook generated in Phase 1, the primary and secondary researchers independently coded relevant excerpts for themes in Nvivo 11. Percentage agreement ranged from 77.7-100%. Researchers reviewed initial coding agreement, resolved discrepancies, and collapsed codes when necessary. These codes were then synthesized to determine major themes and subthemes.

## Results

### Phase 1

In both focus groups, trainees were asked questions about their past use of ePortfolios and their potential future use of the technology. Only one trainee expressed past experience using an electronic portfolio. When asked whether they planned to use their ePortfolios in the future, trainees in both groups largely said they definitely would not or were undecided. Trainees in both groups, however, expressed that the ePortfolio had been helpful for both documentation and reflection more than for integrating the training program into their professional identities. In addition to these descriptive findings, five major themes emerged from the focus group data: (a) personal challenges, (b) accountability and support, (c) buy-in challenges, (d) personal/professional tensions, and (e) positive attributes.

**Personal challenges.** Trainees in both focus groups expressed personal challenges related to the ePortfolio process. Trainees whose primary identity was outside the university noted the challenge of using unfamiliar university systems, while others described the ePortfolio as "academic" in nature. Regardless of university ties, several trainees mentioned that the ePortfolio technology was challenging at first. One trainee said, "The fact that it was embedded in the university system, that was completely foreign to me—that was probably the biggest stumbling block to get me started." Another noted,

I fully believe that [the program] values the family voice, but yet sometimes I felt like I was floundering in the midst of academic requirements that I wasn't accustomed to. So having some type of, not just talking amongst ourselves, because a little more guidance earlier on would have been helpful for me.

A third trainee explained, "It's too many places, too many things and it's not logical in how you . . . if you're not familiar with technology . . . it's not the easiest in order to navigate."

**Accountability and support.** Technology struggles highlighted the importance of accountability and support, which was another major theme identified in the focus groups. Trainees in both focus groups mentioned an appreciation for the accountability and support that was provided during the pilot year but expressed a desire for more frequent check-ins, a user guide, and more accountability. Trainees also suggested the value of in-class working sessions where they could learn by doing. One trainee said,

And [program staff] made comments that I still have. . . The comments that she made helped a lot. Even one of them we didn't agree at first, but then I would explain it to her. So the support that she gave was, even to me, beneficial because I might've had it in a place she didn't expect it, but then she told me where I needed to put it so that I could be in sync with everybody else.

A second trainee explained,

> I think most of us forgot it. If it was more of a component along the way of reminding us and showing us the basics, coming back to it a month later, "Do you have any questions? Have you tried it?" Like, we had monthly journals—maybe, monthly ePortfolio assignment to, kind of, keep you on track would have been helpful.

**Buy-in challenges.** Besides personal challenges, several trainees expressed reservations about the new technology, indicating that buy-in was weak. For example, trainees expressed that the ePortfolio was not their preferred mechanism for documenting and sharing experiences. Others felt the ePortfolio was "just one more assignment" and was redundant with other program components. Very few trainees mentioned the ePortfolio with a sense of ownership. Challenges to buy-in were further complicated by perceptions that the process lacked clarity; trainees in both focus groups expressed a lack of understanding about the purpose of the ePortfolio. For example, one trainee noted,

> It wasn't difficult to do or anything for me, but I didn't really see the point and why it was made for us to do. I wouldn't show that to a future employer, and, I don't know, it just kind of seems like an extra add on for us.

Similarly, another said,

> I think too, maybe I missed it or maybe the point of it is through this process and learning about—I

> didn't really understand the point of it from the beginning or what the goals were for it. It just seemed like a place where I can put all the things I've done in LEND and, kind of, upload them there. But if were turning them in through other venues, I didn't really see how this was—the point of it or what I was supposed to gain from it aside from learning the new technology.

**Personal/professional tensions.** A lack of understanding about the ePortfolio's purpose appeared to contribute to privacy concerns. The GaLEND ePortfolio was designed to allow trainees the freedom and flexibility to use it for reflection or showcase purposes while also providing a vehicle for faculty assessment. Throughout the year, program staff encouraged trainees to use their journal reflection responses as potential content for their ePortfolios. However, in both focus groups, many trainees expressed privacy concerns and a tension between using the ePortfolio for reflection versus showcase purposes. On trainee explained,

> I think we, kind of, had to choose within between making the portfolio either professional or deeply personal because you can't have it both ways really, and I think most people chose to use personal stuff for it because that's part of our right. It's not something we would've shown.

Another said,

> I think it would actually be more effective, because we do so much sharing and so much deeply personal stuff through LEND, that I honestly think it might have been more effective if the ePortfolios had been staged in such a way that they were specifically professional.

**Positive attributes.** Despite personal challenges and issues related to buy-in, trainees identified several positive aspects of the ePortfolio. They appreciated the opportunity to learn a new technology and endorsed the ePortfolio's visual appeal, its structure, and the freedom of expression that the medium allowed. Furthermore, several trainees reported the technology had been a successful tool for documentation and reflection. For instance, one trainee noted,

> For me, because I'm not in the field providing service right now, mine was more self-reflective. I know that it helped me a lot. Because since I had my child, I did not think about what I was going through or how I was going to navigate and how that impacted my life and what I wanted to do from here. It helped me.

Another trainee said, "It was a great place to capture my thoughts and something, like, in my biography…I was able to document how LEND has impacted my work, and I think it was a good place to do that." A third explained, "It was also more for my use. It helped me, kind of, organize the whole experience personally."

**Phase 2**

Between implementation during the first and second years, program staff executed several changes to improve the ePortfolio process, particularly in response to the technology challenges identified by cohort one. Staff created a comprehensive user guide, which included pictures, videos, and links to the Edublog support site. In response to feedback from Cohort 1 and the literature, staff ensured that all non-university trainees had access to university systems prior to the ePortfolio introduction and instruction. They also scheduled and delivered more frequent ePortfolio working sessions to allow trainees to learn by doing (Wakimoto & Lewis, 2014). These sessions incorporated peer support as a major component; program staff enlisted the help of peer supporters who were most comfortable with the ePortfolio technology to provide additional technical assistance alongside program staff.

In addition to these technical assistance changes, program staff attempted to be clearer and more transparent in their communication about the ePortfolio to create buy-in from trainees. To reduce feelings of redundancy, certain program artifacts were shifted completely to the ePortfolio and were no longer required as a journal submission in the learning management system. To ease the personal and professional tensions identified by the first cohort, program staff explicitly educated trainees on the three potential purposes for ePortfolios (i.e., reflection, showcase, and assessment) but highlighted the GaLEND ePortfolio as a vehicle for professional development more than for personal reflection. At the end of the second year, Cohort 2's open-ended survey responses indicated areas where designed changes improved the ePortfolio process and also revealed areas for continued growth.

Compared to Cohort 1, more trainees in Cohort 2 indicated previous use of ePortfolios for undergraduate programs, graduate school, faculty promotion, or artistic purposes. Trainees in Cohort 2 were mixed in their willingness to use their ePortfolio beyond the GaLEND program, however. Roughly half of surveyed trainees ($n$ = 6) indicated they would not or probably would not use their ePortfolio beyond the GaLEND program. The remaining trainees indicated a desire to share their ePortfolios with coworkers, family, and

friends, while some said they would like to continue to develop their ePortfolios for professional purposes. Survey responses revealed some similar themes to those expressed by Cohort 1; however, the ePortfolio was better received by Cohort 2 overall. Five themes emerged from the data: (a) personal challenges; (b) appreciation for new technology; (c) accountability and support; (d) personal/professional tensions; (e) and documentation, reflection, and integration.

**Personal challenges.** As a whole, the second cohort of trainees expressed much less resistance to the ePortfolio compared to Cohort 1, and their perception of the ePortfolio process appeared to be more positive. Some trainees did express resistance and stated they initially felt the process would be "tiresome and cumbersome" and "a lot of work." Several trainees also expressed frustration with the "time-consuming nature of the ePortfolio." Besides time, the most frequently noted challenges were related to the technology of the ePortfolio system, with non-university trainees indicating additional challenges related to accessing university systems. One trainee noted, "My initial impression was that it was going to be an overwhelming component! Technology can sometimes be stressful to me, but the tutorials during class were helpful." A second said, "Start up was hard because it took a while to get [university] access so I started behind the curve."

**Appreciation for new technology.** While challenges with technology were an issue for some trainees, roughly half of the trainees' survey responses revealed they were initially attracted to the ePortfolio concept. Some expressed excitement about the opportunity to learn a new technology. Trainees in Cohort 2 seemed to understand how a digital platform could showcase their work to others and be a useful professional development tool in the future. For instance, one trainee stated, "I was not surprised since we all live in a digital age that people often post/make work-related stuff via social media or LinkedIn." A second said, "I felt that it would be an important skill to develop." Another remarked, "I am so happy that I became more proficient with the platform. I think it has a huge potential to highlight my work."

**Accountability and support.** Trainees in Cohort 2 indicated appreciation for the user manual and dedicated class time provided for ePortfolio instruction. As with Cohort 1, the importance of accountability and support was overwhelmingly endorsed by the second cohort's survey responses. Trainees indicated an appreciation for the existing support but provided suggestions for ways program staff could better support trainees during the ePortfolio process including goals and deadlines. Several trainees indicated a desire for longer or more frequent working sessions to facilitate completion and suggested that sessions focused on learning by doing would provide opportunities for practice and skill acquisition. For instance, a trainee said, "The support and resources were there, I just needed to dive in and work hands on with the website." A second trainee remarked, "I think it would have been easier to have a full 3-hour class session devoted to it, to deal with a lot of the technical difficulties." Another stated, "Group work sessions—during class time encourage us to work on it on a more regular basis so we do not forget what we learned, so we could perhaps have monthly goals and deadlines."

**Personal/professional tensions.** There were a number of sub-themes identified in Cohort 1's feedback of the ePortfolio process that were largely absent in the Cohort 2's survey responses. For example, very few trainees indicated a need for more clarity or transparency on the ePortfolio purpose and process, and no trainees mentioned privacy concerns. Rather than describing the ePortfolio as "redundant" to other program components, a couple of trainees indicated the helpfulness of using their journal reflections for the portfolio, which was in line with the program's intention. The theme of personal/professional tension remained, however, with some trainees identifying challenges in creating a product that accurately conveyed their experience in the training program. One trainee remarked that compared to her past use of ePortfolios, the GaLEND ePortfolio "was much more personal." Another said, "The journals were helpful in filling in the content." A third trainee explained, "I had a hard time taking all my thoughts and reflections and experiences and putting them into an organized product. I struggled to really make my experiences come across as meaningful as they were in real life."

**Documentation, reflection, and integration.** Ultimately, Cohort 2 endorsed the ePortfolio as a valuable tool for documentation, integration, and reflection of their GaLEND year. Several trainees identified the ePortfolio as a central location to compile and organize their work from GaLEND "in a thoughtful way." Beyond documentation, however, several trainees articulated how the ePortfolio helped them reflect on their GaLEND experiences and integrate these experiences into their professional identities. For example, one of the trainees said, "It helped me connect my past and current educational and professional experiences together in cohesive ways." Another explained, "[It helped me] thoughtfully expand on the various experiences, people met, projects engaged in, how any perspectives formed and changed over the last year." A trainee also explained, "It's caused me to spend more time reflecting about my experiences and how I want to communicate to others about them." Similarly, a fourth trainee remarked, "I had to spend a lot of time thinking about the most important experiences I had and try to make sense of how they were important to my growth."

## Discussion

This two-phase study evaluated the acceptability and feasibility of ePortfolios in a non-credit bearing, graduate-level interdisciplinary training program. Program staff designed the GaLEND ePortfolio to be "all things to all people" to support trainee buy-in and appeal to a diverse group of learners. This included being flexible enough to accommodate those who wanted to use it for professional showcase purposes while also providing a space for all trainees to use the technology as a reflective tool. Our study revealed, however, that this purposeful design was not clearly communicated or well-understood by trainees in the pilot implementation year.

Following the pilot year, trainees in cohort one expressed several concerns related to privacy and personal/professional tensions, indicating a need for more clearly defined parameters to ensure trainees understood the ePortfolio's purpose, its audience, and its potential. In her piece "Balancing the Two Faces of ePortfolios," Helen Barrett (2011) acknowledged the two primary purposes for ePortfolios: learning/reflection and showcase/accountability. Reynolds and Patton (2012) have also suggested the ePortfolio serve as both a learning and assessment tool. Our findings confirm these dual purposes but illustrate the tensions that can arise when programs attempt to use ePortfolios for both purposes. Trainee perceptions related to privacy demonstrated a need for improved communication and transparency.

Trainees also expressed a reluctance to fully display their learning transformation on their ePortfolios due to concerns about the end audience. While GaLEND encouraged both personal and professional growth, these types of tensions are not unique to the GaLEND program. Many educational programs have a goal of transformational learning in which learners are exposed to content, acquire new knowledge, and engage in new experiences which could shape their attitudes, behaviors, and skills. The tension between the personal and professional experienced by this study's participants points to the intimate nature of transformational learning and suggests a need for future research on the best ways to use ePortfolios to evaluate this type of learning.

Cohort 1's perceptions of the ePortfolio as redundant was also unanticipated. The original ePortfolio was designed so that journal entries could be used at the trainee's convenience and at his or her discretion to populate the ePortfolio. Miscommunications and misunderstandings about this point illuminated the importance of frequent communication, explicit instructions, and consistent reminders, particularly if learners are completing multiple assignments in tandem with their ePortfolios (Wakimoto & Lewis, 2014).

Changes implemented in Phase 2, including a comprehensive user guide, more frequent working sessions (including peer support), and more explicit communication and instruction on the ePortfolio seemed to result in a more successful implementation with cohort two. Cohort 2's appreciation for the ePortfolio as a new technology was encouraging and is a reminder that as society shifts ever more towards technology-based news, social media, and electronic collaborations, the skills of managing an online presence will become increasingly important (Kleppinger & Cain, 2015). Educators and program staff must continue to push students outside of their technological comfort zone so they can stay at the forefront of emerging technologies.

Cohort two overwhelmingly endorsed the technology as a useful tool for documenting their learning experience, reflecting on its impact on their growth, and how they were integrating their training experiences into their professional identity. While these preliminary results are promising and highlight the ePortfolio's potential as a powerful learning tool, both cohorts expressed challenges with the technology and ultimately buy-in to the ePortfolio process. These challenges remained in Phase 2 despite targeted changes that the program staff made to the process between implementation years. Acceptability among interdisciplinary learners was further complicated by the fact that they come from diverse disciplines. While trainees from certain disciplines had previous experience with portfolios and were more receptive to the requirement (Wuetherick & Dickinson, 2015), others had no previous experience and were resistant.

The theme of accountability and support, which rang true for both cohorts, may reveal a key ingredient for successful ePortfolio implementation, especially in non-credit bearing scenarios (Thibodeaux, Cummings, & Harapnuik, 2017). To ensure these features are in place, ePortfolio initiatives need support from staff, faculty, and leadership at all levels of a program (Lievens, 2015). Peer support and regular peer accountability groups may also serve as a mechanism to generate buy-in and facilitate maximum benefit from ePortfolio initiatives (Gordon, 2017; Ring, 2015). While accountability and support may remedy many of the technical challenges related to ePortfolio implementation, the issues of privacy concerns and personal/professional tensions remain.

It seems privacy concerns and the dilemma of just how much to reveal in an ePortfolio is not unique to the GaLEND program. Students in more traditional, credit-bearing educational settings (Lin, 2008; Svyantek et al., 2015) have also expressed uncertainty about the potential audiences of their ePortfolios. This uncertainty may influence how students construct their ePortfolios if they attempt to engage in impression management (i.e., influencing what their audience thinks of them by

choosing how much or what to reveal in their portfolios; Norris, 2011). For programs attempting to use ePortfolios to assess transformational learning (including changes in attitudes, skills, and behaviors), this impression management may result in invalid assessment of learners or superficial assessment at best.

### Limitations

The results of this study supported the utility of ePortfolios in interdisciplinary graduate-level training programs, yet this study was not without limitations. We examined data from two unique cohorts of trainees; as a result, some themes may be cohort- or even participant-specific. Furthermore, trainee perceptions in Phase 1 were captured via focus groups while in Phase 2, open-ended surveys were used. The choice of these methods could have impacted our results in a few ways. First, the use of focus groups may have allowed certain themes only held by a few participants to dominate the discussion. Potential group-think is unavoidable in these scenarios. The group setting also could have encouraged some more outspoken trainees to overshare while prohibiting other trainees from sharing their thoughts. Finally, although the open-ended surveys in Phase 2 were anonymous, the more positive perceptions of the ePortfolio process captured by the surveys may have resulted partially from social desirability bias. Despite these limitations, this study does contribute valuable knowledge about the use of ePortfolios in nontraditional interdisciplinary settings.

## Conclusion

This study explored the acceptability and feasibility of ePortfolios among two cohorts of interdisciplinary trainees in a non-credit bearing, graduate-level, training program. Our results indicate that even in spite of personal challenges and buy-in challenges, ePortfolios can be successfully used for documentation, reflection, and curriculum integration in an inclusive interdisciplinary setting. Our data also suggest several possible areas of future research including the ways that personal/professional tensions and concerns about self-portrayal may differ for adult learners, learners in transformational learning programs, or learners in interdisciplinary contexts. In addition to targeted evaluation in these areas, our study suggests that evaluating the ePortfolio process and learner perceptions is a worthwhile effort. Ongoing evaluation of ePortfolio implementation, even on an annual basis, can improve implementation, trainee buy-in, and learner experiences with the technology.

Such evaluation is critical for successful ePortfolio initiatives because the potential of this learning technology cannot be fully realized in interdisciplinary spaces unless learners fully buy-in to the ePortfolio as a learning tool. To ensure buy-in and compliance, transparent communication, regular technical assistance and support, and accountability are critical. Our findings have real implications for programs, organizations, and institutions that invest resources into ePortfolio initiatives. Without adequate support from staff, designated time devoted to ePortfolio implementation, and buy-in from participants, these initiatives may fail to yield benefits that make the investment worthwhile. Programs must overcome these implementation challenges before ePortfolios can be validly used for program assessment and evaluation.

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# Appendix

## Interview Protocol

Questions were asked in focus group format in Phase 1 and as open-ended surveys in Phase 2.

1. What was your initial impression of the ePortfolio component of GaLEND?
2. Has anyone ever had to create a portfolio for any other reason? If so, what for?

a. Can you share how the GaLEND ePortfolio was different from your past experience? Were there things about the GaLEND process that were better, same, or worse than your past experience?

3. What was the most challenging aspect of the ePortfolio process?
4. In what ways do you feel that constructing your GaLEND ePortfolio has been a valuable activity?
5. How did constructing your ePortfolio help you reflect on your GaLEND experiences?
6. How will you use your ePortfolio after completion of GaLEND?

a. Will you share with others (like potential employers, friends, family, etc?)

7. What could GaLEND faculty and staff do to improve the ePortfolio process for trainees?