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From Review to Practice: Implementing ePortfolio Research in Professional Identity Formation

J.T. Torres and Marissa C. McKinley
Quinnipiac University

Portfolios have been long celebrated for documenting learning across experiences. The assemblage created through portfolios often becomes more meaningful than the material documentation; they also reflect students’ identities. This understanding offers new instructional possibilities for implementing portfolios, but it does require us to think of portfolios beyond their typically technology-bound definitions.

Batson et al. (2017) lamented that portfolios have “often been defined by the technology that puts the idea into practice” (p. 4). Their recommendation was to focus on “portfolio as an idea,” not just as a material form but also as a concept and practice for teaching and learning (Batson et al., 2017, p. 4). Portfolios have commonly been the preferred tool for process learning and assessing student performance across a range of experiences and time (Aitken, 1993; Camp, 1993). In fact, process-oriented instruction frequently makes use of portfolios to evaluate students based on growth from an early artifact to a later one (Gearhart & Wolf, 1997). Besides change over time, portfolios also promote self-regulation and reflection of learning (Alexiou & Paraskeva, 2019; Jenson, 2011), extending their use and value in student-centered learning. As a pedagogy, Yancey et al. (2014) provided a useful framework for how “portfolio as an idea” (Batson et al., 2017, p. 4) encouraged students to make connections between the

- Delivered curriculum: instructional design;
- Lived curriculum: prior knowledge; and
- Experienced curriculum: students’ engagement with instruction.

ePortfolios, the digitation of print portfolios, emerged alongside rapidly increasing digital learning environments. As online learning promised greater equity and access in higher education, ePortfolios were identified as an empowering assessment method (Calfee, 2000). However, as virtual learning has come to dominate so much of higher education, new challenges emerge. For one, students require a particular literacy to effectively engage ePortfolio platforms (Yancey, 2019). Additionally, students require systematic support from faculty, advisors, and administration when producing an ePortfolio, which requires students to assemble, or bring together, processes, experiences, and identities in one place—an ePortfolio (Gries, 2019; Kirby et al., 2022). While addressing these challenges is certainly important, the process of assembling artifacts to tell a story of oneself should remain the goal.

As a complex product, ePortfolios communicate not just a body of work but also a student’s multimodal identity (Bauer, 2009; Blair, 2017). When a student assembles textual artifacts that tell a story of their learning through an ePortfolio, they are also assembling an identity, a particular way of being recognized in a certain social context (Gee, 2014; Kalmbach, 2017; Yancey, 2015). The current promise of ePortfolios, according to scholars, like Rhodes et al. (2014), may be their capacity to help students transfer their learning by (re)negotiating identities assembled in the moment.

Undergraduate college students experience incredible transition in Western society. They leave home, enter new communities, encounter new ideas, and become different selves. As teacher-scholars, we wondered how ePortfolios could capture and trace identity (trans)formation, learning, and knowledge transfer. In other words, we wondered how, as a method, undergraduate students could use ePortfolios to record their ever-changing identities and learning in and across contexts and time. Thus, taking the theoretical position that the ability to transfer learning across contexts,
and, therefore, to (re)negotiate identities depends on assemblage (Gee, 2014), our review is guided by the following question: In what ways might undergraduate college students assemble an identity in an ePortfolio?

**Method**

From May 2021 to November 2021, we searched Academic Search Premier, PsychINFO, ERIC, and Google Scholar with the terms “writing,” “ePortfolio,” “identity,” and “assessment” in different combinations (e.g., “identity” AND “portfolio”; “portfolio” AND “assessment”). After scanning titles for relevance and removing duplicates from the search, we received 236 results. These initial results came from varying contexts.

To assess the results in relation to our guiding question, we excluded studies that did not:

- take place in a college setting;
- undergo peer review (e.g., unpublished dissertations, conference presentations);
- examine the relationship between portfolios and aspects of identity (e.g., self-reflection, self-regulation, agency), as defined in recent scholarship (e.g., see Berzonsky & Kuk, 2021; Oyserman et al., 2012); and
- assess portfolios within a pedagogical context, rather than solely evaluating portfolio platforms or types.

After testing the results against the above criteria, 31 studies remained. We organized studies based on learning context, portfolio type, and results, allowing us to present the current review so that it emphasizes shared themes across studies. In line with our guiding question, we analyzed studies based on the contextual factors (i.e., how portfolios were situated in particular learning environments) that constituted each study’s results. At first, we annotated articles based on our guiding question following the grounded theory process of open coding (Glaser, 2016). We had in mind not so much the goal of generating a theory, but rather generating themes that pointed to instructional approaches for assembling a professional identity through ePortfolio. We coded for methods that resulted in students successfully using ePortfolios to reflect upon, showcase, or otherwise develop a professional identity. We also coded for benchmarks of success used in each study. We met to discuss our process and then synthesized codes into emerging themes, which we categorized into the approaches we describe in this review.

**Assembling a Professional Identity**

The approaches point to instructional strategies for using ePortfolio to assemble a professional identity. Like any identity, professional identity is dynamic, situated within a specific context, and always in negotiation with social and material forces (Oyserman et al., 2012). The first two approaches—shared ownership and ongoing reflection—describe student/faculty interactions. From the writing studies literature, ePortfolio usage that resulted in students’ awareness of their in-the-moment identities often invited students to negotiate ePortfolio implementation and reflect on their negotiations (Berzonsky & Kuk, 2021). Informed by Berzonsky and Kuk’s (2021) findings, students should have some say on the design, execution, and use of an ePortfolio; students should also be asked to reflect on the contents and purpose of their ePortfolio. The second two approaches—intentional purpose and co-curricular integration—describe contexts and possibilities for interaction. ePortfolios are more likely to benefit students when the contextual purpose is made explicit and when content is composed of multiple samples across courses or experiences.

Even though we discuss the approaches in a seemingly linear fashion below, they are critically interconnected. The primary purpose of this article is not to provide a menu of strategies to be chosen à la carte, but to explore a potential framework contextualizing ePortfolios for explicit purposes.
Shared Ownership

Agency

Students can enact their agency by sharing ownership of their ePortfolios and by participating in the digital assemblage of their materials with others—students, teachers, colleagues, and/or employers (Hiradhar & Gray, 2009). According to Lam and Lee (2010), the opposite was true: ePortfolios could discourage student use and participation, and thus agency, when portfolio processes feel top-down. To encourage student agency and participation in the ePortfolio process, teachers, for instance, can allow their students to make creative decisions, like allowing them to create their own ePortfolio title pages or covers (Hewitt, 2001); teachers can also encourage agency by allowing students to make their own decisions regarding ePortfolio content based on their future orientations (Bennet et al., 2016). As Hewitt (2001) found, when students are afforded opportunities to determine their ePortfolio’s materialization, as linked to their identity as a learner and/or professional, their “vested time, interests, and energy often yield a wealth of quality writing” (p. 188). Many theorists connect agency with identity, demonstrating that feelings of capability and commitment become defining moments of individual trajectories (Stetsenko, 2008). Involving students early in the ePortfolio process does more than hold them accountable, it also encourages them to invest their whole selves.

This is not to say that students should have complete ownership of their ePortfolios. In fact, Lambert and Corrin (2007) demonstrated the importance of faculty acting as co-decision-makers, both with and for their students. What is important is that the decisions made by stakeholders (e.g., students, faculty, administration) are aligned with the ePortfolio’s purpose. Lam (2016), for instance, offered a model of portfolios as assessments as learning, which requires students to learn through the self-assessment occurring through portfolio use. In such a model, for themselves, stakeholders establish clear objectives and make decisions, either collaboratively or independently, in pursuit of commonly understood objectives. The negotiation required of shared ownership also emphasizes the sociocultural nature of identity—particularly, that it emerges through social interaction (Penuel & Wertsch, 1995). This point, explored in the following sections, is critical in establishing the centrality of relationships in defining identities.

Support

Agency is not the same as independence. For students to develop the agency for negotiating their identities through ePortfolios, they need structured support. Lam (2017) provided guidelines for the roles each stakeholder might play in supporting learning through ePortfolios:

- Students monitor their own learning and make decisions based on their progress,
- Faculty model portfolio use and reflective practice, and
- Administration sustains a culture of feedback and reflection.

While much ePortfolio discourse emphasized the roles played by students and faculty in our review of writing studies literature, the role played by administration was equally important. A portfolio culture means that students are consistently exposed to feedback, as well as opportunities to reflect on and incorporate feedback in their progress (Lam, 2017). Some institutions sustain such a culture through writing centers, ePortfolio courses, or seminars that provide students with direct instruction in ePortfolio engagement (Kehoe & Goudzwaard, 2015; Lam, 2021). Institutional buy-in to portfolio pedagogy is necessary to ensure such support. Without significant investment of resources (e.g., portfolio coordinators, portfolio readers) or even explicit interest (e.g., sending the message to students that portfolios are an important material assemblage of their identities), portfolio implementation is likely to suffer. Identity development takes time and frequent reflection checkpoints. Engaging in an activity only once, in a single context, does not provide the necessary experiences to reflect on how we presented and what we might change. For students to develop identities aligned with their professional interests, they need to sustain engagement across time and space. Touchpoints need to be charted along the way, including anyone from student affairs to advising. In short, students need to stay in relation to those helping to shape their identities through ePortfolio.

Ongoing Reflection

Confidence

With a robust support system, students are not only able to develop the agency to construct an identity with ePortfolios, but they are also able to develop confidence in their constructed identities. Writing Across the Curriculum (WAC)/Writing in the Disciplines (WID) research has frequently documented how students’ learning confidence is often connected to feeling supported (Meehan & Howells, 2019). Building ePortfolios within supportive systems can enable students to confidently reflect on the possible identities materializing through their assembled artifacts (Phan,
Further, while working within supportive spaces, students can be encouraged by educators to revisit their reflections and locate areas where superficial, rather than deep reflection, is offered, encouraging students to revise these discussions so they show readers why and how certain things matter and why and how they bear significance in the student’s life. It is through deep reflection that students are likely to build metacognitive awareness, helping them transfer knowledge and skills across contexts (Adler-Kassner et al., 2016; Yancey et al., 2014; Yancey, 2015). This way, students can become alert to how multiple identities overlap and integrate to make up the whole person, as well as how they shift amongst varying contexts.

**Metacognition**

Metacognition is a frequent goal of reflective practice with many benefits to achievement (Goupi & Kouider, 2019). For example, Nezakatgoo (2011) showed how an ePortfolio aligned with clear objectives and formative feedback could assist English as a foreign language students in developing an awareness of variable language rules. The awareness of one’s learning, assembling, or communicating, directly impacts one’s identity as a learner, assembler, and communicator (McAlpine, 2005). ePortfolios are considered tools for enhancing metacognition because they not only provide students artifacts of performance over time, but they also provide opportunities to make explicit connections to learning and identity across artifacts. In our review, WAC/WID studies referred to the metacognitive processing of artifacts as a “narrative identity” (Cordie et al., 2019; Graves & Epstein, 2011; Nguyen, 2013). Narrative identity can be simplified as the belief that identity is, fundamentally, a life story (McAdams, 2018). ePortfolios can become explicit platforms for narrative identity through the following approaches.

**Intentional Purpose**

**Clarity**

Just as task-specific clarity is critical to fostering reflection and decision-making clarity is critical to fostering ownership, clarity is also needed when it comes to ePortfolio purpose. All involved agents need a shared vision of what any ePortfolio is meant to accomplish. WAC/WID studies indicated that an ePortfolio can be situated within a discipline’s discourse (Hunter & Tse, 2013), a “real world” setting (Thibodeaux et al., 2017), or students’ personal lives (Buyarski et al., 2015). The ambiguity surrounding what an ePortfolio is meant to accomplish can have several drawbacks.

One drawback is that students may not engage or use the ePortfolio (Thibodeaux et al., 2017), and even when students do persist in their use, their engagement might be so varied that little meaning might be applied to students’ identities. For example, in the context of an information literacy course, Scharf et al. (2007) found that students did not improve information literacy skills through an ePortfolio when information literacy, as an objective of the ePortfolio, was not clearly defined. A second drawback emerges during assessment when, as in the case of Kelly-Riley (2011), raters created their own idiosyncratic criteria rather than agreeing on explicit expectations. As Kelly-Riley (2011) argued, the purpose of any portfolio must not just be clear, but it must also be consistently defined across agents of a portfolio system. A consistent definition must also reach the student, and the literature suggests the importance of the definition aligning with students’ professional needs.

**Connection**

Based on the many studies in this review, “consistency” does not just signify a longitudinal alignment of goals. While some scholarship positioned ePortfolios as a culmination of learning, such as in a capstone (Harver et al., 2019; Scharf et al., 2007), others used ePortfolios as an opportunity to make horizontal connections (Alexiou & Paraveska, 2019; Hunter & Tse, 2013). Connecting different courses, programs, disciplines, or experiences seems to be an important component of successful ePortfolio implementation. The intended connections need to be clearly understood by all involved agents.

Clear connections across experiences create moments of reflection (e.g., thinking about how experiences connect) and ownership (e.g., autonomous movement along connected pathways). Pedagogically, ePortfolios can connect experiences by focusing on key threshold concepts, the “portals” that lead into each discipline, potentially changing the way people think (Meyer & Land, 2005, p. 373). For example, Lewis (2017) studied the effects of ePortfolio in an education program that asked participants to document and reflect upon the key threshold concepts for teaching particular disciplines. With explicit connections made between courses and the ePortfolio, students could assemble key threshold concepts, transforming the ePortfolio into a passport, which helped provide students entry into different spaces. As Meyer and Land (2005) argued, each new spatial entry requires students to “extend their use of language in relation to these concepts, . . . [creating a] shift in the learner’s subjectivity, a repositioning of the self” (p. 374). This repositioning of the self is a critical moment for ePortfolios, as it brings together the other approaches identified in this review,
specifically that students and teachers should feel a sense of shared ownership of their ePortfolios (i.e., a student might realize that their ePortfolio was not possible without their teacher’s feedback).

**Co-Curricular Integration**

**Collaboration**

Successful ePortfolios need large-scale collaboration on multiple levels (Lam, 2021). While the reported approaches identified in this review mainly describe faculty and student collaboration, administration and staff are also important collaborators in facilitating co-curricular ePortfolios. Administration can provide support by offering credentials or badges (Kehoe & Goudzwaard, 2015), portfolio pedagogy training (Lewis, 2017), and/or technology support (Mueller & Bair, 2018). Coordinating collaboration requires a more global view of ePortfolio use. In fact, Morreale and Zile-Tamsen (2017) found that barriers, such as learning how to use an ePortfolio platform, could be mitigated by linkages across agents. For instance, teachers in first-year university courses could allocate time to introducing students to a particular ePortfolio platform, which could then be used in a capstone course (Lewis, 2017; Morreale & Zile-Tamsen, 2017). Unfortunately, as in the case of Roberts et al. (2016), these connections do not happen on their own. As Roberts et al. (2016) and Mueller and Bair (2018) found, it is not enough to simply hold the expectation that students will create an ePortfolio. Rather, explicit touch points must be built into the process, giving students multiple opportunities in different contexts to practice negotiating and transferring intended identities across time and space.

**Transfer**

Teaching for transfer indicates a pedagogy that emphasizes the ability to move knowledge, concepts, skills, and identities across contexts (Adler-Kassner et al., 2016). Co-curricular ePortfolios tend to promote awareness (and, therefore, metacognition) of how identity is socially formed. This awareness calls attention to the fact that learning does not always result in direct application. On the other hand, students need to reorient themselves to novel situations by identifying and employing appropriate strategies in particular contexts (Adler-Kassner et al., 2016). Transfer does not mean copying a learned skill or concept from one context and pasting it directly into a new context. As novel challenges emerge, learned skills or concepts need to be negotiated. Transfer requires what Yancey (2017) called a “remix” of prior learning to fit new situations (p. 189). Transfer is both critical and creative, and it can be facilitated using co-curricular ePortfolios.

As illustrated in this review, the subtheme of collaboration depends on a student’s awareness of the role they play in a particular context; this awareness also depends on the awareness in other agents. According to Zhu (2004), students were more likely to transfer writing across contexts when faculty from both writing programs and disciplines shared the labor of teaching/contextualizing writing. Related to this finding, Roberts et al. (2016) demonstrated the need for ePortfolios to be introduced as early as possible in students’ learning environments. By introducing ePortfolios early in a student’s learning, teachers can scaffold ePortfolio use and emphasize the importance of adapting identity in response to uncertain contexts. Kelly and Le Rossignol (2022) offer the phrase “shape shifting portfolio” to describe a process in which students have structured opportunities to (re)assemble the digital narratives about their learning, making changes to meet different needs (p. 789). With teaching for transfer in mind, ePortfolios can address current challenges of higher education by encouraging students to view their identities as strategic choices, set within particular contexts, that have the power the adapt to changing professional dynamics.

**Discussion**

This review was guided by the question: In what ways might undergraduate college students assemble an identity in an ePortfolio? The following recommendations are derived from our synthesis of the reported Writing Studies literature in this review and our personal experiences.

The reported literature suggested that when students are encouraged to take ownership of their ePortfolios, and further, when they are encouraged to deploy their creative talents to tailor their ePortfolios to their own interests, tastes, and identities, students are more likely to acknowledge the value in ePortfolio assemblage and how their product can assist them in upward learning and professional mobility (Bennet et al., 2016; Hewitt, 2001). However, for students to see the value in ePortfolio assemblage and usage, they must be guided by trusted teachers and/or mentors, showing them the possibilities for their ePortfolios and what they can offer to others at the university and beyond (Kelly-Riley, 2011; Lam, 2017). Support, then, is crucial.

Support and mentorship also have implications for student confidence and metacognition. When students are supported in their roles as learners, assemblers, and communicators during ePortfolio building, revising, and editing (Lam, 2018), they are more likely to become confident in these roles and, often, in their final product—their ePortfolio (Meehan & Howells, 2019). When students are especially confident in their final ePortfolio product, they are more likely to make use of their work and share it with others.
How does one help students to (further) develop their confidence in ePortfolio assemblage? One way is to ask students to reflect (Adler-Kassner et al., 2016; Yancey, 2015; Yancey et al., 2014). Teachers, for instance, might ask students to free write in a dedicated journal, taking the time to identify their fears and challenges surrounding their ePortfolio work (Yancey, 2015; Yancey, 2017; Yancey et al., 2015). Students could also report in their journals the successes they experience in their ePortfolio assemblage, even detailing how they worked through a challenge in their ePortfolio building. Teachers should encourage students to identify, in detail, how they specifically worked through their challenges, noting what they did first, second, third, etc., before arriving at a solution to their problem (Adler-Kassner et al., 2016; Yancey, 2017; Yancey et al., 2014). Teachers should also encourage students to speak to the learning challenges they encountered and how they moved through those challenges (Adler-Kassner et al., 2016; Yancey, 2017; Yancey et al., 2014). To prompt this level of thinking, teachers could ask students, for example, “How might the problem you encountered exist in other contexts, and, if you find yourself in a similar situation in the future in a new context, how do you plan to apply the knowledge gained from working through your challenge in a new context?” Such prompting by teachers can help students acquire metacognitive awareness of their procedures, leading them to transfer knowledge and skills beyond one context (Adler-Kassner et al., 2016; Yancey, 2017; Yancey et al., 2014). Through reflection, students can gain confidence in their ePortfolio process and product and transfer knowledge about their ePortfolio assemblage efforts across contexts.

As noted in this review, much of transfer stems from a student’s ability to understand the goal of a task or assignment and how working toward that task or assignment might prove beneficial—or help them—in other learning and/or professional contexts (Tur et al., 2019). Simply, students want to understand the purpose for and value of what their teachers are asking of them. In terms of ePortfolios, when teachers clarify to students the purpose of building an ePortfolio and identify clear examples of how an ePortfolio later assisted a student in acquiring scholarships, badges, or even internships, for instance, then students will likely recognize the value of the work they are being asked to take on (Yancey, 2015; Yancey et al., 2014).

The reported scholarship in our review also identified the importance of collaboration among faculty, students, administration, and staff. When collaboration exists across the university, when teachers, administration, and staff across the university take seriously the value of ePortfolios, and when they collaborate on building and presenting an ePortfolio pedagogy, then, early on, students from across the disciplines can be introduced to the value of ePortfolios (Kehoe & Goudzwaard, 2015; Lam, 2021; Lewis, 2017; Mueller & Bair, 2018); students can also begin building ePortfolios, gathering artifacts and arranging them to reflect their own creativity and values. Instilling an ePortfolio pedagogy culture, as Yancey (2019) reminded readers, is central to the success of students understanding not only the purpose and value of ePortfolios but also the process and presentation of them. Without collective commitment, students lack necessary ePortfolio support (Kehoe & Goudzwaard, 2015; Lam, 2021; Lewis, 2017; Mueller & Bair, 2018) and may become less likely to value skills and knowledge pertaining to ePortfolio process and product. So, “In what ways might undergraduate college students assemble an identity in an ePortfolio?” The answer is complex, as it all depends upon a dedicated network involving ownership, reflection, purpose, and co-curricular involvement. In other words, it is dependent upon assemblage.

**Conclusion**

ePortfolios are not new, but the re-emergence of ePortfolio interest seems to come in response to the eruption of digital environments. Given the disruption of education and social connection due to COVID-19, it becomes critical to understand the significance of digital, virtual, and web-based identities. Because of the web’s dynamism of forms, assemblage makes sense as a framework not just for analysis but also for thinking about ePortfolio implementation. As a process, knowledge materializes not so much from creating something new through synthesis, but by bringing together familiar artifacts and forms that reveal, via their relationships to one another, new understandings. For instance, the web’s ability to archive and document various “selves” (e.g., the self we present on Facebook versus the self we present on LinkedIn) provides opportunities for a layered reflection of the transferability and negotiability of identity, critical skills to survive the hyper-dynamism of professional environments. Everything from image-sharing to re-posting contributes to a rapid exchange of artifacts that momentarily snapshot who we are in particular contexts. Thus, forms like digital storytelling become increasingly important as methods of deep reflection (Kelly & Le Rossignol, 2022).

In this review, we indicated that for undergraduate college students to assemble an identity in an ePortfolio, much must fall into place. ePortfolio process and product are interconnected with assemblage. Moving forward, we suggest that ePortfolio assemblage is an ecology, “emerg[ing] through complex networks of interrelations, depend[ent] upon adaptation, fluidity, and the constant motion of diverse rhetorics and discourses” (Reiff et al., 2015, p. 4). Given this notion of assemblage, we argue that
successful ePortfolio design does not rest on the shoulders of an individual. The process of implementing an ePortfolio also needs to be an assemblage so that students receive personalized feedback, collect artifacts from experiences that might extend beyond the boundaries of a single class, and revise their assemblages across different experiences. By offering opportunities to (re)assemble digital selves, ePortfolios become a valuable tool for navigating uncertain professional contexts.

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Designing and Implementing an ePortfolio as a Capstone Project: A Constructivist Approach

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Sharing the journey of developing an ePortfolio assignment, this article focuses on the design process, implementation, and benefits of the ePortfolio as a capstone project for a bachelor’s degree program using a constructivist approach. Integrating constructivist educational practices (e.g., student-centered learning, autonomy, self-regulation, mental relationships, and reflection) in the ePortfolio project design deepens student learning, offers a useful means for assessment of student learning through the degree program, and provides students with validation of their learning and development as professionals. Explaining the process of the implementation of the project in the capstone course, this article shows how students can co-construct knowledge in the context of a sociocultural atmosphere. The ePortfolio project serves as an instrument for student assessment and deepening of learning, and beyond graduation, it serves as a valuable tool for professional advancement.

No one would object to the statement that society has been changed significantly by the development of technology. Most would agree that the effect of technology on society has been more impactful now than at any other time in human history, and its influence will only continue exponentially into the future. Moreover, the recent COVID-19 pandemic has forced society to adopt even more technology into daily life. As with other sectors of society, the field of education is heavily influenced by the advancement of technology. One example of effective technology use in education is that of ePortfolios.

An ePortfolio is a creative and personalized digital collection of artifacts, such as documents, presentations, videos, data analysis, pictures, paintings, images, etc., that provide evidence to demonstrate students’ learning and development over time. Dahlstrom et al. (2013) found that more than 50% of the colleges and universities in the United States offer some form of ePortfolio experience, and its use among institutions of higher education is expected to increase considering the advance of technology and the proliferation of online programs. Especially in higher education, ePortfolios are used to assess the quality of a degree program or competencies of a student. In addition to being utilized as an assessment tool, ePortfolio usage has demonstrated a positive correlation with student success, student learning, and stimulating institutional change in higher education settings (Eynon et al., 2014). Further, students who develop an ePortfolio exhibit increased levels of metacognition relative to connections to personal or career goals and learning (Bowman et al., 2016).

The Early Childhood Education (ECE) bachelor’s degree program at Vanguard University of Southern California (VU) is an asynchronous, fully online program that launched in 2012. In 2015, drawing upon former experiences at another institution, Program Chair Chun-Burbank, one of the article’s co-authors, sought to develop a capstone project that would (a) be fun, meaningful, and practical for students; that would be aligned with the program’s Student Learning Outcomes (SLOs), as well as national standards for early childhood professionals, to demonstrate their competence and achievement; (b) deepen students’ learning through reflection on what they have studied through co-construction of knowledge with other students and the instructor; (c) provide tangible evidence of the knowledge, skills, attitudes, and dispositions of the students as early childhood professionals that they acquire through the degree program; (d) assist students in career advancement upon graduation; and (e) increase student retention. For a fully online program, creating an ePortfolio for the capstone project was a suitable choice to help achieve these goals.

In constructing the capstone project, artifacts and required materials are detailed for students as a guideline to help them create their ePortfolio. VU’s ePortfolio comprises (a) six student-selected artifacts, one for each SLO; (b) reflective narratives connecting the artifacts to the SLO for which it was selected; (c) reflections on the students’ understanding of each SLO and their ability to apply it in practice; (d) professional goals, one for each SLO; (e) a resume; (f) their philosophy of education; and (g) creative additions to personalize and further demonstrate students’ learning, competence, and achievement. This article shares how the ePortfolio was designed and implemented as a capstone project for a fully online, asynchronous bachelor’s degree program in ECE while applying principles and practices of constructivist learning theory. This study was approved by the Institutional Review Board of VU. Student course evaluations from ECED 499 Capstone course and reflections by the instructor are used to describe students’ behaviors shown during the development of their ePortfolios. The
Constructivist Education

Constructivist educational practices are rooted in key ideas of constructivism based on the work of Jean Piaget (1936; cognitive constructivism) and Lev Vygotsky (1978; social constructivism). Constructivism is a theory suggesting that learners construct their own knowledge through interaction with people or objects, and it describes both what knowing is and how one comes to know. Based on work in psychology, philosophy, and anthropology, constructivism describes knowledge as temporary, developmental, nonobjective, internally constructed, and socially and culturally mediated. Learning, from this perspective, is viewed as a self-regulatory process through assimilation and accommodation as well as the zone of proximal development progression. Learners build knowledge through a continuous dynamic process of taking information and constructing new ideas and connections. In the process, learners actively transform that information from the world around them into something that is unique and personally meaningful rather than passively taking it in. Learners use their prior understanding as the basis for building new meaning and skills. This knowledge-constructing process is facilitated by teachers who scaffold learning experiences to provide appropriate challenges that promote continuous learning and development (Tryphon & Vönêche, 1996).

With the foundation of constructivism, constructivist educators believe that education should be learner-centered. This means that learning experiences should encourage self-regulation and autonomy. The role of the instructor is to facilitate interactions with the physical and human environment by providing opportunities for learners to work together. Constructivism facilitates the development of mental relationships and reflection so that learners make sense of information for themselves and construct their own knowledge while fostering critical thinking skills in the context of a sociomoral atmosphere in which students feel respected and safe to try new things and learn from their errors (Bhutoo & Chhapra, 2013; DeVries & Zan, 2012). With the goal of helping students deepen their learning and to demonstrate achievement of the program’s SLOs, a constructivist approach was foundational to the program’s design and implementation of the ePortfolio at VU.

Vanguard University Early Childhood Education Program’s Journey

Adopting a constructivist approach, the ePortfolio project was designed as a learner-centered experience. Students create their ePortfolios in an introductory Cornerstone course at the beginning of the program and continue to develop the project until completing it in the concluding Capstone course. Being a fully online degree program, the ePortfolio is the best, most pragmatic format for creating a professional portfolio. Having the same instructor for both the Cornerstone and Capstone courses provides continuity and support across time for authentic learning which requires revision and reflection by the student (Cordie et al., 2019).

The development of the ePortfolio capstone project began with a backward planning approach, designing instruction that looked at the learning objectives first and then planned assignments and assessments around what the students are expected to learn and achieve. Thus, the first step was to align the assignments and the course learning outcomes with the program’s SLOs. This makes each learning experience uniquely designed to help students achieve the intended learning outcomes.

The next step was to choose an ePortfolio platform. Many platforms may be integrated with the learning management system that the ECE program uses. Considerations for adopting a platform were (a) to have simple and easy-to-use software that students could access, edit, and share outside of the VU learning community; (b) to enable the ePortfolio to be a living document so that students may continue to develop their ePortfolios throughout the degree program; and (c) to be accessible to students even after graduation, enabling the ePortfolio to be a useful tool to document students’ continued growth and development as lifelong learners and professionals. After researching options for an ePortfolio platform that met the design needs of the program, Google Sites was chosen.

Next, the ePortfolio project was divided into smaller steps, developing specific assignments for each step of the process to assist the students in the construction of a professional ePortfolio. Each assignment in the ePortfolio project was created with a constructivist educational philosophy in mind. These assignments serve as an opportunity for unique reflection by each student on their skills, knowledge, and dispositions as an early childhood professional.

Principles of Constructivism in the ePortfolio Project

Student-Centered Learning, Autonomy, and Self-Regulation

O’Keeffe and Donnelly (2013) pointed out the passive learning roles of students as mere consumers of
knowledge (Neary & Winn, 2009) and proposed an idea by Biggs and Tang (2011) to integrate active learning and appropriate assessment into the curriculum, which student-created ePortfolios provide. Creating ePortfolios also empowers students to become the owners of their learning, aligns the assessment methodology to their learning, and enhances their future employability.

Students begin the process of developing their ePortfolios by setting up their own Google Site. To support students, the instructor, Bartlett, created (a) step-by-step videos providing detailed guidance for students needing help creating their Google Site and (b) an ePortfolio template, which is a framework for the ePortfolio that is organized around the program’s SLOs. Within the template framework, students are given the autonomy to creatively personalize their ePortfolios to reflect who they are as early childhood education professionals, highlighting their own unique strengths and abilities. As students build their ePortfolio, they are supported by guided video instructions, individualized feedback from the instructor, and peer review opportunities.

Goal setting is also one of the components of successful self-regulation in a constructivist approach to education. Cheung (2004) described how goal setting can be a motivational tool that improves students’ self-regulation learning processes, which in turn improves their academic performance. Research demonstrates that learners who practice goal setting are learning-oriented students and show higher levels of achievement than those who do not practice goal setting (Cheung). As students begin building their ePortfolios, they create goals for themselves in relation to each of the SLOs. The model used for writing goals is the “SMART” model: specific, measurable, attainable, relevant, and time bound. In a study by O’Neill (2000), educators described the value of writing SMART goals because it helped them to identify areas of growth and reflect on their current instructional practices. These SMART goals then become part of a Professional Growth Plan which they include in the ePortfolio and utilize as a tool to encourage continued professional learning and growth beyond the completion of the program. Payne reflected on this goal-setting process as follows:

Learning how to write SMART goals was a challenge for me at first because I had not thought about all the components of writing an effective goal and how those components contributed to my successfully meeting those goals. Also, I never really thought about what I was going to do after my program to continue to grow as a professional. I was grateful for the opportunity to create these goals and would often revisit the year after I graduated to see if I was living up to the goals I had set for myself.

**Mental Relationships, Reflection, and Critical Thinking**

Piaget (1936) stated that “Intelligence is the construction of mental relationships” (p. 418). In other words, one’s intelligence organizes experiences to create specific knowledge content by constructing mental relationships. He identified the process of constructing mental relationships as regulation through the adaptation process. When learners encounter a new situation, the first thing they do is critically examine and reflect on their own prior experience and knowledge. Without such internalized reflection, mental relationships would not be constructed; thus, no increase in intelligence.

This mental relationship-building process, reflection, was emphasized by Dewey (1933) as the importance of reflecting on experience in learning. Reflection is valued within the education profession, as Schön (1983) advocated for educational professionals to be reflective practitioners. The National Board (2016) identified five Core Propositions for Professional Teaching Standards, one of which states, “Teachers think systematically about their practice and learn from experience” (Proposition 4). This motivates educators to implement reflective practice as they grow in their profession. Reflective practice is an ongoing, continual, systematic, intellectually engaging, and iterative process through self-examination and/or seeking others’ advice. Through this, learners gain new understanding, adjust, and implement the new understanding into practice. Schön (1983) found that the most effective educational professionals use their previous experiences and knowledge to understand and figure out new and challenging situations whenever they encounter them. Roger (2001) emphasized the importance of guided reflection to support students’ achievement of anticipated learning outcomes. Such guided reflective practice can be facilitated when implemented as part of an academic plan, such as the implementation of portfolios, to increase self-confidence, enhance capacity for practice, create supportive relationships among those involved in the reflective process, enhance one’s ability to mentor, and ultimately transform one’s professional practice (Bell, 2001; Kahn et al., 2006; Russell, 2005). Focusing on helping students to advance their intelligence through active reflection, educators consider a few constructivist educational principles: (a) engage the students’ interest, (b) inspire active experimentation with all its necessary grouping and error, and (c) foster cooperation between teachers and students and among students themselves (DeVries & Kohlberg, 1987; DeVries & Zan, 2012). Being able to reflect on one’s learning is a skill that takes practice and refinement. Landis et al. (2015) found that “reflection in ePortfolio
can foster many forms of success” (p. 118). In our project, intentional reflective practices are embedded throughout the learning opportunities provided from the beginning to the end of the ePortfolio capstone project.

Many students in the ECE program did not start with this skill of reflective practice. Throughout the Capstone course, each week students examine a specific SLO, identify an aligned artifact, and reflect on how that artifact demonstrates their learning, growth, and understanding in relation to the SLO. By the time students complete the ePortfolios with the SLO-related assignments, they have had ample opportunities to reflect on their learning throughout the program and on their practices as early childhood educators. They grasp the value of and hone their skills in reflecting on their learning and on their practice as early childhood professionals, which is evident by the depth of their reflections and analysis. For example, in the Cornerstone course, students begin developing their mission statement and educational philosophy, both of which are included as components of their ePortfolio. Like the ePortfolio itself, a student’s mission statement and educational philosophy are living documents that evolve as the student grows in knowledge and experience. These components of the ePortfolio encourage students to continuously reflect on their beliefs and commitment to their profession as well as to examine firsthand their growth throughout the program. During the Capstone course at the completion of the program, students again reflect upon, revise, and consider feedback from fellow students and the instructor in the process of refining their mission statement and educational philosophy, through which they demonstrate their learning and development as educators. The following is an example of Payne’s (2020) mission statement transformation and her reflection on its evolution:

- October 2017: As a teacher, it is my personal and professional mission to provide a nurturing environment where my students are encouraged to explore, create, and imagine, all while harboring a love for learning and establishing a deeper relationship with God who created all, and is in all. (In the Cornerstone course)
- October 2019: As a teacher, it is my personal and professional mission to provide a nurturing and safe environment where students are encouraged to explore, create, and take risks, all while harboring a love for learning to help my students to develop into the best version of themselves, identify their unique strengths and talents, and provide them with the opportunity to fulfill their God-given purpose. (In the Capstone course)
- Reflection: When I looked back on the original mission statement that I had written at the beginning of my program, I remember thinking how simple it seemed. I had learned so much about the education of young children and I wanted my mission statement to reflect all the new knowledge I had acquired. Once I was hired as an educator, I had revisited my ePortfolio and reflected on how my mission statement had changed once again after having new experiences in the classroom.

Students also have additional opportunities to reflect on what they have learned throughout the degree program and to develop their critical thinking skills as they select artifacts for their ePortfolios that demonstrate their knowledge, skills, abilities, and dispositions in relation to each of the six SLOs. In addition to selecting the artifacts to include in the ePortfolio, students also write a reflective narrative about each artifact to explain why that artifact connects to the SLO and how it provides evidence of their development of competence in relation to the SLO. As Carraccio and Englander (2004) found, demonstrating their learning, growth, and understanding of the SLO through the artifact is challenging for the students initially. Thus, scaffolding—based on the application of Vygotsky’s theory (Wood et al., 1976)—is provided by the instructor through a structured set of questions to be answered in each of the reflective narratives. Additionally, students have access to a sample reflective narrative that provides a high-quality example to guide their development of reflective narratives. Through the process of creating their ePortfolios and the various assignments to be included in the ePortfolio, students reflect on what they have been learning throughout the degree program and who they have become as early childhood professionals. As a result of this process, students would have experienced deepened learning, developed critical thinking skills, and built mental relationships. Payne reflected on her experience with constructing mental relationships and her reflection of the SLOs as follows:

I did not realize how much knowledge I had obtained from my undergrad program until I started working through my Student Learning Outcome (SLO) Reflections. When I started the program, I could read the lines. As I read the SLOs, I could read what the words said, but I had no idea how to interpret what that meant in the classroom. As I started to take some classes, I started to be able to read between the lines. I was able to read the SLOs along with the National Association for the Education of Young Children Professional Standards and Competencies for Early Childhood Educators and start to understand what those principles looked like in the classroom. As I gained practical experience implementing those principles into my teaching, my understanding deepened, and I started to read beyond the lines. I saw how each principle was interdependent with one another and why they are important to the role of a teacher.
As students invest in the design of their ePortfolios, mental relationships are further developed and reinforced. Through the promotion of creative freedom in the design of their ePortfolios, students are encouraged to explore diverse technologies. As students engage with the ePortfolio platform, they develop skills in website building and design as they learn how to format their ePortfolio pages. Using personal images from their experiences in the classroom and photos from the internet requires students to ensure that all original sources are given proper credit. Students also learn from seeing examples of other students’ ePortfolios and their use of technology and design. Through this, students are motivated to try out new things in their own ePortfolios. However, students encounter the challenges of mastering new technology skills, learning about fair use and copyright law, and making meaningful connections with the content. When faced with the limitations of design, formatting, and fair use, some students looked to graphic design applications to create visuals that were original, as well as fit the design of and supported the theme and purpose of the ePortfolio. Figure 1 shows an image and reflection created by Payne, who also wrote:

I really wanted the images in my ePortfolio to have meaning and support the purpose of my ePortfolio. I wasn’t working in the classroom yet, so I didn’t have a lot of photos from my personal experiences to include on the pages to enhance the aesthetics. Trying to find images on the internet posed many challenges including copyright restrictions and size formatting for my pages. To problem solve, I learned how to make all my own images using a graphic design software which allowed me to accentuate quotes that supported my purpose and fit the layout of my design. I enjoyed learning how to use this new software and it has helped me in many visual design projects since.

Such digital literacy skills are highly valued by employers in current society, which is supported by the findings of Finley (2021). Her study shows that digital literacy was one of the top-ranked essential learning outcomes that employers believe college graduates should have. Creating an ePortfolio provides students ample opportunities to do so.

**Sociomoral Atmosphere and Co-Construction of Knowledge**

The ePortfolio project was designed to ensure students would be active participants in their learning and co-constructors of knowledge among their co-learners in a safe, sociomoral atmosphere. DeVries and Zan (2012) discussed the importance of creating a sociomoral atmosphere in building mental relationships and learning. In a sociomoral atmosphere, the classroom functions as a learning community where there is mutual respect between student and teacher and students with one another, and where students feel safe to be mentally active and to be bold in their learning (Howes & Ritchie, 2002; Watson & Ecken, 2003). In such an environment, dialogue, guidance, feedback, and
social interactions drive and transform potential development into reality (Ehiyazaryan-White, 2012). By the time students take the Capstone course, many of the students have already met online, having interacted together with those peers enrolled in the ECE courses throughout their degree program. These learning communities allow for genuine conversations where students guide and support each other in their learning.

As the course progresses and the learning community develops, meaningful collaboration occurs among the students as they provide feedback to one another in the development of their ePortfolios. Students continuously encourage each other in the construction of knowledge through their constructive feedback, interactions, and support, which inspires the co-learners to achieve higher levels of understanding. Payne reflected on a time she and another student set up their own time to meet virtually to offer support and to help one another as they faced challenges regarding their ePortfolio design:

I was continuously blessed by feedback from my peers. If I was unsure of something, or had questions, I knew that I could pose my questions without judgment or ridicule. Likewise, when I saw that a peer had a question or was asking for feedback, I was glad to offer my help and assistance to help support that individual in their growth and understanding. One of my classmates and I met on a weekly basis as we worked through our Capstone course together, providing feedback on each other’s ePortfolios.

Each week, students share a specific component of their ePortfolio (e.g., philosophy of education, professional goals, reflective narratives) with their co-learners and instructor in a discussion forum. Weekly discussions form a learning community and provide time for collaboration as students develop and share components of their ePortfolios. In such a sociomoral environment, students feel safe in sharing their work and offering constructive feedback to one another as they co-construct knowledge in the learning community. While certain elements of the ePortfolios are required to be shared, the students have the option to share their final draft of their ePortfolios with the class. However, due to the sociomoral atmosphere created, most students feel respected and safe to share their entire ePortfolios. This is an authentic example of social constructivism originated from Vygotsky, which is a learning theory that views learning as a social process in which students collaborate by engaging in group activities for meaningful learning to take place (Akpan et al., 2020). In other words, social constructivism views knowledge acquisition as the responsibility of the student as an active participant as well as a co-constructor of knowledge. Jones and Lea (2008) found that in a discussion forum, students play various roles such as a supporter to fellow learners, a friend, and a teacher. The process of developing the ePortfolios, and sharing through the discussion forums and other interactions, leads students to develop a professional learning community in which they see themselves as valuable contributors and co-constructors of knowledge as early childhood professionals.

Studies show that the mentor’s guidance could increase the effectiveness of the reflective practice (Bell et al., 2010; Russell, 2005). The VU ePortfolio project is an excellent example of such practice. The instructor scaffolds in multiple ways such as providing instructional guidance that facilitates the discovery and construction of students’ learning while they interact and work together in the learning process and designing opportunities into the online environment for students to interact with one another, with the instructor, and with the course content. The instructor remains actively engaged with students through the ePortfolio construction to guide the students. The instructor gives specific guidelines in the ePortfolio Handbook for what to include and how the ePortfolio will be built step-by-step through the course. The template created in Google Sites provides an organized, simple way for students to begin creating and personalizing their own Google Sites for their ePortfolios. Instructor-created videos provide instructions for students to get started in Google Sites to create the website and edit the template, and another short video shows students some examples of completed ePortfolios to stimulate their creativity and individualization of the template. Sample SLO reflection PowerPoint presentations and reflective narratives from previous students also stimulate student creativity and encourage reflection.

Course assignments are designed using backward planning to help the students achieve the course outcomes and to be meaningful and relevant to the ePortfolio. The ePortfolio assignment functions as a tool for both the assessment of student learning and the assessment for program review. Using the SLOs as an organizational framework for the ePortfolio enables instructors to assess students’ knowledge, understanding, and skill in relation to each SLO. As students develop each element of the ePortfolio (e.g., reflections on each SLO, philosophy of education), the instructor assesses and provides feedback to the students before the assignment is added to the ePortfolio. This formative assessment process enables students to continue to reflect on the assessment/feedback and revise the assignment before adding it to their ePortfolios. Additionally, the ePortfolio project provides an opportunity for the program to evaluate student learning. The ECE program at VU has established key assessments/assignments in a
variety of courses that provide an evaluation of student learning and achievement of the program’s SLOs. The ePortfolio project serves as one of the key assessments used in the program review process. The instructor’s formative feedback throughout the entire process of the ePortfolio development is critical for the co-construction of knowledge. Formative feedback encourages students’ reflection and guides appropriate revisions of the elements of the ePortfolio. As weekly assignments are submitted, timely and relevant feedback is provided by the instructor to the students to help them make improvements as they develop their ePortfolios, versus providing only a summative assessment at the end of the course.

**Implications Beyond an Online Classroom**

Students in the ECE program at VU begin the program with different levels of professional experience. Typically, students in the ECE program are already early childhood education practitioners, are directors of early childhood education facilities, or are looking to advance their career in the field of education. Regardless of their current role in the education system, students share through course evaluations that the ePortfolio has been a useful tool that helps them make connections beyond the online classroom.

Prior students have reflected at the end of the course on how beneficial it would be to incorporate ePortfolios in their current instructional settings. Utilizing multi-media tools, teachers and students can take pictures and videos that capture and document learning moments in the classroom. For example, a student who builds a tower with blocks only shares that experience for a short period until it is knocked down for another student to use. By using a camera to take a picture that can be uploaded digitally, the student can reflect on prior building experiences to grow and develop an understanding of early engineering skills. Since the artifacts are housed digitally, they can be easily shared with families to engage them in their child’s educational experiences.

Some students in the VU ECE program are already directors of early childhood learning centers. For the same reasons stated previously, these students share their goals for implementing an ePortfolio in their current program as an assessment tool amongst students and staff alike. Having teachers create an ePortfolio that supports the mission and vision of the learning facility helps stakeholders properly assess the effectiveness of the program. Likewise, using student portfolios also helps ensure the quality of the instruction provided, in which teachers and program facilitators can monitor student development.

In line with the National Association for the Education of Young Children’s Professional Standards and Competencies for Early Childhood Educators, one of the VU ECE program’s SLOs focuses on the student’s ability to build family and community relationships. Through intentional design within the EC program, students are given opportunities in various classes to develop these skills and build relationships. Some students currently working as practitioners in the early childhood education setting have expressed an interest in using their digital portfolio to share and connect with families. When a child enters an early childhood education facility, this is usually a family’s first educational experience with their child. Families want to know that their child is in good hands. By creating and sharing an ePortfolio, families can see the level of professionalism of their teacher and the teacher can connect with families in a way that also encourages and extends learning experiences to the home environment.

For students who would like to advance their careers, the ePortfolio is a modern, digital showcase of their personal and professional knowledge, skills, and experience. Students find value in being able to share a hyperlink to their ePortfolios that makes it easily accessible to future employers. Students may continue to add information to their ePortfolio that describes more about their personality, educational philosophy, and teaching practices than what can be found on a resume. With the variety of digital artifacts, students can include videos of lesson demonstrations and interactions with students, helping future employers visualize the candidate as a part of their organization. Finley (2021) found that more employers recognize the usefulness of the ePortfolio during the hiring process to gauge the knowledge and skills job applicants need to succeed in their business or organization. She also found that nearly 90% of employers stated that an ePortfolio would be useful to them when evaluating job applicants and that nearly 50% of employers responded that they would be “very likely” to click on the ePortfolio link of a college graduate. Payne reflected on her ability to use her ePortfolio as she sought employment:

By the time I had completed my ePortfolio, I was proud of the final product, and I looked forward to sharing it with potential employers as I applied for my first teaching position. I was easily able to insert the link to my ePortfolio at the top of my resume. Through my ePortfolio I was able to demonstrate all the learning I had accomplished and my understanding for what it meant to be an effective teacher, along with my passion for learning, teaching, and growing as a professional. I was also able to showcase my technology skills firsthand, which made me stand out as a candidate.
Conclusion

When a degree program has clearly articulated SLOs, and those learning outcomes are reinforced through each course, the ePortfolio project in the capstone course solidifies prior learning, allowing for the students to truly reflect on their learning and growth as professionals throughout the degree program. The VU ECE program’s case demonstrates that designing and implementing an ePortfolio as a capstone project for an online degree program using a constructivist approach deepens student learning, offers a useful means for assessment of student learning through the program, and provides students with a validation of their learning and development as a professional that can be utilized to advance their careers. Bartlett stated:

Many students start out with anxiety about creating the ePortfolio. However, it is inspiring to see the students’ portfolios develop and through it how they can master the process of ePortfolio and website development, to reflect meaningfully on their learning through the degree program as they grow in their appreciation of all they have learned in the degree program, and to value continuous improvement, learning, and growth as ECE professionals.

The following are some key recommendations for implementing an ePortfolio as a capstone project:

- **Design/assignment development:**
  - Program implementation: Implement within a program starting from cornerstone to capstone.
  - Backward design approach: Align with institutional or program SLOs and national academic disciplinary standards.
  - ePortfolio platform: Select a user-friendly, web-based platform that is accessible beyond graduation.
  - Defined steps: Develop specific assignments.

- **Student-centered learning:**
  - Autonomy: Provide student freedom for creativity and personalization.
  - Co-constructing opportunities: Offer discussion forums to facilitate peer-peer and student-instructor interactions.
  - Reflective assignments: Foster building mental relationships through reflection.
  - Goal setting: Develop a professional growth plan in relation to SLOs.

- **Instructor guidance:**
  - ePortfolio handbook: Outline student expectations and requirements.
  - ePortfolio template: Build an ePortfolio framework for personalization.
  - Feedback and formative assessment: Provide feedback and formative assessments frequently throughout.
  - Rubric and summative assessment: Develop and share rubrics and assessments with students at the beginning of the ePortfolio project.

With the advancements in technology and the flourishing of remote/digital learning, a constructivist approach to creating an ePortfolio helps students develop valuable 21st-century skills such as effective self-reflection, goal setting, self-regulation, collaboration, critical thinking, problem solving, and autonomy. Students produce a creative final product that demonstrates their achievement of the SLOs, illustrates their knowledge and skills as professionals, and exemplifies their personalities, creativity, strengths, and passion for their field of endeavor.

References


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Leveraging a Campus Equity Walkthrough Evaluation (CEWE) ePortfolio to Assess First-Year Students’ Equity-Minded Learning and Campus Belonging

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Scholarship demonstrates that ePortfolios enable students to collect work over time and reflect upon personal, academic, and career growth. However, a discussion on whether ePortfolios enable students to collect work over time and reflect upon personal, academic, and career growth remains mostly unexplored. The purpose of this point-in-time, qualitative research study is to document their campus belonging perspectives remains mostly unexplored. The purpose of this point-in-time, qualitative research study is to describe first-year students’ experiences completing an on-campus physical walkthrough each spring quarter of 2017, 2018, and 2019. All first-year students were enrolled in a yearlong Freshman Inquiry course at Portland State University in Oregon. This study utilizes Saldaña’s (2016) in vivo coding approach to analyze students’ survey responses and summative essays. The research design begins with students answering an anonymous pre-learning survey each spring quarter, then completing an on-campus walkthrough during the same spring quarter utilizing a Campus Equity Walkthrough Evaluation (CEWE) learning ePortfolio and concludes with students writing a summative reflective essay. The study found three themes: (a) Before completing the CEWE, students defined equality and equity interchangeably with fairness; (b) while completing it, students showed surprise at the variety of on-campus student resources; and (c) after completing the CEWE, students identified inclusion and exclusion experiences on campus based on their social identities.

The results suggest that the CEWE shifted first-year students’ understanding of equity-mindedness in three ways: (a) First-year students identify racialized structures and practices on campus, (b) the equity-minded ePortfolio framework develops students’ capacity for self-reflection, and (c) students determine that racialized structures and practices on campus impact their campus belonging.

Leveraging ePortfolios to assess first-year students’ equity-mindedness and sense of campus belonging is understudied. Scholarship on ePortfolios primarily demonstrates how such portfolios enable students to collect work over time; reflect upon their personal, academic, and career growth; and make connections across various educational experiences (Penny Light et al., 2012; Reynolds & Patton, 2014; Yancey, 2019). However, a discussion on whether ePortfolio practice in first-year courses also helps students describe their equity-mindedness (Bensimon & Malcom, 2012; Dowd & Bensimon, 2015) and document their perspectives on seeing themselves represented on campus remains mostly unexplored. The purpose of this point-in-time, qualitative research study is to describe first-year students’ experiences completing an on-campus physical walkthrough each spring quarter of 2017, 2018, and 2019—before most U.S. universities closed campuses in the spring of 2020 due to COVID-19. All first-year students were enrolled in an Immigration, Migration, and Belonging Freshman Inquiry course, an interdisciplinary, yearlong first-year University Studies seminar. The results suggest that the CEWE (Campus Equity Walkthrough Evaluation) shifts first-year students’ understanding of equity-mindedness in three ways: (a) First-year students identify racialized structures and practices on campus, (b) the equity-minded ePortfolio framework develops students’ capacity for self-reflection, and (c) students determine that racialized structures and practices on campus impact their campus belonging. The study found three themes:

- Before completing the CEWE, students defined equality and equity interchangeably with fairness.
- While completing it, students showed surprise at the variety of on-campus student resources.
- After completing the CEWE, students identified inclusion and exclusion experiences on campus based on their social identities.

This study describes how students utilized the CEWE to document their sense of belonging in physical university spaces before COVID-19. The study provides a fascinating case study for university leaders interested in utilizing student-centered assessment to re-examine and modify post-pandemic college students’ physical spaces (Alexander et al., 2020). Further, anyone involved in ePortfolio design, curricular development, and critical pedagogies (Freire & Ramos, 1970) may benefit from an equity-minded ePortfolio design. Similarly, faculty benefit from seeing a real-world example of a critical hands-on activity focused on students’ equity-minded learning.

Motivated by the need to describe what first-year students learned from an on-campus physical walkthrough, we collected pre-learning surveys and students’ completed CEWE learning ePortfolios for three consecutive spring quarters (2017, 2018, and 2019). In this study, we begin by describing why co-author Fernández created the CEWE after the University Studies program revised its 20-year-old diversity learning goal in 2016—now the Diversity, Equity, and Social Justice learning goal (Fernández et al., 2019). We then identify the study’s three main
themes. Next, we discuss how this CEWE ePortfolio shifts students’ critical analysis of university spaces. Throughout, we suggest ways that educators and university leaders may use the CEWE as a student-centered assessment tool when examining and modifying physical spaces for the post-pandemic college. Finally, we suggest that the CEWE is one way to decenter Eurocentrism in ePortfolio thinking (i.e., in curriculum and design) so that diverse students utilize ePortfolios to reflect on their cultural wealth (Yosso, 2017) to transform the university.

Literature Review

ePortfolio Thinking as Transformational Learning in University Studies

The University Studies program utilizes high-impact practices that build upon the experiences and beliefs their learners hold, including first-year seminars, common intellectual experiences, learning communities, collaborative assignments and projects, diversity/global learning, and ePortfolios (Kuh, 2008). Such high-impact practices can support transformational learning stages (Hamington & Ramaley, 2019; White, 1994). The literature on transformational, student-centered teaching focuses on reframing the learning process from being faculty-centered to student-centered. Such educators provide students with guided opportunities to interact and learn from one another (Cunningham, 2012; Kolb, 1984; Mezirow, 1981; Millis, 2010; O’Sullivan, 1999; Weimer, 2013). Student-centered teaching, also known as learner-centered teaching, refers to a teaching philosophy that shifts the instructional focus from the educator to the student, including active learning, cooperative learning, and inductive learning (Felder, 2016). We define an ePortfolio as a single digital document containing evidence of the authors’ accomplishments, experiences, and self-reflections (Garrison & Ring, 2014). Additionally, learning ePortfolios refers to ePortfolios that surface learning through self-reflection, monitor growth over time, and act as a means of understanding and developing intellectual and digital identity (Chen, 2016). Self-reflection (also known as self-authorship) refers to the capacity of learners to “internally define a coherent belief system and identity that coordinates mutual relations with others” (Baxter Magolda & King, 2004, p. 8).

Transformational learning is typically aimed at reflection and student-centered pedagogies. Transformational learning refers to a teaching philosophy whereby faculty establish a shared vision for courses, challenge and encourage students, personalize attention and feedback, create experiential lessons outside the classroom, and promote reflection opportunities (Slavick & Zimbardo, 2012, p. 571). Although O’Sullivan’s (1999) expectations for transformational learning require students to understand “relations of power” and “interlocking structures of class, race and gender” (O’Sullivan et al., p. xvii), it is not clear how students first become aware of such interlocking structures in classroom assignments. The set of equity-minded questions in the CEWE is one way for students to become aware of such interlocking structures in first-year seminars. Equity-mindedness refers to a concept created by the University of Southern California’s Center for Urban Education (CUE) and describes “actions that demonstrate individuals’ capacity to recognize and address racialized structures, policies, and practices that produce and sustain racial inequities” (CUE, 2021, p. 1; as also Bensimon & Malcom, 2012; Dowd & Bensimon, 2015).

Utilizing ePortfolios to Assist Students’ Identification of Racialized Structures and Practices

The existing literature on confronting equity issues in higher education (i.e., reducing academic gaps for racial and ethnic groups) mainly focuses on how university leaders, staff, and faculty can implement institutional change. Such change asks leaders to identify racialized structures, policies, and practices on campus (Bensimon & Malcom, 2012). Scholars discussed that identifying such racialized structures would create campus-wide “Diversity Scorecards”—as first coined and developed between 2001 and 2005 by Marta Soto, Georgia Lorenz, Michelle Bleza, Melissa Contreras-McGavin, and Lan Hao (Bensimon & Malcom, 2012, p. 7). In 2005, the Diversity Scorecard was renamed Equity Scorecard to underscore the original developers’ intent to focus on racial equity (Bensimon & Malcom, 2012, p. 8). More recently, the University of San Diego further developed the Equity Scorecard by framing it as a set of 12 questions for campuses to create a “practice of equity minded indicators” (CUE, 2021, p. 1). Although university communities benefit when leaders attend to campus-wide equity-minded indicators and adopt university-specific Equity Scorecards, a literature gap persists when describing student-centered and equity-minded campus assessments.

The literature on documenting learning with ePortfolios demonstrates how keeping ePortfolios enables students to collect work overtime, reflect upon their personal, academic, and career growth, and make connections across various educational experiences (Penny Light et al., 2012; Reynolds & Patton, 2014; Yancey, 2019). Such literature generally identifies the “e” in ePortfolio as “electronic” to signify its electronic or digital medium (Reynolds & Patton, 2014, pp. 101-02). The “e” is also understood as “evidence of experiences” to document students’ educational career-related skills to help them develop “opportunities for career and professional development” (Penny Light et al., 2012, p. 124). Additionally, the “e” is interpreted as
examining self-“efficacy” to help ePortfolio creators identify their overlapping societal identities and discover their whole selves (Carey, 2016; Fisher, 1994; Taylor, 2020). However, while the literature describes essential academic, professional, and personal learning associated with creating ePortfolios, there is less understanding of how ePortfolios assist users in documenting their knowledge of equity-mindedness on campus—the missing “e” in ePortfolio.

In the field of University Studies, the literature on its ePortfolio student learning curriculum also describes how this general studies program at Portland State University utilizes first-year student ePortfolios to annually assess its general education learning goals (Reitenauer & Carpenter, 2018; Reynolds & Patton, 2014). Despite University Studies’ long history of using portfolios to assess—in part—its program (Portland State University, University Studies Program, 2021; White, 1994), there is less literature addressing how individual University Studies faculty utilize ePortfolios to describe students’ equity-minded learning.

Utilizing ePortfolios to Develop Students’ Self-Reflection and Describe Their Campus Belonging

The existing literature describes how the ePortfolio process is a high-impact practice that supports students’ self-reflection by documenting their personal and academic growth (Kuh, 2008; Reynolds & Patton, 2014; White, 1994). However, there is less understanding of how embedding equity-minded questions in self-reflection assignments help students develop self-reflection practices and discuss their sense of campus belonging with peers.

Although many areas across campus offer support services, a student’s willingness or desire to access these services on campus can be impacted by having a sense of belonging or a sense that they do not belong (Strayhorn, 2018). Moreover, students report that their sense of belonging can be larger when they socialize with peers whose backgrounds and social identities differ from their own (Maestas et al., 2007). The factors that influence students’ sense of belonging include peer interactions, peer mentoring, and faculty encouraging positive interactions among students in learning communities (Kuh et al., 2005). However, comparatively little is known about differences in college students’ sense of belonging related to their social identities and campus environments that can support that sense of belonging (U.S. Department of Education, 2006).

Methodology

Background and Institutional Context

“CEWE” refers to a digital Campus Equity Walkthrough Evaluation, a term coined by co-author Shaquid Pirie. The 2017 digital version of the CEWE by co-author Fernández is based on a 2015 paper-based Student Equity Walkthrough Evaluation Tool by Dr. Veronica Keiffer-Lewis, then-department chair of International, Peace, and Justice Studies, De Anza College (Cupertino, CA). Between 2016-2017, co-authors Shaquid Pirie (PebblePad Implementation Specialist) and Lawrence (Instructional Designer, Office of Academic Innovation, Office of Academic Innovation) utilized PebblePad, Portland State University’s centrally supported ePortfolio platform, to adapt the paper-based walkthrough evaluation (Appendix B) into the CEWE (Appendix C). The term walkthrough (also reflective walkthrough or learning walkthrough) generally refers to principals observing teacher-student relationships in classrooms (Archer, 2005). However, this study’s walkthrough refers to college students walking the campus’s physical space without faculty present and while answering equity-minded questions using the CEWE (Appendix D). The Office of Academic Innovation (OAI) is a centralized team of academic professionals supporting and fostering teaching and learning communities at Portland State University. In their on-campus walkthrough, students were asked to complete self-reflection questions in two CEWE tabs: Tab 1, Five Equity Lenses, and Tab 2, Final CEWE Analysis (Figure 1).

Co-author Fernández initiated this study as part of his inaugural role as diversity, equity, and inclusion (DEI) coordinator (2017-2020) in University Studies. In 2017, then-University Studies Executive Director, Dr. Maurice Hamington, created the DEI coordinator position to aid faculty after the faculty senate’s 2016 approval of the University Studies program’s revision of a 20-year-old diversity learning goal—now called the diversity, equity, and social justice (DEJ) learning goal. The revised learning goal now reads, “Students will explore and analyze identity, power relationships, and social justice in historical contexts and contemporary settings from multiple perspectives” (Fernández et al., 2019). Given that, as DEI coordinator, co-author Fernández was also teaching first-year courses, he created the CEWE in 2016 to help students describe their equity-minded learning and become familiar with the revised DESJ learning goal.

Participants

This research was conducted within one academic unit, University Studies, which is Portland State University’s general studies program that includes freshman (FRINQ), sophomore (SINQ), and senior capstone courses (Hamington & Ramaley, 2019). The findings in this study represent the experiences of 45 participants, all of whom were first-year undergraduate students enrolled in co-author Fernández’s Immigration,
Migration, and Belonging FRINQ, a course theme he co-designed in 2014. All participants walked the Portland State University campus visiting various locations—many of which were suggested by the instructor—while taking notes, photographs, and reflecting on their experiences. At the end of their walkthrough, students collated these notes into PebblePad (Appendix C). Although the CEWE was a required graded assignment in the Immigration FRINQ (2017-2019), only students who completed the consent form (N = 45) were part of this study (Appendix D). The Internal Review Board for the Protection of Human Subjects of Portland State University approved this study.

**Data Collection and Analysis**

The data spanned three spring quarters, collected once every year (2017-2019). At the beginning of each spring quarter (weeks 1-2), students completed the pre-learning survey (Appendix A). Beginning week 8, students walked to specific campus areas in small groups (generally three to four students). Co-author Fernández, this study’s instructor of record, generated a list of possible areas for the group to visit, including but not limited to student academic and cultural resource spaces (e.g., Queer Resource Center, Veterans Resource Center, Women’s Resource Center, and cultural centers). These locations were suggestions—not requirements. Co-author Fernández selected such resource centers to broaden students’ knowledge of—and access to—unfamiliar campus spaces; granted, students could make their own selection of campus spaces. Completion of the CEWE first consisted of students individually answering short-answer questions based on their notes and photographs. Finally, the students completed one summative essay (Appendix B). (For an example of a student’s completed CEWE, see Appendix D.) By week 11 (Portland State University’s final exams week), each student submitted their individually completed CEWE.

Three sets of data were collected to help us better understand students’ equity-mindedness as well as their sense of on-campus belonging:

1. An anonymous pre-learning survey containing five open-ended, short answer questions: (a) “Define ‘equality,’” (b) “Define ‘equity,’” (c) “Define ‘belonging,’” (d) “Describe an experience of belonging, if any, at our college campus,” and (e) “Describe an experience of not belonging, if any, at our college campus” (Appendix A).
2. Responses to CEWE’s open-ended, short-answer questions posited from five equity lenses (Appendix B). Each question included a
space to provide evidence, such as photographs and videos, to add depth and personality to their answers. Additionally, for each of the five equity lenses (Figure 1), students identified their sense of belonging using a numeric scale (1 = lowest sense of perceived belonging, 10 = highest sense of perceived belonging; Appendix C).

3. A final reflective essay in the learning ePortfolio where students engaged in a summative analysis of the various aspects of the CEWE (Appendix C).

To reduce visual bias when assessing the ePortfolios’ media (e.g., images and video), we only coded the text in pre-learning survey answers, short answers, and summative essays. To reduce educator-related bias given co-author Fernández’s role as educator and research designer, co-author Lawrence was invited to code the data, as he did not teach or implement the CEWE.

Data Analysis

Data analyses included in vivo coding (also known as verbatim coding, natural coding, or emic coding) and open coding (Saldaña, 2016; Seidman, 2019). In vivo coding consists of utilizing participant-generated words or short phrases from “the actual language found in the qualitative data record” (Saldaña, 2016, p. 105). Open coding consists of looking for patterns and themes in the transcriptions of responses to preliminary learning surveys, CEWE’s short-answer prompts, as well as CEWE’s summative essay. This study utilized Luborsky’s (1994) thematic analysis to isolate prominent themes and interpret the analysis categories. We conducted constant comparative data analysis (Glaser & Strauss, 1967). We ensured triangulation using data from three data sources: (a) a pre-learning survey (Appendix A), (b) short-answer questions in the CEWE (Appendix B), and (c) one summative essay (Appendix C). We utilized triangulation in this study to improve internal validity and establish the study’s trustworthiness (Merriam & Tisdell, 2016; Taylor et al., 2015). Specifically, we used in vivo coding (Saldaña, 2016) to first find in vivo codes, then find patterns, and finally identify themes across all three data sources.

Results

In this study, we found three themes:

- While completing it, students showed surprise at the variety of on-campus student resources.
- After completing the CEWE, students identified inclusion and exclusion experiences on campus based on their social identities.

Note that we did not alter grammar or punctuation when sharing student-generated responses.

Theme 1: Students Define Equality and Equity as Fairness

When students defined both equality and equity in their pre-learning surveys, they did so primarily using the words “fair” and “fairness.” Moreover, students’ definitions of equality and equity were nearly interchangeable. For example, when defining equality, students responded with the following:

- “Providing fair, unbiased, and proportional opportunities for all people no matter race, gender, religion, or other attributes.”
- “Fairness for everyone.”
- “Everyone being at the same level making everything fair.”

To define equity, students wrote, for instance:

- “Being fair.”
- “Fairness.”
- “Being fair, everyone getting equal treatment.”

Out of the 45 pre-learning survey participants across the study’s three years (2017, 2018, and 2019), only one student defined equity as distinct from equality. For the survey item, “Define equity,” this student wrote: “Acknowledging the disadvantages of some in society and providing more resources and help in order to achieve the same opportunities as those without certain disadvantages.”

Theme 2. Students Show Surprise at the Variety of On-Campus Student Resources

Students showed surprise at the number of student resources available to them. One student wrote:

The experience of walking through the building, for me, was very important because in my first year, I only travel to the buildings that my classes are held, which none of them were in SMSU [Smith Memorial Student Union] all year. Seeing all of the resources that are available on campus really made me feel like PSU was inclusive to me.
Additionally, students showed surprise at the number of resources for peers they identified as belonging to different cultural backgrounds and identities. One student wrote:

After we gathered all the information we needed and finished the evaluation by answering questions on the worksheet, we were surprised that there were actually a lot of resources available for students with different cultural backgrounds, different gender or disability needs. Before we did the walkthrough, most of us just naturally ignored these elements because these resources are not the ones that we need every day. However, even if they are not useful for everyone, they are indispensable for a certain amount of people.

**Theme 3: Students Recognize Their Inclusion and Exclusion on Campus**

In their summative essays on completing the CEWE, some students identified themselves according to their social backgrounds. In the example below, a student self-identifies as Mexican and describes how some university spaces were welcoming given their Mexican identity:

> Besides feeling a bit weird at first, it was a good experience that taught me stuff I probably wouldn’t know or learn on my own. I enjoyed working on worksheet two because we could see how different parts of campus have different racial equity. Some parts of campus were far more welcoming and inclusive of the different cultures while other parts of campus weren’t oriented towards that aspect. I enjoyed working in a group because I could see how people of different cultures saw the racial equity. For example, I am Mexican and I may see a certain aspect of campus to be bad or good. Whereas, a member of my group might see it different because of his cultural background. I thought that was cool and interesting because different cultures have different ideas about what it means to be equitable.

**Discussion**

The study’s data suggests that the CEWE ePortfolio shifts first-year students’ understanding of equity on campus in three ways: (a) first-year students identify racialized structures and practices on campus, (b) the equity-minded ePortfolio framework develops students’ capacity for self-reflection, and (c) students determine that their sense of campus belonging is impacted by racialized structures and practices on campus.

**Students Identifying Racialized Structures and Practices on Campus Shifts Their Definition of Equity**

The CEWE ePortfolio shifts first-year students’ understanding of equity-mindedness. Before completing the CEWE, first-year student participants generally defined equality and equity interchangeably by using fairness as their foundation of reasoning. We could not locate other studies surveying how contemporary American college students define equality and equity. Given this research gap, we cannot discuss how comparable university student groups define such terms (i.e., equality and equity) interchangeably. However, a few studies demonstrate how some social scientists, university leaders, and faculty use equity and equality interchangeably. For example, Espinoza (2007) pointed out how some scholars use equality or equity interchangeably when defining distributive justice (i.e., how societal members share benefits and burdens; Armstrong, 2012). Espinoza concluded that such practice results in “ambiguity and confusion among those social scientists using these concepts” (2007, p. 359). More recently, however, American high school teachers and principals demonstrate the importance of defining equality and equity as distinct before creating culturally specific programming for underserved students:

> Educators say that equity in education is not the same as equality. While students should have equal access to high-quality teachers and school leaders, as well as instructional resources, equity means that each student has the individual supports needed to reach his or her greatest potential. (Scholastic, 2020, p. 6)

Indeed, university leaders and educators often define equity as distinct from equality (i.e., equity gets at providing specific institutional support for students to achieve their “greatest potential”). Other scholars further point out that minoritized students will continue to underachieve in university classrooms unless leaders further differentiate between types of equity: representational equity and academic equity. For example, even if schools and universities change policies to support representational equity (e.g., in culturally specific recruitment, the examination of affirmative action, and diversification of the student body), such overarching policies may not always support diverse students’ academic equity in the faculty-to-student classroom dynamic (Bowen & Bok, 1998). Such scholars ask how faculty member’s classroom practices—and their assumptions, beliefs, and values about diverse students—“have great implications for academic equity” for racialized students (Robinson-Armstrong et al., 2002, p. 76).
It is vital for education leaders and faculty to define equality as distinct from equity to guide representational equity (university-wide programming) and academic equity (in the classroom). Chiefly, campus equity discussions are centered on university leaders, faculty, and staff transforming the university through Diversity Scorecards, Equity Scorecards, and equity-minded indicators (Bensimon & Malcom, 2012; CUE, 2021). What is missing from such campus equity discussions is why college students need to define equality and equity as distinct in the first place.

In the field of University Studies, one answer to this query is curricular. As a faculty member in University Studies at Portland State University, co-author Fernández co-created the CEWE so that students could apply the University Studies program’s revised diversity, equity, and social justice (DESI) learning goal to a campus setting and help them distinguish between equity and equality. In essence, the CEWE asks students to frame their experiences of evaluating campus spaces by asking them to center their attention on their social identities and then on social identities dissimilar to their own. The CEWE’s dual framing (i.e., evaluating spaces by focusing both on individual social identities and those of others in the group completing the CEWE) is guided by Dewey’s (1986/2008) injunction that, “To form relevant and effective ideals we must first be acquainted with and take notice of actual conditions. Otherwise our ideals become vacuous or else filled with content drawn from Utopia” (p. 97). Similarly, the CEWE’s dual framing approximates the intentions behind Bridgman’s (2019) notion of the invited ePortfolio. In such ePortfolios, students negotiate “new knowledge, new identities, and new communities largely through building their portfolios and engaging in the reflection that accompanies this building (i.e., building an ePortfolio)” (p. 192).

In addition, the CEWE’s dual framing exemplifies transformational learning’s focus on student-centered learning. A hallmark of transformational learning is when educators provide students with guided opportunities to interact and learn from their peers (Cunningham, 2012; Kolb, 1984; Mezirow, 1981; Millis, 2010; O’Sullivan, 1999, Weimer, 2013). In our study, CEWE was the tool for students to define for themselves the term equity. For example, in their summative CEWE reflection, a student reflected on how completing the CEWE individually—but in the company of peers—provided insight into how the meaning of equity differs according to each student’s social identity in a given space:

I enjoyed working in a group because I could see how people of different cultures saw the racial equity. For example, I am Mexican and I may see a certain aspect of campus to be bad or good.

Whereas, a member of my group might see it different because of his cultural background. I thought that was cool and interesting because different cultures have different ideas about what it means to be equitable.

In the University Studies program, a second reason why students need to understand the term equity for themselves is pedagogical. The University Studies program’s teaching philosophy focuses on an interdisciplinary, student-focused approach, and the program mission reads, in part: “Our inclusive, interdisciplinary, and inquiry-based pedagogy . . . provokes students to build self-efficacy through relational learning across difference” (Hamington & Ramaley, 2019, p. 305). This CEWE also provokes students to build self-efficacy (Carey, 2016; Fisher, 1994). For example, the faculty is not present to guide their initial reflections. Instead, students discover their equity-mindedness with peers through individual and communal reflections of their campus observations. In this way, the CEWE is one way for faculty to resist a banking model of education (Freire & Ramos, 1970). In such a banking model, faculty would create important lectures, classroom discussions, and (even) examinations on equity-mindedness.

One way to minimize such a banking model (and maximize students’ self-efficacy) is for educators to create transformational learning opportunities for students to discover equity-mindedness outside a lecture. Slavick and Zimbardo (2012), for example, identified how educators—versed in transformational learning—create experiential lessons outside the classroom and promote self-reflection opportunities. What students write in their reflections after completing experiential assignments may be unexpected. For example, in their CEWE summative reflection essay, a student surprised co-author Fernández with their critique of the university’s motto, “Let Knowledge Serve the City” (Portland State University, 2023). Convincingly, the student writes how the university’s motto is exclusionary in three ways: (a) the motto privileges students from Portland compared to students from all of Oregon, (b) the motto is “narrow in focus” because it is not global in outreach (i.e., the motto is not “Let Knowledge Serve Oregon—or the United States—or the World”), and (c) the English-only motto excludes the many languages that university students speak:

Until this class, I had never looked up to see the big letters on the bridge over Broadway [Avenue] shouting out to all: “Let Knowledge Serve the City.” Because of this class, I began to not only see this sign but also think about how it makes me and others feel as we look at it. I have grown to see that though this is to be inclusive, it leaves so many out
Foundationally, the CEWE brings together Freire’s (1987) notion of reading and rewriting the world with Bensimon’s (2004) institutional change model focused on individuals’ awareness, interpretation, and action steps to change systems. As an illustration, the following student described their experience of completing the CEWE as challenging one-perspective-only world views held by faculty and college students alike: “We, meaning college students and professors, tend to fixate on one perspective or another, when great insight and understanding can come from listening to perspective [sic] that oppose our own or the perspectives of those who often go unheard.” With such words, the student echoes Pasquerella’s (2018) aspirations for higher education: Universities should prepare students to “think critically, engage in ethical decision making, and work in diverse teams to address the complex, unscripted problems of the future” (p. viii).

The CEWE is an example of an authentic and intentional learning assignment (Herrington et al., 2014) focused on shifting students’ understanding of equality and equity through the action of walking around campus (or “reading” the campus; Freire, 1987). Dewey (1916) reminded educators that the material of thinking is action (e.g., walking around campus), as compared to thought (e.g., defining equity in classroom lectures):

> The material of thinking is not thoughts, but actions, facts, events, and the relations of things. In other words, to think effectively one must have had, nor now have experiences which will furnish . . . resources for coping with the difficulty at hand. (pp. 156-157)

In their summative essay, one student noted how walking around campus helped them discover racialized structures on campus for minoritized students (e.g., La Casa Latina, Pan-African Commons) and non-racialized structures (e.g., Queer Resource Center, Veterans Resource Center, Women’s Center). One student wrote:

> For my group, we walked through [the] SMSU [Smith Memorial Student Union] building. After we gathered all the information we needed and finished the evaluation by answering questions on the worksheet [the CEWE], we were surprised that there were actually a lot [of] resources available for students with different cultural background[s], different gender [sic] or disability need [sic]. Before we did the walkthrough, most of us just naturally ignored these elements because these resources are not the ones that we need every day.
Other students described their equity-mindedness shift by examining, instead, on-campus racialized practices (i.e., cultural practices, such as university-specific symbols). Such students examined the university’s mascot, the so-called Victor E. Viking, which is a White- and male-presenting figure with a full beard and a gray helmet with two lateral horns pointing up. After completing the CEWE, a student determined ways that the university’s mascot included and excluded university students:

For example, while I was looking at the Vikings logo for Portland State, I never thought about inclusivity nor diversity. I found that the logo itself wasn’t really a limitation for me nor was it particularly offensive. But just because I’m not offended by a certain symbol, that doesn’t mean someone else isn’t [Emphasis added]. It is through that level of analysis that needs to be made in order to achieve social justice and equity. . . . After [completing the CEWE] for 10 weeks, I am able to see that there is still much to be done.

When the student above wrote “just because I’m not offended by a certain symbol, that doesn’t mean someone else isn’t;” they are making use of an equity-minded lens as defined by Bensimon and Malcolm (2012). In short, the student recognized that a mascot is a racialized cultural practice. That racialized recognition remains hidden until students utilize an equity-minded lens to uncover a symbol’s racialized underpinnings.

**Students Developing Their Self-Reflection Practice by Responding to Equity-Minded Questions**

This study suggests that a guided equity-minded evaluation framework develops students’ self-reflection, what other scholars call self-knowledge. For Reynolds and Patton (2014), ePortfolios promote self-knowledge or metacognition (i.e., the action of “thinking about one’s thinking”; p. 98). Similarly, the CEWE aligns with ePortfolio scholarship that demonstrates that students need to understand where their knowledge about the world comes from and “how they have come to know what they know but also apply that knowledge in a changing world” (Penny Light et al., 2012, p. 11). To that end, the CEWE asks students to question their understanding of the world around them (i.e., the campus) by asking them to identify racialized structures and practices. After completing the CEWE on the university mascot, another student wrote:

When discussing [the Viking mascot] and whether it is inclusive or not, I got to hear from classmates who aren’t my own race and hear their own perspectives. For me personally, I did not have a problem with the logo and thought it was fine, but could understand why other people might have a problem with it.

This student describes how the CEWE created a space for them to identify their social position (e.g., “my own race”), recognize other cultural groups, and engage with diverse peers to examine a cultural symbol. The student illustrates a promising aspect of the CEWE: student participation in conversations about race and racism that acknowledge how such discussions are challenging for American educators and students (Kite et al., 2021; Singleton, 2015). Additionally, educators face other challenges: outright bigotry in the classroom (e.g., homophobia, racism, sexism, transphobia) and silence from students when faculty introduce such topics. For example, Goldstein (2021) described how some students remain silent in classrooms because they are “tired of having to explain prejudice to those who just don’t understand” (p. 17). Others stay silent because they are afraid to offend or do not know what is politically correct to say since self-identifying terms change “constantly” (p. 17).

The CEWE is one tool for addressing such silences among various students. The student cited above is taking risks talking to students from other races while examining—in community with peers—a racialized practice (i.e., the university’s mascot). Reynolds and Patton (2014) described risk-taking in ePortfolio learning as students “marveling in seeing what they know and understand when they look at their own ePortfolio as an observer” (p. 99). In short, by documenting their knowledge, the CEWE experience allows students to become observers of their understanding of on-campus exclusion and inclusion in dialogue with diverse peers.

**Re-Examining the “Self” in Self-Reflection: CEWE’s Focus on Communal Reflection**

The literature on developing students’ self-reflection capacity through ePortfolio learning commonly focuses on individual risk-taking (Reynolds & Patton, 2014), exploration of experiences for career and professional development (Penny Light et al., 2021), and self-efficacy to discover the whole self (Carey, 2016; Fisher, 1994; Taylor, 2020). However, our findings suggest that asking equity-minded questions also develops students’ capacity for self-reflection by focusing, instead, on diverse students’ cultural wealth as the lens through which to evaluate what they know about themselves and their surroundings. In their summative essay, one student recognized how the CEWE allowed them to compare “racial problems” between their country of origin (China) and the United States:
Being born and grown up in China, I did not have a sensitive mind for racial and ethnical problems. And it was not a natural for me to relate these problems to myself [Emphasis added]. But the Equity Lens [i.e., the CEWE] taught me how to develop critical thinking and be able to seek out the unequal corner of the society, especially in the United States, which has large ethnical diversity.

The student’s self-reflection that “it was not a natural [sic] for me to relate these problems to myself” should alert ePortfolio educators about Eurocentric notions of the Self prevalent in self-reflection assignments. In other words, if ePortfolio educators are to invite diverse, minoritized students to develop their self-reflection practices, such a curriculum needs to be culturally inclusive. Accordingly, such a curriculum needs to address Eurocentric notions of knowledge creation and production grounded in the self as separate from the community. Delgado Bernal named that separation “the dominant-Euro-American epistemology” (1998, p. 107).

For example, many world cultures view the self and the creation of knowledge as relationships among individuals, their communities, extended families, queer families, and kinships (Bernstein & Reimann, 2001), and other intentional communities organized around a shared history, memory, and cultural intuition (Yosso,). To disrupt Western notions of self-reflection as separate from communal reflections, the CEWE asks students to consider how their social position and intersectionality (Crenshaw, 1991) on campus compare with other students’ social locations. Thus, such a collaborative, reflective practice invites minoritized students to honor their cultural wealth. For instance, suppose students determine—in comparison with others—that they do not see themselves in some university spaces. As part of the communal reflection, they can honor how their culture’s resistant capital afforded them the coping mechanisms to navigate such spaces. Yosso (2017) defined “resistant capital” as the “knowledge and skills fostered through oppositional behavior that challenges inequality” (p. 125). For educators to invite self-communal reflections on challenging inequality, the reflective prompts must create minoritized students’ spaces to name their cultures’ resistant capital. In short, what if students utilized ePortfolios to reflect on their cultures’ legacy of resistance to subordination (Deloria, 1969)?

To further invite minoritized students to develop so-called self-reflection practices, equity-minded questions also need to be the foundation of such practices. Without equity-minded questions, self-reflection practices are ahistorical and colorblind. Alternatively, self-reflection practices built on equity-minded questions acknowledge how racialized structures, policies, and practices impact students’ self-development in (and outside) academe. In this way, so-called self-reflection practices grounded in equity-minded questions help all students view self-knowledge—and knowledge systems—as contextual. The CEWE, then, gets at students evaluating their learning through an epistemological foundation lens (i.e., students view knowledge as contextual). Moreover, the CEWE helps students construct, evaluate, and interpret judgments “in light of available frames of reference” (Baxter Magolda & King, 2004, p. 8). Undoubtedly, the CEWE provokes students to evaluate such available frames of reference by examining whether such frames are racialized and—therefore—produce and sustain racial inequities (Bensimon & Malcom, 2012).

### Leveraging Equity-Minded Questions to Describe Students’ Campus Belonging

The study suggests that completing the CEWE helps students determine how their sense of campus belonging is impacted by their individual and collective understanding of campus racialized structures and practices. A significant difference between standard evaluative tools describing students’ campus belonging and the CEWE is that this learning ePortfolio allows students to compare their sense of campus belonging with peers (Strayhorn, 2018). Additionally, the CEWE provides an outlet for students to share results with various changemakers across the university. Most campus belonging evaluative tools do not employ students’ equity-minded experiences. In essence, such evaluative tools on campus are often unidirectional. In general, students complete campus surveys generated by in-house (or outsourced) research agencies.

Moreover, select students may further participate in campus belonging surveys by engaging in focus groups and answering pre-generated prompts. University researchers and leaders then make sense of such student-generated data. Although such standardized tools are essential for demonstrating a university’s ongoing examination of its operations for students’ social and academic well-being (and for university funding and accreditation purposes), such evaluative tools are not particularly student-centered (Maestas et al., 2007).

Another critical difference between standard evaluative tools describing students’ campus belonging and the CEWE is introducing students to an institutional change model—specifically an equity-minded change model (Bensimon, 2004). To this end, CEWE encourages students to act upon their campus observations. After completing the CEWE and sharing findings with their peers, students can submit a final report to campus leaders. For example, students concerned about the university’s mascot (or its motto) may send their CEWE results to the president’s office or the university’s trustees’ board.
Given that the CEWE creates a space for students to describe their inclusion or exclusion on campus, this tool is one effective way of centering students’ experiences as evidence to support and modify the resources already in use on campus. Despite how universities offer services in many areas across campus, students’ sense of belonging impacts their willingness to access campus services (Strayhorn, 2018). The CEWE is also one tool for diagnosing why some students may not access academic and student-support resources in the first place.

**Leveraging Equity-Minded Questions to Decenter Eurocentrism in ePortfolio Thinking**

As noted throughout this paper, one aspiration behind the CEWE is bringing systemic change to a university campus guided by ongoing student-centered, equity-minded evaluations. Another aspiration behind the CEWE is decentering Eurocentrism (i.e., Delgado Bernal, 2002) in ePortfolio thinking (i.e., in curriculum and design). Texas A&M-San Antonio (A&M-SA), a Hispanic Serving Institution, provides one case study of decentering Eurocentrism in ePortfolio thinking. Bridgman (2019) described how A&M-SA created culturally relevant ePortfolios to support learning in their borderland classrooms (i.e., classrooms where “multiple communities and sources of knowledge intersect”; pp. 191-192). To build students’ self-reflection practices about themselves and their memberships across communities in borderland classrooms, ePortfolios became one tool for diverse students to invent themselves. At the same time, such students co-invent their universities, a process that is central to borderland classrooms and ePortfolio curricula (Yancey, 2009). Additionally, scholars such as Bridgman (2019) advocate for a more culturally relevant framework when designing and assigning ePortfolios to diverse students:

A broader framework for conceptualizing an ePortfolio curriculum . . . is provided by scholars across a range of fields, including borderlands and Latinx studies. This work, for example, underscores the importance of the ePortfolio curriculum’s acknowledgment and affirmation of students as creators of knowledge and negotiators of community. (p. 194)

ePortfolio educators must recognize the multiple ways of knowing and valuing diverse students bring to classrooms. Likewise, educators must recognize that such diverse values are often at odds with higher education’s dominant culture. Rendon et al. (2015) pointed out that university culture often clashes with students’ diverse values: “Further, the world of college includes academic values and conventions such as merit and independence, along with specific formal and informal forms of language expression, codes of behavior, and belief systems, which are often foreign to first-generation, low-income students” (pp. 97-98). The CEWE is one ePortfolio example focused on describing and valuing students’ knowledge of the campus because of their cultures.

Additionally, the CEWE places front and center students’ cultural wealth (Yosso, 2017) as the lens to describe their campus. For example, in completing the CEWE, some students demonstrated their cultural wealth in navigational capital. Yosso (2017) defined navigational capital as the ability “to maneuver through institutions not created with Communities of Color in mind... Navigational capital thus acknowledges individual agency within institutional constraints” (pp. 124-125). In their summative essay, one Latinx student described their navigational capital when experiencing frustration with first-year classmates:

[The first-year Immigration course] opened my eyes to things I didn’t see on campus before. I wasn’t aware of how students were so closed-minded about the course, and how disrespectful they were because of the unlikelihood to see a Latinx professor at such a “diverse” college.

Interestingly, co-author Fernández never asked participants to use the CEWE to evaluate their experiences in the Immigration first-year course they were enrolled in as part of this study. Unfortunately, this Latinx student’s experience echoes research on how university students often devalue minoritized faculty’s teaching and content knowledge (Evans & Moore, 2015). We acknowledge this student’s frustration and resilience. Furthermore, this student inspires us to utilize the CEWE in alternative ways. We ask ourselves: What if faculty assign the CEWE to identify and address racialized structures, policies, and practices in our very own classrooms?

**Limitations**

While there is much to be gained from a qualitative research study focused on a single class of students, some limitations should be noted. First, a study conducted by the educator researcher may limit the ability to generalize these findings to a larger, more diverse group of students and faculty. Another possible limitation pertains to the use of qualitative methods alone. Conducting a single research design study rather than employing a mixed-methods approach can limit the study’s reliability and objectivity. Although we took steps to avoid researcher bias (e.g., coding the data with a co-author
who was not the instructor of record), the possibility of bias exists in our review of the CEWEs. This study was designed and implemented by a single faculty member to describe the depth of understanding of first-year students’ experience on a college campus. These limitations should be considered and addressed in future studies, as described below.

Implications

While we are optimistic about this study’s results, which suggest a shift in first-year students’ definitions and understandings of equity-mindedness on campus in multiple ways, there would be a benefit to extending this study and gathering more data on using the CEWE. Notably, a larger sample size and more diverse classroom settings utilizing a mixed methods design would elucidate any potential bias in the current study. Additionally, future studies should examine and code visuals (Tinkler, 2013) that students submit as part of the CEWE. We would also like to revisit this study and its participants to gather longitudinal data to determine the long-term implications of completing the CEWE. For example: How did the CEWE impact access to student resources and support structures? Did students act as a resource for classmates who may have felt excluded as they have felt? Further, what impact, if any, did their equity-mindedness have on their confidence to access resources and use their voice to address racialized inequities on campus?

Conclusion

In this study, we sought to understand first-year undergraduate students’ experiences completing an on-campus physical campus walkthrough. The CEWE has the potential to shift first-year students’ understanding of equity-mindedness in multiple ways. Using the CEWE allowed students to re-envision the campus and identify racialized structures and practices within it. The CEWE experience was vital because it empowered first-year students from diverse backgrounds to bring to the self-reflection practice aspects of their cultures through a reflective, learning ePortfolio embedded with equity-minded prompts. This study suggests that this new-found confidence is crucial for first-year students’ ongoing success in college. Phrases in the CEWE such as “I would share this with Student Government,” “I would share this with other campuses”, and “These tools will help me continue to question the world around me” suggest that helping students practice an equity-minded self-reflection of the campus will have a far-reaching impact in the Portland State University community and beyond. Striving for systemic change is at the core of what modern educators do.

References


Garrison, W., & Ring, G. (2013). Walking the ePortfolio walk: Begin your portfolio in 4 hours [Workshop session]. Annual Meeting of the Association for Authentic Experiential and Evidence-Based Learning, Boston, MA, United States.


for the past two decades. Her work has been across programs that relate to learning support, undergraduate research, teaching with technology, ePortfolio development, dual enrollment, faculty training and development, and student services.

GAIL RING, PhD, is the Director of Service and Learning Partnerships at PebblePad North America where she works with colleges and universities to develop learning-centered curricula. Her research interests are centered on student engagement, learning, and reflection through ePortfolios. Gail earned her PhD in instruction and curriculum from the University of Florida.

ANDREW F. LAWRENCE, MA, Educational Leadership and Policy, has been serving Portland State University for over 13 years through supporting faculty and the adoption of efficacious educational platforms, and through the design and implementation of pedagogically supportive and inclusive digital learning practices.

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We thank Dr. Veronica Keiffer-Lewis for giving us written permission to use her equity walkthrough tool. The co-authors’ 2017 Campus Equity Walkthrough Evaluation (CEWE) learning ePortfolio would not be possible without the 2015 paper-based “Student Equity Walkthrough Evaluation Tool” by Dr. Veronica Keiffer-Lewis, then-department chair of International, Peace, and Justice Studies, De Anza College (Cupertino, CA).
Appendix A
Pre-Learning Survey Questions via Qualtrics

Dear Student:

Dr. Óscar Fernández from PSU’s University Studies is conducting a research study and would like to ask for your participation in an online survey on your experiences with an electronic workbook called Campus Equity Walkthrough Evaluation (CEWE). The survey will ask a series of questions on topics like your experience completing this electronic workbook called CEWE. Your answers will help us to gain a better understanding of student viewpoints on belonging and equity in college programs and resources, and help us to identify areas where we can better serve PSU’s undergraduate needs.

Participation in the survey is entirely voluntary, and you can choose to exit the survey at any point. There are no right or wrong answers; just answer as honestly as you can. Your responses will be collected two weeks after final grades are posted. This survey might take you up to 30 minutes to complete. Your participation will involve open and closed-ended online questions. Dr. Fernández will collect data, code the data, so your identity remains unknown, and start studying data TWO weeks AFTER he turns in final grades for the spring quarter. Your involvement in the study is voluntary, and you may choose not to participate. Your names or identifying information will not be included in any final reporting. Students will receive a pseudonym in instances where Dr. Fernández wants to describe an individual response.

Thank you in advance for your participation! To get started, please answer the questions below.

If you have any further questions about the study, at any time feel free to contact me, Dr. Óscar Fernández, at osf@pdx.edu, or by telephone, at 503.725.5832. You have the right to ask questions about this research study and to have these issues answered by me before, during or after the research. If you feel any summary of the results of the study will be sent to you. If you have questions regarding your legal rights as a research subject, you may call the PSU Office of Research Integrity at (503) 725-2227.

If you have any problems or concerns that occur as a result of your participation, you can report them by calling the number above. Alternatively, you can report concerns by completing a Participant Complaint Form, which can be found on the IRB website at https://sites.google.com/a/pdx.edu/research/integrity/human-subjects/new-irb-application-forms.

By completing this survey/returning this survey, you will agree to participate in the above-described research study. You will be provided with a copy of this consent statement.

Sincerely,

Researcher’s Name: Dr. Óscar Fernández
Researcher’s Title: PSU, University Studies, Core Faculty Member, Instructor, Diversity, Equity, and Inclusion Coordinator

- Question 1. Define “equality.”
- Question 2. Define “equity.”
- Question 3. Define “belonging.”
- Question 4. Describe an experience of belonging, if any, at our college campus.
- Question 5. Describe an experience of not belonging, if any, at our college campus.
Appendix B
Depiction of All the Prompts in the CEWE (Campus Equity Walkthrough Evaluation)

CEWE-Campus Equity Walkthrough Evaluation

CEWE tool adapted from “Student Equity Walkthrough Evaluation Tool,” by Veronica Keiffer-Lewis, 2015, De Anza College. Adapted with permission.

About CEWE

Welcome to your Campus Equity Walkthrough Evaluation (CEWE) Tool*

*Acknowledgements. Used with permission from Dr. Veronica Keiffer-Lewis (Neal), Department Chair, International, Peace and Justice Studies, De Anza College, Cupertino, CA. Based on April 14, 2015, draft. The five sections align with the six success factors identified by the RP Group (Research, Planning & Professional Development) for California Community Colleges. (2011-2014). Student support (re)defined: Equitable, integrated, cost effective. https://rpgroup.org/Student-Support. Digital formatting and content changes by Dr. Óscar Fernández, Portland State University, University Studies, Portland, Ore.

*Seeking the CEWE’s online version? Go here: https://bit.ly/psu-cewe

Components

There will be three overarching areas that include five sections for you to evaluate during your walkthrough:

- Welcoming Environment (1. Public Space)
- Engaging Students (2. Policies & Practices)
- General Inclusion (3. Resources, 4. Assessment/evaluation, and 5. Attitudes/values)

Please complete all five sections as if you were new to the campus, new to the area or even new to the country! You may also wish to put yourself in another’s shoes. For example, you might ask yourself if you were an undocumented person (a student or an employee) or in a wheelchair how welcomed and supported would you feel as you move through campus.

Once you complete the five sections, you will be offering a final analysis and synthesis of what you have seen and experienced.

Please enter your name here as “the observer” during your Campus Equity Walkthrough Evaluation (CEWE).

Walkthrough Components

There will be three overarching areas or sections evaluated during the walkthrough:

- Welcoming Environment (Public Space)
- Policies & Practices to Engage Students
- General Inclusion (resources, assessment/evaluation, and attitudes/values)

Please select the date you are reviewing these instructions and overview.
About the Campus Equity Walkthrough Evaluation Tool

We have built this tool to foster an interactive learning experience with the goal of answering the following question: **Is our Campus Student-Centered and Inclusive?**

What is the purpose of the Campus Equity Walkthrough Tool? The goal of equity walks is to sharpen and focus the inclusion efforts and instructional leadership lens through the gathering of observational data to confirm or challenge assumptions regarding improvement and equity in the buildings. Adopting this tool allows institutions an opportunity to assess visual equity practices and sense of inclusion on campus. This tool gives students the opportunity to evaluate how inviting the campus appears, feels, and reflects a commitment to inclusion. It can also help to point out various areas that may have been previously overlooked and can be addressed efficiently.

Suggested Walkthrough Guidelines

- Select a team leader(s) to coordinate the walkthrough. The team leader(s) should organize an orientation meeting to review the tool with the program officers directing diversity efforts on your campus. For students, this will most likely be arranged by an instructor or a program coordinator with whom you are working. However, employee & student clubs and affinity groups, volunteers, and others interested in this activity are welcome and encouraged to initiate this process.
- We recommend that at least four students from various backgrounds work together to complete the evaluation walkthrough (if your group size is larger or smaller, please check with your instructor).
- Each student team can complete the walkthrough separately or as a team, but each person is encouraged to complete their own checklist. After completing your walk and gathering your individual notes, review together with the group. Your group review/dialogue is another opportunity to identify cross-cutting themes or patterns that emerged during your walk.
- After all parties have completed the walkthrough, the team leader schedules a meeting to discuss the observations and how to address areas that need improvement and highlight area of success. The team leader(s) should also collect the forms and submit a copy to program staff leading diversity and equity efforts for your organization.

The 5 Equity Lenses

- **Environment/Public**
- **Policies & Practices**
- **Resources**
- **Assessment & Evaluation**
- **Attitudes & Value**
Environment/Public

Environment/Public

● Space where students feel connected and nurtured.
● Students feel like they are part of the college community.
● Students feel somebody wants and helps them to succeed.

What evidence of connection and support is demonstrated in the campus’ public spaces?

Please attach your evidence for connection and support demonstrated in the campus’ public spaces.

Is there evidence of a commitment to nurturing?

Please attach your evidence of a commitment to nurturing.

Are there certain areas on campus students/employees hang out around more or less?

How is the learning environment inclusive and reflective of individual learning profiles?

What can you discern from “walking the walls”, describe the types of visuals you see on the walls, posters, images, flyers, etc.

What evidence do you see in the environment that demonstrates culturally relevant and responsive teaching and learning?

Please attach your evidence of an environment that demonstrates culturally relevant and responsive teaching and learning.
Is student work visible, such as art, research contributions, community engagement experiences, etc.?

Are there gender-neutral restrooms?
- Yes
- No

In the buildings you are observing and analyzing is there accessible community space?
- Yes
- No

Is there information present in various languages and literacy levels?
- Yes
- No

Is there posted information about a meditation or prayer room?
- Yes
- No

Is there a room identified for students with young children or a breastfeeding/lactation room?
- Yes
- No

Is there a parent room available and/or are family friendly classes available?
- Yes
- No

Overarching evidence for Environment /Public equity components.
Please add any additional media you have to support the statements on this page you have not already evidenced. Please make sure your files are titled in a way that you can easily connect them to this topic that you are analyzing. An option is to create a collection of images and videos and upload the collection here.

Please add any questions this part of the CEWE generated for you.

What further dialogue regarding these facets of the CEWE environment/public aspect of equity were generated by your observations and evidence gathering?
Now that you have completed your observations and evidence gathering, uploaded evidence to support that process, and posed some future dialogue regarding the CEWE environment/public aspect of equity - how would you rank your institution overall in this category of equity?

1 being the lowest and 10 being the highest.

Lowest score [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] Highest score

**Policies & Practices**

**Policies & Practice / In-Class and Public Space**

Students are engaged and valued.
Engaged: Students actively participate in their learning both in and out of class.
Valued: Students’ skills, talents, abilities and experiences are recognized; they have opportunities to contribute on campus and feel their contributions are appreciated.

*Are students engaged in curriculum decisions and campus planning? If so, how are you informed of this process? If so, how are you informed of this process?*

Please share what you understand to be learning goals as a student at PSU.

Do you see information posted or available for students with learning needs?

- Yes
- No

Do you see information on special cohort programs and why they are available?

- Yes
- No

Are there gender-specific resources present?

- Yes
- No

What instructional strategies are being used in public space to encourage critical thinking and respect for differences?

- Yes
- No
Do assigned readings expose students to the various life experiences of different cultures and ethnic groups?
- Yes
- No

Overarching evidence for Policies & Practices equity components.
Please add any additional media you have to support the statements on this page you have not already evidenced. Please make sure your files are titled in a way that you can easily connect them to this topic that you are analyzing. An option is to create a collection of images and videos and upload the collection here.

Please add any questions this part of the CEWE generated for you.

What further dialogue regarding these facets of the CEWE policy & practices aspect of equity were generated by your observations and evidence gathering?

Now that you have completed your observations and evidence gathering, uploaded evidence to support that process, and posed some future dialogue regarding the CEWE policy & practices of equity how would you rank your institution overall in this category of equity?

1 being the lowest and 10 being the highest.

Lowest  |  |  |  |  |  | Highest

Resources

Resources
Tutoring Centers, Counseling, Financial Aid, Special Student Programs, Library, Computer labs, etc. Students are directed and focused.
Directed: Students have a goal and know how to achieve it.
Focused: Students stay on track- keeping their eyes on the prize.

Is it clear what resources are available?
- Yes
- No

Are you comfortable asking for help to find the resources you need?
- Yes
- No

Is the process of obtaining resources clear and easy to follow?
- Yes
- No

Are you able to obtain information about food programs, scholarships, etc. easily?
- Yes
- No
Are you able to easily identify posted information on educational resources and pathways to graduation or transfer?
- Yes
- No

Are you able to identify crises or specialized community assistance?
- Yes
- No

How do the resources recognize and value different learning styles?

Overarching evidence for the resource’s equity component.

Please add any additional media you have to support the statements on this page that you have not already evidenced. Please make sure your files are titled in a way that you can easily connect them to this topic that you are analyzing. An option is to create a collection of images and videos and upload the collection here.

Please add any questions this part of the CEWE generated for you.

What further dialogue regarding these facets of the CEWE resources aspect of equity were generated by your observations and evidence gathering?

Now that you have completed your observations and evidence gathering, uploaded evidence to support that process, and posed some future dialogue regarding the CEWE Resource lens of equity, how would you rank your institution overall in this category of equity?

1 being the lowest and 10 being the highest.

Assessment & Evaluation

Assessment and Evaluation
Students are directed and focused.
Directed: Students have a goal and know how to achieve it.
Focused: Students stay on track- keeping their eyes on the prize.

Are you familiar with the guidelines on assessment and evaluation used in this school/school system?
- Yes
- No

Are they easy to find?
- Yes
- No
Are there opportunities to evaluate your instructors and the college?
- Yes
- No

Is there publicly located feedback or input stations available?
- Yes
- No

What are the homework policies and how are they personalized to address diverse learning styles?

Is there evidence of students being able to use differing learning styles to submit work?

Please add evidence you located of being able to use differing learning styles to submit work.

Is student work on display?
- Yes
- No

Where do you see student work displayed?

Are you able to easily locate the assessment office?
- Yes
- No

Do you know where to find the disability support and programs department?
- Yes
- No

Were there signs for a disability support and programs department?
- Yes
- No

Overarching evidence for the resources assessment & evaluation component.
Please add any additional media you have to support the statements on this page that you have not already evidenced. Please make sure your files are titled in a way that you can easily connect them to this topic that you are analyzing. An option is to create a collection of images and videos and upload the collection here.

What further dialogue regarding these facets of the CEWE assessment & evaluation aspect of equity were generated by your observations and evidence gathering?
Please add any questions this part of the CEWE generated for you.

Now that you have completed your observations and evidence gathering, uploaded evidence to support that process, and posed some future dialogue regarding the CEWE assessment & evaluation lens of equity - how would you rank your institution overall in this category of equity?

1 being the lowest and 10 being the highest.

Lowest ____________________________  Highest ____________________________

Attitudes & Values

Attitudes and Values
Student experiences feeling connected and nurtured.
Connected: Student feels like they are part of the campus community.
Nurtured: Student feels somebody wants and helps them to succeed.

What is the feeling you experience walking or moving around campus?

Are students discouraged from using racial and ethnic slurs by helping them understand that certain words can hurt others?
• Yes
• No

Please describe how you have personally experienced being discouraged from using racial and ethnic slurs or have been helped to understand that certain words can hurt others.

As a student, is the process used by your professor or instructor to screen books, movies, and other media resources for negative cultural, ethnic, racial, or religious stereotypes before sharing them to students in the class clear to you?
• Yes
• No

Is it understood that students from different cultures will have different expectations from their society for doing well in school?
• Yes
• No

Please describe where you have encountered different cultural expectations discussed in class or illustrated in public ways.
Do class goals, policies, and procedures incorporate principles and practices that promote cultural diversity, cultural competence and linguistic competence?
- Yes
- No

Are these goals, policies, and procedures posted?
- Yes
- No

Can students vote on school policies and practices?
- Yes
- No

Is there information publicly available on student voting for policies and practices?
- Yes
- No

As a student are you, or have you been, engaged in any way regarding changes or contributions to a course syllabus?
- Yes
- No

Do the halls, cafeteria, lounges and other public spaces communicate that students are valued and their success matters?
- Yes
- No

Please attach specific evidence of communication in public spaces that students are valued and their success matters.

Overarching evidence for the attitudes and values equity component.
Please add any additional media you have to support the statements on this page that you have not already evidenced. Please make sure your files are titled in a way that you can easily connect them to this topic that you are analyzing. An option is to create a collection of images and videos and upload the collection here.

What further dialogue regarding these facets of the CEWE attitudes & values aspect of equity were generated by your observations and evidence gathering?

Please add any questions this part of the CEWE generated for you.
Now that you have completed your observations and evidence gathering, uploaded evidence to support that process, and posed some future dialogue regarding the CEWE attitudes & values lens of equity - how would you rank your institution overall in this category of equity?

1 being the lowest and 10 being the highest.

| Lowest |  |  |  |  |  | Highest |

Final CEWE Analysis

Below you will find a prompt/reminder of the aspirations that, when present at your institution, indicate excellence in equity. Please review these, and the specific equity lens workbook page you completed related to that lens, and then offer a 250-300-word synthesis/analysis that includes your experiences, reflections on evidence gathered, and your stated outcomes/rankings of that lens with supporting reasoning. You will complete a synthesis/analysis for each of the five sections. You will then be asked to provide an overall ranking and a short list of potential persons to share your final report with.

The aspiration for the Environment/Public lens:

Space where students feel connected and nurtured. 
Students feel like they are part of the college community. 
Students feel somebody wants and helps them to succeed.

Environment/Public Analysis
250-300 words

The aspiration for Policies & Practice / In-Class and Public Space:

Students are engaged and valued. 
Engaged: Students actively participate in their learning both in and out of class. 
Valued: Students’ skills talents, abilities and experiences are recognized; they have opportunities to contribute on campus and feel their contributions are appreciated.

Policies & Practice Analysis
250-300 words

The aspiration for Resources: Tutoring Centers, Counseling, Financial Aid, Special Student Programs, Library, Computer Labs, etc.:

Students are directed and focused. 
Directed: Students have a goal and know how to achieve it. 
Focused: Students stay on track- keeping their eyes on the prize.
Resources Analysis
250-300 words

The aspiration for Assessment and Evaluation:
Students are directed and focused.
Directed: Students have a goal and know how to achieve it.
Focused: Students stay on track - keeping their eyes on the prize.

Assessment and Evaluation Analysis
250-300 words

The aspiration for Attitudes and Values:
Student Support (Re)defined Alignment: Student experiences feeling connected and nurtured.
Connected: Student feels like they are part of the campus community.
Nurtured: Student feels somebody wants and helps them to succeed.

Attitudes and Values Analysis
250-300 words

Overall ranking of campus equity:
Now that you have completed your campus equity walkthrough evaluation and synthesis, what OVERALL equity ranking would you offer this institution?

Lowest

Highest

Now that you have completed your final analysis and ranking -- based on the observations you have made, the evidence you have gathered, and any additional questions this equity activity has prompted you to ask, who would you share this with, 1) on your campus, and 2) any others who may not be on located on your campus, and why are you selecting these recipients?
Appendix C
Sample Screenshots of the CEWE (Campus Equity Walkthrough Evaluation)

Figure C1
*Showing the Frontpage’s Top Part of the CEWE*

Note. Because most CEWE’s ePortfolio pages do not fit in one screenshot, Figures C1 and C2 together show how CEWE’s frontpage appears to students.

Figure C2
*Showing the Frontpage’s Bottom Part of the CEWE*
Figure C3

Students Complete Open-Ended Questions in the CEWE

What further dialogue regarding these facets of the CEWE attitudes & values aspect of equity were generated by your observations and evidence gathering?

Please add any questions this part of the CEWE generated for you.

Now that you have completed your observations and evidence gathering, uploaded evidence to support that process, and posed some future dialogue regarding the CEWE attitudes & values lens of equity - how would you rank your institution overall in this category of equity?

1 being the lowest and 10 being the highest.

Lowest | Highest

Figure C4

Students Complete Numerical Rankings for Each of the Five Equity Lenses

What further dialogue regarding these facets of the CEWE environment/public aspect of equity were generated by your observations and evidence gathering?

Now that you have completed your observations and evidence gathering, uploaded evidence to support that process, and posed some future dialogue regarding the CEWE environment/public aspect of equity - how would you rank your institution overall in this category of equity?

1 being the lowest and 10 being the highest.

Lowest score | Highest score
Figure C5

*Students are Asked to Provide a Qualitative Analysis of Each of the Five Equity Lenses*

**Resources Analysis**
250-300 words

**The aspiration for Assessment and Evaluation**
Students are directed and focused.
Directed: Students have a goal and know how to achieve it.
Focused: Students stay on track—keeping their eyes on the prize.

**Assessment and Evaluation Analysis**
250-300 words

---

Figure C6

*Students are Directed to Offer a Final Quantitative Ranking of Overall Campus Equity*

**Overall ranking of campus equity . . .**
Now that you have completed your campus equity walkthrough evaluation and synthesis, what overall equity ranking would you offer this institution?

Choose one: Lowest | | | | | Highest

Now that you have completed your final analysis and ranking—based on the observations you have made, the evidence you have gathered, and any additional questions this equity activity has prompted you to ask—who would you share this with, 1) on your campus, and 2) any others who may not be on located on your campus, and why are you selecting these recipients?
Appendix D

Screenshot Samples of a Student’s Completed CEWE (Campus Equity Walkthrough Evaluation)

Figure D1

*A Student Captures Evidence of Perceived Equity in Campus’ Public Spaces*

![Image of CEWE screenshot showing evidence of equity in campus public spaces]

*Note.* The five images (Figures D1-D5) only show sample pages of a completed CEWE. The CEWE itself is longer (Appendix B). Students can upload photos or videos. In this case, the student uploaded two images (IMG_8787 and IMG_8786). Figure D2 and D3 will show these two images.
Note. In PebblePad, “linked assets” refer to any artifacts uploaded by users (e.g., documents, videos, photographs). Such “linked assets” are created by users—or borrowed from other sources. In this study, “assets” refer to written reflections, photos, and videos uploaded by students for the purpose of completing the CEWE. The image shows the “Re-Use Room” (Cramer Hall, first floor, an academic building), a room where students find a wide range of upcycled products (e.g., dormitory appliances, clothing, office supplies) from around the campus.

Note. The image shows a wheelchair accessible bathroom (Cramer Hall, first floor, an academic building).
**Figure D4**

*A Student Completes Short Answer Questions about the Policies and Practices Equity Lens*

<table>
<thead>
<tr>
<th>Contents</th>
<th>About CEWE</th>
<th>The 5 Equity Lenses</th>
<th>Final CEWE Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you see information on special cohort programs and why they are available?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are there gender-specific resources present?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What instructional strategies are being used in public space to encourage critical thinking and respect for differences?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Signs that communicate the zero tolerance policy at PSU about discrimination against people based on ethnicity, gender and sexual orientation, class, religion etc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What instructional strategies are being used in public space to encourage critical thinking and respect for differences?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* The questions ranged from yes/no questions to deeper ones (e.g., “what instructional strategies are being used in public space to encourage critical thinking and respect for differences?”)

**Figure D5**

*A Student Completes an Overall Numerical Ranking of Campus Equity and Reflects on Next Steps*

<table>
<thead>
<tr>
<th>Contents</th>
<th>About CEWE</th>
<th>The 5 Equity Lenses</th>
<th>Final CEWE Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes and Values Analysis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>250-300 words</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The community is strong within PSU and they have events for students of all interests. There is a place for everyone and we have a welcoming environment that is focused on improved learning and exploration. There is always someone there to listen to the questions and concerns of the students.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall ranking of campus equity . . .</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Now that you have completed your campus equity walkthrough evaluation and synthesis, what OVERALL equity ranking would you offer this institution?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lowest</td>
<td>Highest</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Now that you have completed your final analysis and ranking – based on the observations you have made, the evidence you have gathered, and any additional questions this equity activity has prompted you to ask, who would you share this with, 1) on your campus, and 2) any others who may not be on located on your campus, and why are you selecting these recipients?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. I would share it with freshman who are looking for places to ask their questions and gain new information about college. 2. I would share it with people who live off campus and have a harder time finding their community at PSU.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* In this CEWE-specific numerical ranking, “lowest” refers to “1” (lowest perceived rank of campus equity); “highest” refers to “10” (highest perceived rank of campus equity).
I Can See Clearly Now: Using ePortfolios to Support Reflection and Engaged Learning in a Summer Internship Program

Karen Weber, Theo Cai, and Zhanat Elliston
Duke University

This study analyzed the development of an electronic portfolio (i.e., ePortfolio) program designed to promote and assess reflection and engaged learning for participants in a summer internship program. Over the course of eight weeks, 12 undergraduates reflected weekly on their internships through their ePortfolios both in writing and through artifacts, and attended three focus groups. The researchers identified common themes that emerged from the students’ reflections and the focus group discussions, as well as analyzed the artifacts they uploaded. The researchers found that students used their ePortfolios to document increased proficiency in professional skills; to reflect on their personal development; and to discover how their internships shifted their perspectives, values, and future professional and academic plans. During the focus groups, the students shared that they valued the practice of reflection and found ePortfolios easy to use and effective for reflection, strengthening their purpose and confidence and enhancing their communication. The researchers also found the tool helpful for observation and assessment. Going forward, ePortfolios will remain the program’s tool for reflection. However, the curriculum and assignments will be more collaborative and flexible for students, and the prompts will vary each week to enhance reflective practice and student engagement.

As we learn to navigate our “new normal”—the late-pandemic academic landscape—in higher education, administrators and faculty across the country are seeking novel ways for students to reconnect with one another and to engage with both attention and intention. Students are again studying abroad; conducting research in labs, archives, and the community; and participating in local and global internships. It is imperative that educators encourage and support involvement in these outside-the-classroom activities, while at the same time offer co-curricular programs that incorporate tools for reflection and connection among the participants. Incorporating electronic portfolios (i.e., ePortfolios) into co-curricular programs is one way to ensure students are taking time to consider their learning progress in an iterative way.

Recognizing that student engagement is pivotal to the success of an ePortfolio initiative (Barrett, 2007; Yancey & Hunt, 2009), it is essential that students find value in the practice of reflecting on their experiences. The utility of a professional or career ePortfolio is clear: it can be included on résumés, shared with potential employers, and used when applying to graduate and professional schools as well as when preparing to enter the workforce (Bonsignore, 2013). For learning ePortfolios, students can engage in integrative learning by connecting their experiences to create new knowledge (Reynolds & Patton, 2014). Asking students to reflect each week on the highlights and challenges they encountered during their internship or research project via their ePortfolios can make their learning and growth more visible to them. It is also a means for program coordinators to measure whether students are benefiting from their co-curricular experiences. In this study, we documented the creation and implementation of an ePortfolio program that promotes reflection and engaged learning for students in a summer internship program. At the same time, we assessed their learning outcomes by reviewing their ePortfolio submissions and artifacts and by recording the focus group discussions.

This qualitative, phenomenological study (Patton, 2015) builds upon a previous analysis, which explored using ePortfolios for a summer undergraduate research program (Weber & Myrick, 2018). In both studies, we used the same weekly reflective prompts, offered three focus groups, and utilized Wix for building the students’ websites. For the present study, however, we added a requirement of uploading at least one artifact per week pertaining to their internship. We hoped that by asking students to upload their own photos, videos, audio files, PDFs, etc., they would feel more inclined to express themselves in an authentic manner, thus, promoting self-expression (McLellan, 2021). As the researchers for the present study, administrators in higher education with expertise in co-curricular programs, we were interested in learning qualitatively how our students might share their academic and professional experiences through developing an ePortfolio during their summer internship program.

Literature Review

ePortfolio Usage

Practitioners use ePortfolios for a variety of purposes, including teaching and learning, programmatic assessment, and career development (American Association of Colleges and Universities [AAC&U], 2022). The versatility of ePortfolios makes
them a desirable learning tool for students, educators, and researchers. Students can also use ePortfolios in a variety of ways: to electronically compile their work over time; reflect on their academic and personal development; and share their insights with others such as teachers, advisors, and future employers. For optimal ePortfolio usage, students should be encouraged to create websites that cultivate community-wide interactions and collaborations (Zhang et al., 2007). The extent to which ePortfolios can be used varies depending on its purpose. However, these various approaches are not mutually exclusive, but rather may represent different starting points for portfolio usage (Sutarno et al., 2019). To achieve its full potential, educators should dedicate ample time and attention to implementing ePortfolios to ensure they are elevating student learning (Moore, 2016).

Documentation and Evaluation

Creating ePortfolios is a useful tool to document experiences (Juhana et al., 2018). With the knowledge that students and instructors expect their eTools to be accessible and easy to use, ePortfolios adhere to both priorities for learners (Jafari et al., 2006). They can also be used to support formal and informal learning and to communicate student outcomes (O’Keeffe & Donnelly, 2013; Wild et al., 2008). Given the ease with which ePortfolios can be used for collection and then communication by sharing the content widely, it is a tool that can also be used to evaluate faculty and institutional educational practices (Basken, 2008). An ePortfolio can support integrative learning through the process of students making connections with the content in their ePortfolios (Reynolds & Patton, 2014). Moreover, ePortfolios can be useful in evaluating educational outcomes. The ePortfolio practice can support the assessment of learning outcomes through demonstrating student and faculty members’ work and by capturing learning in all stages (Eynon & Gambino, 2017). They can serve as an innovative tool to do a wide range of assessments and can be used to support pedagogy and enhance students’ overall engagement with their education (Richards-Schuster et al., 2014).

Reflection

The robust pedagogical practice of ePortfolio development is fully realized through the process of reflective writing (Shulman, 1998). These reflective skills pave the way for transforming personal experience into new knowledge and in challenging preconceived notions and structures (Carl & Strydom, 2017; Eynon, 2009). With recent advances in online learning environments, researchers agree that ePortfolios benefit students in terms of extending knowledge acquisition and encouraging connectedness, specifically for those students without prior ePortfolio experience in reflecting on their learning (Bolliger & Shepherd, 2010; Taylor et al., 2012). In fact, student ePortfolios can be used to demonstrate the acquisition of specific skills in terms of reflective learning and continuous professional development. Moreover, they can also serve as the connective tissue for students when deciding what and how to share their artifacts and insights in their ePortfolios (Yancey & Hunt, 2009). Photos, videos, research projects, interviews, and reflective writing are all examples of evidence and can be linked to specific academic experiences or serve as proof of lifelong learning.

However, simply asking students to reflect on their newly acquired skills and experiences will not necessarily result in a thorough analysis. To support optimal student learning, ePortfolios must be developed in a precise manner to further deepen student reflection (Bartlett & Sherry, 2006; Harring & Luo, 2016). Specific questions and guidelines should be developed that relate to course goals, allowing students to make their learning apparent and connected to the learning outcomes.

Regardless of how ePortfolios initiatives are designed and for what intended purposes, they can guide students in thinking more critically about their learning in collaborative learning contexts (Klenowski et al., 2006). Encouraging students to use ePortfolios in a collaborative way supports more effective reflections; it can be enjoyable and improve their writing skills (Tonogbanua, 2018). These types of ePortfolios can validate the learning process in the form of knowledge, collaboration performance, and student skills (Sutarno et al., 2019). The user’s reflection, a demonstration of what was learned during the learning process, and the level of social interaction between the user and other participants, such as peers, facilitators, or teachers, remain critical to appropriate ePortfolio practices (Barrett, 2011).

Professional Development and Civic Engagement

Furthermore, through the creation of an ePortfolio, students may hone their professional identity and self-efficacy (Bennett & Robertson, 2015). Recognizing that self-assessment is vital to professional development and growth (Jarvinen & Kohonen, 1995), ePortfolios can be used to support this maturation process and can even serve as a preparatory tool prior to entering the workforce (Choate et al., 2019). For students’ co-curricular experiences, it is ideal to merge the curriculum with their programmatic experiences, promoting reflection from their lived experiences (Gallen, 2021). Using ePortfolios can enhance students’ civic literacy by strengthening their engagement in the real world as well as their learning on sustainability (Conefrey & Smyth, 2020; Geoffrely, 2015). For
instance, when ePortfolios were used to collect reflective feedback from students who participated in a service immersion program, ePortfolios were useful in ways of extending knowledge and deepening civic engagement experiences (O’Laughlin & Serra, 2016). For students engaged in service-learning work, ePortfolios are particularly useful for showing how field experiences inform their personal growth and vice-versa (Richards-Schuster et al., 2014). Through ePortfolio practice, students can demonstrate their integrity by articulating their values and their civic and personal responsibilities (Cambridge, 2010). This kind of integration can deepen students’ connections to communities, as well as their understanding of civic engagement and social justice broadly and how these issues configure into their work individually (O’Laughlin & Serra, 2016).

**Personal Development and Lifelong Learning**

An ePortfolio practice encourages reflection, collaborative activities, and achievement, thereby providing critical opportunities for personal development. This includes learning that stems from what students choose to upload to their ePortfolios in addition to the social practice of sharing and communicating their work with peers and educators (Barrett, 2011). Since students will work multiple jobs throughout their careers, documenting skills that they have learned over time shows evidence of both lifelong and life-wide learning (Chen, 2009). Creating ePortfolios allows students to demonstrate learning over time and fosters cycles of reflection, revision, and iterative growth (O’Keefe & Donnelly, 2013). Beyond documenting purely academic experiences, ePortfolios can provide unique platforms for integrating co-curricular, professional, and personal experiences into comprehensive “living documents” of life-wide learning—elevating the value of all dimensions of student life, and promoting cross-context connections (Cambridge, 2008; Fitch et al., 2008; Madden, 2015).

**Career Development**

Recognizing that ePortfolios can be a valuable tool in career development and in job searches, students are able to continue utilizing their websites once the formal course or programmatic assessment has concluded (Yu, 2012). Students’ ePortfolios can be authentic indicators of what they have learned and are able to accomplish, addressing their potential. In addition to the typical integrative learning practices, ePortfolios can promote students’ professional digital identities (Conefrey & Smyth, 2020). In the spirit of creating their online identities, students also have an opportunity to not only develop their professional career profile through ePortfolios but also to integrate newly acquired skills to present themselves to potential employers. In addition, professional websites can showcase some of the top qualities that employers are seeking, such as computer and organization skills (Barrett, 2012). Creating ePortfolios can hone students’ technological and communication skills (D’Angelo & Maid, 2013). When students create their professional portfolios, they can showcase their academic, co-curricular, and extracurricular experiences in a curated fashion, making it easier for an employer to evaluate their knowledge and skills (Benander & Rafael, 2016; Ramirez, 2011). In fact, many students indicate that they wish to use their ePortfolios during their careers because the websites align with their professional goals (Schiele et al., 2017).

**High-Impact Practices**

Recognizing the multiple uses of ePortfolios, administrators in higher education are often compelled to use them in tandem with other high-impact practices. Studies find that the reflective practice can be even more valuable when students engage in multiple high-impact practices (HIPs) during their academic careers; specifically, students become more flexible and self-directed learners (Mueller & Bair, 2018; Peet et al., 2011; Reese & Levy, 2009). For instance, this process might include developing an ePortfolio to post reflections during an undergraduate research experience, a study abroad, or an internship. Using ePortfolios, in conjunction with other high-impact activities, gives students the opportunity to draw connections between distinct educational experiences because collection over time is a crucial component of the ePortfolio process (AAC&U, 2022; Strivens, 2015). Since creating an ePortfolio is a form of dispositional learning, combining cognitive and personal development for developing life skills, it is a highly valued HIP for 21st-century learners (Kuh et al., 2018).

Thus, ePortfolios are viewed as a sound pedagogical and evaluative tool capable of promoting student learning and success (Nguyen, 2013). Consistent with the literature in the field, there are many compelling reasons to further examine ePortfolios in higher education. Our study explores students’ experiences in a summer internship program with an attempt to provide insights into ePortfolios that promote and assess reflection and engaged learning.

The research questions raised for this study included: How do we develop an effective ePortfolio initiative that will promote reflection and engaged learning for participants in a summer service program? As the program coordinators, will we be able to observe and measure the students’ learning through the reflections in their ePortfolios?
Table 1
Participant Chart Including Intended Academic Major

<table>
<thead>
<tr>
<th>Participant</th>
<th>Academic Major</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Premed</td>
</tr>
<tr>
<td>2</td>
<td>Biomedical Engineering</td>
</tr>
<tr>
<td>3</td>
<td>Public Policy</td>
</tr>
<tr>
<td>4</td>
<td>Math, Computer Science</td>
</tr>
<tr>
<td>5</td>
<td>Premed, Public Policy, Global Health</td>
</tr>
<tr>
<td>6</td>
<td>Premed, Neuroscience, Biology</td>
</tr>
<tr>
<td>7</td>
<td>Neuroscience</td>
</tr>
<tr>
<td>8</td>
<td>Biomedical Engineering</td>
</tr>
<tr>
<td>9</td>
<td>Economics</td>
</tr>
<tr>
<td>10</td>
<td>Chemistry</td>
</tr>
<tr>
<td>11</td>
<td>African, African-American Studies</td>
</tr>
<tr>
<td>12</td>
<td>Public Policy, Economics</td>
</tr>
</tbody>
</table>

Method

This was a qualitative, phenomenological study (Patton, 2015) on how we launched an ePortfolio initiative in the summer of 2022 for students participating in a full-time, 8-week internship program. As an academic unit housed in a midsized, highly selective, private university in the Southeastern United States, our office supports undergraduate and graduate students in academic engagement activities. One of the scholarship programs we oversee includes an internship initiative for rising sophomores, which places students with non-profits that match their professional interests. These students were the participants in the study.

Participants

This year’s cohort included 12 rising sophomore students who worked at a wide range of non-profits in the same city as the location of the university campus (see Table 1). The internship placements were in the fields of education, health, housing, law, and the environment. The students lived in apartments on campus and met together once or twice per week: once formally with the program coordinators and once optionally for an excursion or group activity.

Procedure

Regarding participation in the research study, all 12 students received the consent form from a representative at the institutional research office. The students were informed that it was their choice whether to allow their ePortfolio submissions and responses during the focus groups to be included in the study. However, if any had not participated, their ePortfolio submissions and responses during the focus groups would have been removed from the data analysis process. This removal would have been easy to do because each participant’s responses were clearly sorted and labeled in the software that we used for collecting and storing data.

Weekly Reflections

The students were required to develop ePortfolios during their internship experience. They were expected to build these ePortfolios whether they participated in the research study or not; however, as mentioned above, all students opted into participating in the study. Each week, the students were asked to respond to prompts, which included these five questions (also available in Appendix A):

1. What was the most fulfilling task you completed this week and why?
2. What was the most challenging issue you encountered this week and why?
3. How have these occurrences impacted your summer service experience?
4. Has your perspective on your service experience changed? If so, how?
5. How is this experience shaping or informing your overall views on service?

The students built their ePortfolios using Wix, a website-building platform. They shared their links with us, but the links expired after a certain amount of time to protect their privacy. Their websites were not made public.
The students used the Blog tool in Wix for responding to the prompts. Each week, they posted their responses to the questions as a new entry in their blog. This helped us easily find and review their responses. They also uploaded an artifact each week, which could include a photo, video, screenshot, or another type of file. Wix’s Blog tool allows users to easily upload artifacts to their posts, which was helpful to us and to the students.

We commented on the students’ posts each week via email, so they were aware we had read their responses. The feedback given to the students varied in length and scope based on what they originally posted. Most of the time, we engaged with the content each student shared, but sometimes our comments were more of an acknowledgment that their responses had been received if their original posts were brief. The feedback was only visible to the individual students; the comments could not be viewed by other students in the program. We were hopeful that this feedback would address the issue of students potentially feeling a lack of connection with us during the program (Morales & Soler-Domínguez, 2015).

Focus Groups

The students also participated in three focus groups during the first, fifth, and last week of their internship program. The sessions were recorded for data analysis purposes, and the recordings were audio only. During the first week of the program, the students learned how to create ePortfolios using Wix, and we asked about their expectations for using ePortfolios. During the fifth week of the program, we checked in on how their ePortfolio process was going. During the final week of the program, we assessed their experience in building ePortfolios. The focus groups were conversational and guided by a set of discussion questions; they were an invitation for the students to provide their feedback to us and their peers (see Appendix B for the full list of questions). At the end of the study, we also gave the students an opportunity to attend an optional session on transitioning their ePortfolios from a learning to a career, or public-facing, ePortfolio. This session took place during the fall semester and served as a quasi-reunion for the students to gather again as a group.

Data Analysis

We used the research software program Dedoose to collect, code, and analyze the data. The weekly prompts were uploaded into Dedoose once all the identifying data was removed. The three focus groups were recorded and transcribed. Once we had complete and accurate transcripts, we removed the descriptors from the data collected and deleted the original audio recording to protect the identities of the students.

We met consistently as a research group during the 8-week program to discuss our data collection and to debrief after each focus group. During these discussions, we confirmed that our students were all completing the weekly prompts, and we were obtaining substantive reflective responses from them that we could later analyze for the study. After the focus groups, we discussed if our questions were eliciting the feedback we needed to answer our research questions and if the students felt free to share their insights in the group settings. Overall, we were pleased with how much the students contributed during the focus groups and we appreciated their interest in sharing their experiences with us.

When we finished collecting the data at the end of the summer program, we learned that all students consented for their reflections and feedback from the focus groups to be included in the study. We then began the analysis process using Corbin and Strauss’s (2015) method of open and axial coding; we highlighted key phrases and ideas and then identified the dominant themes that emerged. If any students had not consented to participate, however, we would have removed their submissions in Dedoose and their comments from the focus group transcripts prior to analyzing the data.

Results and Discussion

Through this analysis, we sought to answer the following questions: How do we develop an effective ePortfolio initiative that will promote reflection and engaged learning for participants in a summer service program? As the program coordinators, will we be able to observe and measure the students’ learning through the students’ reflections in their ePortfolios? This project collected data from two primary sources: the students’ responses to the weekly prompts, which they posted in their ePortfolios, and the three focus groups, which took place at the beginning, middle, and end of the summer program.

In an effort to share our findings, we first discussed the dominant themes that emerged from the students’ reflective essays. They posted on professional development; personal development; and their perspectives, values, and plans going forward. Then, we identified the feedback and themes that emerged from the focus groups. The students believed:

- Recording their summer experience was valuable, but were concerned with authenticity;
- ePortfolios were an effective tool for reflection;
- The reflective practice strengthened their purpose and confidence and enhanced their communication;
and personal triumphs

Emerging Themes From Students’ ePortfolios

Professional Development

Professional development was the most prevalent theme in the students’ reflective essays in their ePortfolios. In this context, students posted on issues that pertained to the workplace and related to skills they could include on a résumé. They shared how they were learning to effectively communicate with others, manage employer expectations, and work collaboratively with others. The students posted about developing their leadership skills, and some explored what leadership meant to them. For instance, Participant 9 wrote, “The responsibility of an individual to show up and hold themselves accountable is upon themselves. It can be difficult as a leader to tread the line between management and micromanagement” (Reflection Week 6).

Students wrote about how they organized and planned projects, events, and initiatives. They explained in writing how they were becoming more proficient at honing new skills, such as coding, marketing, and using social media. They also posted on how they were adapting to working independently, sharing their ability to problem solve and think creatively about an issue:

These experiences have greatly impacted my summer service experience by not only improving my communication skills but further teaching me how to think outside of the box. For the client I mentioned earlier, collaboration and creative thinking were key to find ways to actually help her.

(Participant 6, Reflection Week 4)

Personal Development

The students also often reflected in writing through their ePortfolio submissions about how they had developed personally, referring to experiences and skills they would not likely share publicly but related to their individual growth and maturation. These included performing tasks outside their comfort zone, recognizing the need for patience, acknowledging a lack of skills, and noticing how their confidence was building over time. Their ePortfolios were platforms to share professional and personal triumphs as well as challenges and frustrations. Many students posted about the personal obstacles they had to overcome to get their specific jobs done. At the same time, they shared their concerns regarding systemic challenges that they believed were thwarting their organizations’ abilities to serve their populations. Participant 12 wrote, “Knowing they now received legal resources eased the situation; however, the challenge is actually taking legal action” (Reflection Week 6). Participant 4 stated, “My summer service experience has been able to give me a first hand [sic] experience with how the system needs reform and that was not something I expected to get from working in my [summer program] location” (Reflection Week 3).

Perspectives, Values, and Plans Going Forward

One of the reflective prompts asked the students to consider how their perspective on service may have changed during their internship. The students shared how they learned more about their populations’ real-world issues, which offered them more insight into the complexity of the challenges their clients faced as well as empathy for their personal struggles. This encouraged students to ponder what might lie ahead for them and how they wish to serve going forward. For instance, one student mentioned now realizing the need to pursue a career that involves hands-on work to stay motivated. Another wrote about planning to take a personal finance course to address their newfound knowledge gap, as well as quenching their renewed interest in advocacy. Another student shared that because of the internship, they learned the importance of enjoying what you do. Participant 8 added, “It’s important that one finds a way to serve doing something they either enjoy or are passionate about so they can find their work more fulfilling and continue serving, thus impacting the community more” (Reflection Week 3).

The students were also asked to write about how their experiences were informing their overall views on service. They posted on the importance of engaging the community, doing work that is sustainable, and realizing that much of service happens behind the scenes without anyone knowing. In addition, some students expanded this question to explore how their internship was shaping their larger goals and perspectives, often keeping in mind the systemic challenges they may have encountered during their internships. Participant 5 wrote, “The little things (or at least the things we take for granted) are also important aspects of service” (Reflection Week 6). Participant 3 stated, “I think the overarching lessons I have learned through experience this summer are the benefits of a healthy work-life balance as well as the inner rewards of engaging in work that you feel passionate about” (Reflection Week 5).
Emerging Themes From the Focus Groups

Valuable Record but Concern With Authenticity—Focus Group 1

During the first focus group, the students shared their enthusiasm for having an online record of the progress of their summer experiences, which they could refer to later in their collegiate careers. “I think, after the summer is over, I’m going to appreciate having [the ePortfolio] to look back on. I think that’ll be really valuable to me” (Participant 11, Focus Group 1). They felt that having this record would remind them of what they accomplished and how they may have changed over time. The students also believed that by chronicling their activities, they would be able to organize their experiences by themes, which could better showcase their interests in fields such as health and education. They also expressed an interest in eventually using their ePortfolios to show evidence of their professional attributes and as a resource to share with employers.

One concern that was shared was how it might be difficult to be authentic and honest when posting their reflections. Participant 2 expressed, “If you focus too much on professionalism, though, it might not be as genuine” (Focus Group 1). Participant 3 added that when creating products such as an ePortfolio, it is hard to be “authentically honest” (Focus Group 1).

Effective Tool for Reflection—Focus Groups 2 and 3

Their initial impressions proved accurate. During the second and third focus groups, the students shared that ePortfolios were an appropriate and convenient storage and reflective tool for the internship program. Their websites and reflective prompts assisted them in organizing their thoughts, emotions, and experiences, and shed light on what they enjoyed most about their internships. Responding to the prompts compelled them to jog their memories to identify the highlights for the week. One student mentioned that by looking back, past challenges no longer seemed like challenges because they were already addressed (Participant 8, Focus Group 3). Another student appreciated the ability to write freely without being graded or judged (Participant 3, Focus Group 2). One participant shared that the weekly reflections were critical in shaping the service experience (Participant 1, Focus Group 2).

Even when they were not in the mood to reflect, they felt the exercise was worthwhile after it was completed (Participants 3 and 11, Focus Group 2). As the students predicted during the first focus group, they appreciated having a record of their weekly experiences that they could refer to later, and this record provided them with a feeling of accomplishment. “I would not sit down for 30 minutes and reflect on my day otherwise. . . . Three years down the road [when] applying to grad school, I have an almost first-hand account of what I was doing” (Participant 5, Focus Group 2). The students felt that it will be helpful to review over time how their perspectives may have changed. “I think in the long-term it will definitely be very useful” (Participant 12, Focus Group 2).

Consequently, they grew to have an appreciation for the practice of reflection. Participant 1 noted that people tend to reflect on negative experiences, but taking the opportunity to also consider positive experiences is impactful (Focus Group 3). Participant 9 shared that by reflecting, “I felt almost better about myself and just better about the work that I was doing” (Focus Group 3). Participant 12 stated, “I think that one of the values of reflection is learning your values and learning why you continue to do this” (Focus Group 3).

Strengthened Purpose and Confidence—Focus Groups 2 and 3

The participants expressed that the reflections—especially the question on what was fulfilling—gave them a stronger sense of purpose and confidence that they were making a difference. One student mentioned that when responding to what was fulfilling, they realized they were having an impact, just on a smaller scale than perhaps they had originally intended. “Instead of changing the world or something, you’re kind of just changing the life of one person, helping an individual and their circumstance” (Participant 11, Focus Group 2).

By posting each week about their service experience, their progress and growth were made transparent; their skills, strengths, accomplishments, and improvements became more evident (Participants 1, 3, 6, 9, and 10, Focus Group 3). The students mentioned building specific skills, such as honing their interpersonal communication abilities, enhancing their patience and empathy, and improving their capacity to engage in challenging conversations. Through the reflections, they were also able to consider what will and will not bring them more fulfillment when they enter the workforce, thinking forward to their future career pursuits.

Enhanced Communication—Focus Groups 2 and 3

Another benefit of the ePortfolio program was that the students received consistent feedback from a program coordinator on their postings. For instance, Participant 10 shared that the feedback served as “validation” when they were struggling with whether they were making an impact (Focus Group 3). These weekly comments served to personalize and support their reflective process.
The fact that they knew their posts would be read and commented on each week likely enhanced their degree of engagement in using their ePortfolios. This consistent communication also allowed the coordinators and students to build stronger relationships with one another throughout the summer experience. We recommend building in time to respond to the students’ posts each week since this is a worthwhile, albeit time-consuming, task.

Lack of Personalizing Artifacts—Focus Groups 2 and 3

As previously mentioned, in addition to the written reflections, the students were asked to upload an artifact each week. This could essentially be any document—professional or personal—that was demonstrative of their week.

During the focus groups, the students mentioned that they struggled to decide which artifact to upload each week. Since they could not share clients’ personal information and images, some settled on posting generic stock images of buildings or stacks of books, which they found disappointing. Although students were given the latitude to upload a broad range of artifacts, adhering to McLellan’s (2021) suggestions for creating ePortfolios, most posted photos of themselves at work, the documents they completed for their internships, and projects they were planning at their jobs. One student mentioned, “I usually try to find like the highlight of the week” (Participant 9, Focus Group 2). Many of the photos took place at their non-profit organizations but were mostly informal in nature—selfies with colleagues, students in action and at events, and yummy treats at the office. A few students posted personal items, such as their weekend activities and their lives outside of their internships.

Wix Was an Ideal Platform

All but two participants had prior experience building websites, so the students had no issues using Wix. They quickly adapted to using the tool, adding pages, and uploading artifacts to their websites with ease. The students were also pleased with the aesthetic of their websites. In addition, we as the researchers found Wix to be an ideal platform for coordinating an ePortfolio program. Using the Wix Blog tool enabled us to easily locate the postings, as well as view the students’ progress over time.

About half of the participants embraced the ePortfolio beyond the programmatic requirements, posting additional information on their personal backgrounds, classes taken, views on service, and other co-curricular experiences. The other half addressed the weekly postings but did not go beyond what was required. However, it is important to note that during the 8-week summer program, we focused on developing learning ePortfolios, which meant the websites were not intended to be shared with anyone outside of the program. During the fall semester, we offered a workshop on transitioning their websites into career (or public) ePortfolios. We expect that they will expand their Wix websites to include more web pages and artifacts going forward.

Enhancements to the ePortfolio Program Going Forward

Opportunities to Collaborate

Perhaps the most significant outcomes from this study derived from the thoughtful suggestions offered by our students during the focus groups on how to make modifications to the reflective process going forward. To begin with, they would have liked more occasions to collaborate with peers on their ePortfolio reflections. During the program, the students had the opportunity to share the links of their unpublished websites with one another, but there was no assignment or requirement to do so. Supporting the recommendations made by Zhang et al. (2007), the students would have also liked to be separated into small groups to discuss their weekly reflections or had an assignment that entailed group reflective postings.

Reflect Using Various Mediums and Prompts

In addition, they suggested either being encouraged or required to post in varied ways throughout the program. They would have liked to have had more mediums for reflection and felt the variety would enhance the authenticity of the postings. In addition to written comments, this might include vlogs, photos with captions, slide presentations, videos, and other ways of expressing thoughts and ideas.

The students also asked that the prompts change each week. They suggested that some questions remain constant, such as what was fulfilling this week and what was challenging, but that other prompts should vary to encourage creativity and deeper introspection “I know the questions are meant to be as a guide, and for the most part they are, but sometimes like I can feel a little like restricted by like having to answer all of them” (Participant 8, Focus Group 2). Students recommended questions that solicited something funny or remarkable that occurred, so they would be encouraged to approach the prompts with more novelty, or perhaps ask a question that makes them think differently about an issue. Another student suggested bulleted the prompts rather than numbering the questions (Participant 4, Focus Group 3). Bulleted prompts might change the order or the approach of how students respond.
For the present study, we kept the prompts the same for the entire program to better assess the ways in which the students utilized their websites weekly. However, now that we are more confident that ePortfolios are a sound tool for reflection for our program, we can experiment with varied ways for students to post and collaborate going forward. For next year’s program, we plan to incorporate all the students’ suggestions and are grateful for their feedback, which will likely enhance the reflective process.

Conclusion

For this research study, we explored the development of an ePortfolio program designed to promote reflection and engaged learning for our participants in a summer program. We also assessed if ePortfolios could be used to observe and measure the students’ learning through the reflections in their websites. For the summer internship program studied, ePortfolios proved to be an ideal medium to achieve these objectives. The students appreciated reflecting on their experiences each week, and the ePortfolios were easy to access and utilize for assessing student learning. Going forward, the curriculum and assignments for the program will be more collaborative and flexible for students and the prompts will vary slightly from week to week to enhance the reflective practice.

Although our university campuses are still working towards returning to collegiate life pre-pandemic, the changes and disruptions we have endured present opportunities for us to rethink how we educate and inspire our students. As they set out to make a difference in their academic fields and in the world—through research, internships, and study abroad experiences—we should consistently assess if our programs are achieving their stated goals. Our students (and admittedly all of us) have changed a lot in the past few years. If the outcomes of our co-curricular programs are not meeting our expectations, should the execution of the goals or the goals themselves be changed? If we anticipate that students will learn to reflect, think critically, and learn more about themselves and others through participating in our co-curricular activities, are our curricula, resources, and assessment tools appropriate to evaluate these outcomes? Using ePortfolios can help educators answer these critical questions and many more, presenting innovative options for engagement and assessment going forward.

References


programs, high-impact practices, and experiential learning opportunities in higher education.

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Appendix A
Weekly ePortfolio Prompt Questions

1. What was the most fulfilling task you completed this week and why?
2. What was the most challenging issue you encountered this week and why?
3. How have these occurrences impacted your summer service experience?
4. Has your perspective on your service experience changed? If so, how?
5. How is this experience shaping or informing your overall views on service?

Appendix B
Focus Group Questions

Focus Group – Session One

1. Do you have prior experience building a website?
2. What are your expectations for building and using an ePortfolio this summer?
3. What do you anticipate will be challenging?
4. What do you anticipate will be valuable or beneficial?
5. How do you plan to use your ePortfolio during the service program?
6. How do you plan to use your ePortfolio after the service program?

Focus Group – Session Two

1. How are you using your ePortfolio?
2. What are you uploading on your website in addition to what you have shared with us each week?
3. What are the benefits of building an ePortfolio?
4. What are the drawbacks of using an ePortfolio?
5. Thus far is this a useful tool? If so, how is it useful? If not, why?

Focus Group – Session Three

1. Overall, how would you assess your experience in building an ePortfolio?
2. What are the benefits of building an ePortfolio?
3. What are the drawbacks of using an ePortfolio?
4. What did you learn about yourself through developing an ePortfolio?
5. What did you learn about your service experience through developing an ePortfolio?
6. What is the value of reflection?
7. How was using a digital platform more or less beneficial than in-print journal writing or vlogging?
8. Would you recommend other students build a website while conducting service? Why or why not?
9. Do you recommend we continue using ePortfolios for this program?
10. What modifications should be made to the ePortfolio program?
ePortfolio: Advancing Human Services Education through Technology

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Educators across the country utilize technology in innovative ways to bridge the gap between education and practice. This emphasis is prevalent within helping professions that rely heavily on field placements for further development of students. Digital pedagogy can be used by human services educators to bridge the gap between education and human services practice. In this study, we utilized the Catalyst Framework (Eynon & Gambino, 2017) to delineate student perceptions of their experiences with ePortfolio, demonstrating how digital pedagogy can support human services education. Through qualitative methods, ePortfolios were explored with undergraduate human services students to capture students’ experiences and skill development. Three core themes emerged from the findings, suggesting that ePortfolio provides a necessary challenge in the education of human services students. The challenges students reported were meaningful, as ePortfolio increased ownership over their education. Students cultivated a digital space for creativity and authenticity in their education. Implications for human services education are proposed based on the research findings.

Most traditional college students currently enrolled in American universities can be classified as millennials. Millennials, or “generation next,” have spent more time using technology than any previous generation (Au-Yong-Oliveira et al., 2018; Jacobsen & Forste, 2011). The human services sector is increasingly advancing the use of technology in the field by allowing more professionals to work remotely and embracing the use of electronic records (Littlefield et al., 2015; Lopez-Crespo et al., 2022). Current research highlights the inclusion of digital pedagogy in human services education (Larsen et al., 2011; Littlefield et al., 2015; Lopez-Crespo et al., 2022; Schelbe et al., 2014); however, there is a gap in the literature regarding the advantages of digital pedagogy. This study sought to fill one such gap by exploring the experiences of undergraduate human services students who have experience utilizing digital teaching platforms in an upper-level (i.e., junior and senior level) human services course at a large, southern university. The purpose of this study was to explore the usefulness of ePortfolio as a form of digital pedagogy in conjunction with human services education. The research question that guided this qualitative inquiry is: How do upper-class undergraduate human services students define their experiences with ePortfolio?

**Literature Review**

Akyildiz (2019) explained that as our social context evolves, so must the ways in which post-secondary education is provided. Current literature posits today’s adult learners benefit from being active agents in their learning, which can be achieved through the integration of technology into heutagogical practices (Akyildiz, 2019; Blaschke, 2019; Wozniak, 2020). Through heutagogy, adult learners can engage in self-directed learning, allowing them to better develop both competence and capabilities in preparation for professional life. Research has explained that integrating technology into this active form of learning lays the foundation for lifelong learning (Blaschke, 2019; Wozniak, 2020). Using technology, such as ePortfolios, educators are better poised to pivot from pedagogy to heutagogy.

Littlefield et al. (2015) and Harvey et al. (2017) asserted that traditional college students are entering college after utilizing technology for most of their lives. These students have been given numerous names related to their technology use, including millennials, digital natives, and the next generation (Akçayır et al., 2016). Many traditional college students utilize technology daily as a way of learning and engaging with the world, making it advantageous for human services educators to integrate technology into their teaching praxis (Akçayır et al., 2016; Rockinson-Szapkiw & Walker, 2009). Digital pedagogy literature suggests instructors go beyond uploading lectures to an online database and instead incorporate the full integration of lessons and experiences onto a digital platform (Littlefield et al., 2015; Lopez-Crespo et al., 2022). Literature also supports the idea that creating a space for students to practice skills that will be used in the field is vital to the development of their identity as a helper (Desmond & Stahl, 2011). A specific technological tool that can be used to incorporate digital heutagogy into the human services classroom is the ePortfolio, an electronic portfolio of student work. By incorporating the ePortfolio into human services courses, students can create electronic portfolios to practice organizational skills and demonstrate the knowledge they have acquired throughout the course (Littlefield et al., 2015).
ePortfolios can provide opportunities for students to participate in more effective and engaging ways of learning (Akçayır et al., 2016).

**Digital Heutagogy: The ePortfolio**

The utilization of portfolios to document learning is far from a new concept (Lopez-Crespo et al., 2022; Wilson & Albon, 2009). In higher and secondary education, students and teachers have used portfolios to culminate and present what they have learned, while illustrating who they are as professionals (Wilson & Albon, 2009). Historically, a concern regarding the use of traditional portfolios is that learners may view their portfolios as a single project that once presented, is complete (Chang et al., 2014; Fournier & Lane, 2006; Lai et al., 2016; Wilson & Albon, 2009). While the traditional portfolio is complete after the presentation, the ePortfolio has the potential to be continuously developed by the student as they grow, learn, and have new experiences (Lopez-Crespo et al., 2022; Wilson & Albon, 2009). “ePortfolios are used to systematically collect and present students’ learning goals, learning processes, reflections, artifacts, and learning outcomes, etc.” (Chang et al., 2013, p. 213; also see Pennazio & Fedeli, 2021).

ePortfolios create a space for students to apply both their lived experiences and learned knowledge. Using the flexible ePortfolio interface, human services educators can arrange each module to fit the needs of the coursework and be easily accessed by students (Banachowski et al., 2013; Drabik et al., 2017). Chang et al. (2014) discovered that students had considerably elevated academic growth with the use of ePortfolios in comparison to the control group which did not have access to this resource. In further support of the use of ePortfolios, Fournier and Lane (2006) found that ePortfolios contributed to a greater connection between student learning and additional artifacts, such as the incorporation of a larger array of visual aids to assist in describing their experiences and learning. Furthermore, traditional portfolios utilize artifacts such as notebooks and other devices which may become cumbersome, while ePortfolio allows for the incorporation of a greater span of resources due to digital housing of the materials (Fournier & Lane, 2006; Lopez-Crespo et al., 2022).

Through the purposeful use of the ePortfolio, human services educators can add an additional teaching tool to their pedagogy to enhance student learning. We designed this study to explore the experiences of human services students with ePortfolio as they worked to complete a program evaluation of a human services agency and display their evaluation results. As outlined in the syllabus, students were required to create and utilize an ePortfolio to complete the course, in which they showcased their new knowledge and experiences gained through the course.

This study, despite its small sample size, speaks to the importance of integrating ePortfolios into human services education and how ePortfolio can be used as a catalyst for student learning.

**Theoretical Foundation**

The Catalyst Framework is an evidence-based approach to ePortfolio pedagogy that accounts for the complexities found in ePortfolio implementation (Eynon & Gambino, 2017). This framework is multi-layer, linking pedagogy with broader institutional practices (see Appendix A). Eynon and Gambino (2017) stated, “The Catalyst Framework addresses the multiple facets of ePortfolio practice and the ways they connect to build a high impact ePortfolio initiative” (p. 28). This framework consists of a learning core that includes students, faculty, programs, majors, campus culture, and structure, and has five interlocking sectors: (a) outcomes (b) assessment, (c) pedagogy, (d) professional development, (e) technology, and (f) scaling up (Eynon & Gambino, 2017). Researchers have found that these five sectors reflect core learning levels present in high-impact ePortfolio practices. In addition, this framework has three overarching design principles: inquiry, integration, and reflection (Eynon & Gambino, 2017). Research suggests that ineffective implementation of these design principles is likely to exist in one or more of the five interlocking sectors in ePortfolio pedagogy if this framework is not employed. Exploring the tenets of this framework is important in understanding the outcomes of this current study.

The core of this framework posits that effective integration of ePortfolio involves at least three levels of campus life and learning (Eynon & Gambino, 2017; Lopez-Crespo et al., 2022). Those three levels are identified as: (1) students and faculty, (2) programs and majors, and (3) campus culture and structure (Eynon & Gambino, 2017). At the first level, the faculty involved shape student core learning experiences. At the second level, the organizational units around which campus life and learning are generally organized are represented. At the third level, the broader campus-wide policies are represented including conditions that shape educational practices such as mission, culture, and stakeholders (Eynon & Gambino, 2017). The core of this framework informs the current study and is important in understanding why additional ePortfolio research is needed.

The three design principles of this framework are overarching concepts that demonstrate effective ePortfolio initiatives. The inquiry is the first of these design principles which accounts for students taking responsibility for their learning. Eynon and Gambino (2017) explained that by using ePortfolios, students are provided an opportunity to showcase the “products of their inquiries” (p. 33), while engaging them in a deeper examination of their own learning and evolving
identities. Reflection is the second overarching concept and can be built upon inquiry or stand-alone. As explained by Eynon and Gambino (2017) and Pitts and Ruggirello (2012), reflection allows students to form connections between their experiences, thereby fostering the continuation of learning and empowering meaning-making. In addition, the inclusion of reflectivity fosters the use of ePortfolios as an engaging process by which students link academic knowledge and life experiences to their personal growth and development. Integration is the third design principle and specifically addresses the context of ePortfolio and student learning. Eynon and Gambino (2017) explained that, through integrative learning, connections are formed and knowledge is transferred across courses and semesters, thereby linking different forms of knowledge attainment and lived experiences. In utilizing the ePortfolio, students use integrative pedagogy to explore the relationship between the classroom and their lives and to develop a new identity as a learner. Researchers posit that these three design principles are in every interlocking sector of the Catalyst Framework.

The university setting in which this study takes place has adopted ePortfolio as a high-impact practice university-wide, supporting the university’s strategic plan and mission in adequately preparing students for the workforce. In addition, university culture fosters this by providing resources to support faculty development and encourage the use of ePortfolio within the classroom. Students and faculty are trained in the development and implementation of ePortfolio. Researchers involved in the current study were trained as a part of this initiative and used the Catalyst Framework as the theoretical underpinning in designing the ePortfolio activity explored in the current study (Eynon & Gambino, 2017).

Method

Qualitative research seeks to describe an individual’s experiences by providing thick descriptions, participants’ perspectives, and depth while in naturalistic settings (Creswell & Creswell, 2018; Creswell & Poth, 2018; Hays & Singh, 2012). Using qualitative methods, we worked to understand the experiences of undergraduate students to inform teaching practices and enhance the learning environment for students and ultimately improve students’ learning outcomes. We used a phenomenological approach to gain a deeper understanding of participants’ lived experiences using ePortfolio as an educational tool. Using this phenomenological approach, we began the study with an unbiased exploration of the use of ePortfolio. Peer debriefing and triangulation were used as trustworthiness strategies throughout this inquiry (Creswell & Creswell, 2018; Creswell & Poth, 2018; Hays & Singh, 2012; Patton, 2014).

Utilizing qualitative research protocols, this study explores the experiences of upper-level (junior and senior level) human services students enrolled in a program evaluation course at a large, southern university in the United States. Over the course of the semester, the participants were expected to complete a program evaluation through the utilization of a regional human services agency. The students were assigned nine individual tasks that were deemed critical aspects of program evaluation. The task was as follows:

- select an agency,
- develop an evaluation question,
- write an annotated bibliography of relevant research articles,
- create a mind map connecting themes found in the research,
- develop a research plan,
- develop a protocol to be used to collect data,
- create a timeline outlining your evaluation plan,
- report research findings, and
- construct a letter reflecting on your experience.

The final assignment required the development of a showcase portfolio through a WordPress ePortfolio template (Sparkman-Key, 2018) specifically designed for the program evaluation course (see Appendix A).

Students were instructed to upload their original ePortfolio along with an edited version, incorporating feedback from instructors and peers. This allowed us to establish a baseline and account for students’ writing growth over the course of the semester. The ePortfolio was used to display each task in a cohesive and creative way while documenting the ways in which students used instructor feedback to improve upon tasks throughout the course. Students were asked to include their initial task, a paragraph on what changes were made to the task, and the updated task in the portfolio. Participants were also asked to include a professional introduction in their ePortfolio that could be viewed by a future employer, a copy of a current résumé, and a closing statement. Participants’ ePortfolios were evaluated for accuracy, creativity, attractiveness, and technical writing skills.

Participants

Participants were selected using purposeful sampling methods (Merriam & Grenier, 2019; Palinkas et al., 2015; Patton, 2014). We chose purposeful sampling as it would allow for a more representative sample of the undergraduate human services students at this university. This sampling method was also selected because of our goal of data saturation. All participants met preset criteria by declaring a major in human
services, having junior or senior status, enrollment in a program evaluation course, and enrollment in the section of the course that utilized ePortfolio. There were three sections of the program evaluation course taught during the semester of this study. However, only one section of the course utilized ePortfolio as an assignment. Participants were recruited from the program evaluation course that met the requirements for participation. There were 25 students enrolled and invited from the course to participate in this study. A total of 23 students agreed to participate. To ensure the anonymity of students, participants’ demographic information was not obtained. However, the demographics of the human services students enrolled in the program are highlighted to provide context regarding the population demographics. At the time of data collection, there were 441 full-time and 93 part-time students majoring in human services. Human services majors at this university are predominantly female (89%). The racial makeup of the students at the time of the study consisted of the following: less than 1% Indigenous, 2% Asian, 3% unknown, 9% Latina, 7% two races, 27% White, and 51% Black.

Multiple steps were taken to ensure ethical practice throughout this study. To maintain confidentiality, participants’ reflections and closing statements were taken from portfolios and analyzed in a separate document. Participants’ names were also changed to pseudonyms to protect participant confidentiality (Corden & Sainsbury, 2006; Pickering & Kara, 2017). We also informed participants that their participation was voluntary and provided them with information detailing the confidential nature of the research. Participants were given the option to end their participation in this study at any time without penalty. As this was a class, all students were expected to complete the assignments included in the ePortfolio. To ensure ethical practice, however, all data collection was delayed until after the semester ended and grades were submitted. This allowed students to participate freely without the possibility of having their grades impacted because of not participating. Additionally, we pulled all data not affiliated with the course to increase the trustworthiness of the study and to prevent the coercion of students.

Data Collection

For this study, data were collected using written materials (see Appendix B). Written materials can be used to help understand participants’ lived experiences, especially when gathering the information might prove difficult (Hays & Singh, 2012; Creswell & Poth, 2018). We chose this method, as it allowed for an unobtrusive observation which encouraged students to be honest about their experience without the fear of retaliation. The use of written materials was also a good fit for our study, as we wanted to highlight the participants’ voices and experiences throughout (see Appendix B). All participants were required to reflect on their experiences in the program evaluation course and use the ePortfolio as a learning tool over the course of the semester. Students also provided closing statements and reflection letters to allow us to better examine the students’ experiences.

Data Analysis

Data analysis for this study utilized a phenomenological methodology guided by Willis’s (2004) modification of Moustakas’s (1994) model. Willis (2004) employed a deeper emphasis on the lived experiences of participants, which is vital to this study. To gain a deeper understanding of participants’ experiences with ePortfolio, personal reflections were captured for data analysis (as cited in Grbich, 2013). Student reflections were provided to the members of the research team for coding. We ensured the same coding method was followed by each coder. Following the outline of consensus coding by Creswell and Poth (2018), the research team was able to increase trustworthiness and inter-coding reliability. Consensus coding requires researchers to code the data individually, then meet to discuss and arrive at an agreed-upon operational definition for each code (Hays & Singh, 2012). Using consensus coding, the research team agreed on three codes that highlight the experiences of the participants.

Findings

We used an open coding analysis, producing the following themes: (a) demanding educational tool, (b) encourages creativity and critical thinking, and (c) increased ownership of education. These themes emerged through the descriptive narratives of participants at the culmination of the coursework.

Demanding Education Tool

Engaging with any new pedagogical tool can be challenging for any learner. Post-secondary education is structured to challenge the learner to cultivate critical thinking opportunities. The demanding educational tool theme emerged as participants engaged in this process. Participants reported a degree of difficulty in developing the ePortfolio as a part of their course assessment:

Technology is something that is such a big part of our lives and even though I can see the benefits of having an ePortfolio the overall experience of putting this together was not a great experience. Even though I
did have my struggles with it I did learn a lot from it. I enjoyed the task themselves and going through those processes putting them all together within this program was difficult. (Participant 1)

Participants viewed the ePortfolio as a difficult activity and displayed a wide range of technological awareness. Participant 12 indicated the following about the difficulty of this experience: “At first, I struggled to develop this portfolio because I was unfamiliar with how to navigate around.” Despite the challenge, students grew and learned. Participant 15 stated, “It has been a great experience to learn about program evaluations and develop this ePortfolio. There were few challenges but from those challenges, I had learned, and those experiences will benefit me in my future career.” Similarly, Participant 5 stated “In conclusion, this portfolio has been a wonderful experience of growth. I have learned a lot about myself as a writer. This assignment has taught me how to create a portfolio and the reason why a portfolio is needed.” Lastly, Participant 4 illustrated this code, stating, “While developing this portfolio, I had to face several problems because for me it was a very new digital report. But after starting to make this portfolio, I was feeling very excited,” which accentuates the growth of students using ePortfolio. The participants described their initial hesitation with using ePortfolio while highlighting their growth over the semester.

Developing this portfolio has been a fun and difficult challenge. I’ve never created an online portfolio before, so it was a good learning experience. I’ve made paper portfolios before, so I knew the general requirements for a portfolio. Having a premade template also made it that much easier as well so I didn’t have to also learn how to format a web page on top of the assignment. (Participant 8)

Overall, despite their initial difficulty, participants expressed a greater appreciation of ePortfolio at the culmination of the semester.

**Encourages Creativity and Critical Thinking**

Encourages creativity and critical thinking emerged as a theme as participants highlighted their ability to infuse their personalities into the ePortfolio. Participants indicated having a joyful and meaningful experience with a deeper appreciation of the ePortfolio. Participant 2 spoke highly of her learning experience: “I am very proud of the work I did within this portfolio, and I enjoyed creating this showcase of my work done in HMSV 440W.” Similarly, Participant 20 described her ability to complete the task: “I learned more when planning this evaluation than I did conducting it. I was challenged and forced to think critically when completing tasks.” Participant 4 rounded out this theme development by expressing pride in the final product:

Initially it seemed very overwhelming with the number of tasks I had to do. However, now that I am at the end of the road, I can say I’m proud of the work that I have done and can say I have learned a lot.

The versatility of ePortfolio allowed students to personalize their projects while also meeting requirements presented in the course rubric.

**Increased Ownership of Education**

Increased ownership of education, the third and final theme, evolved through participants’ articulation of feeling a sense of pride in their work upon completion of the portfolio. The customizability of ePortfolio increases the sense of ownership which leads to increased learning, as seen with Participant 10:

Although putting together this portfolio was somewhat difficult because of the user interface, I enjoyed looking back on my old work and uploading it to this site. It has been a pleasurable experience overall and I can see the benefits of using an ePortfolio in the future. It’s professional, streamlined, and easy to look at.

Students were able to manipulate information using pre-set templates in the ePortfolio software. Participant 21 described the significance of ePortfolio’s flexibility: “I thoroughly enjoyed creating this portfolio because I was able to display my progress on each task outlined in the course. . . . I was able to grasp the improvements I made in this course with my newly obtained skills.” Similarly, Participant 10 stated, “Although putting together this portfolio was somewhat difficult because of the user interface, I enjoyed looking back on my old work and uploading it to this site. It has been a pleasurable experience overall” regarding the significance of the project. The flexibility allowed by the ePortfolio framework created a sense of pride and accomplishment for students. Participant 13 stated, “Personally, this portfolio has enlightened me along the way as I completed each task and made final corrections before publishing my portfolio,” which aligns with the sentiments of pride and accomplishment. Additionally, Participant 4 depicted this theme with the following:

This portfolio and course have been an interesting experience. Initially it seemed very overwhelming
with the number of tasks I had to do. However, now that I am at the end of the road, I can say I’m proud of the work that I have done and can say I have learned a lot. I now know how relevant and important evaluations are to any program or profession and will use this knowledge going forward in my career.

These culminating remarks depict the third and final theme which emphasizes the increased ownership felt by students while using ePortfolio. In the following section, the authors will discuss how these findings can be incorporated into human services education.

Outliers

Participants expressed how demanding both the course and the use of ePortfolios were. Despite the demand, most participants found satisfaction in the activity as outlined above. There was one outlier comment that indicated dissatisfaction with ePortfolio. Participant 1 stated, “the overall experience of putting this together was not a great experience.” Technology can often be challenging; in some cases, students may find the entire experience too difficult to engage.

Discussion

Participants in this study utilized ePortfolio to illustrate their understanding of program evaluation course objectives and to reflect on their experiences. The experiences of the participants align with the theoretical foundation of this study which views ePortfolio as a catalyst for learning (Eynon & Gambino, 2017; Lin et al. 2013). The three design principles of the Catalyst for Learning Framework are inquiry, reflection, and integration (Eynon & Gambino, 2017). Inquiry, reflection, and integration are closely related to the findings of the present study. The results of this study determined that students found ePortfolios to be a demanding yet purposeful form of digital pedagogy that allowed them to be challenged while simultaneously encouraging their creativity. Similarly, to Eynon and Gambino (2017), Katz et al. (2014) stressed the value of using digital pedagogy to create meaningful learning as students engage more freely in the learning process.

Students were required to fully engage in their education by learning to design a comprehensive ePortfolio, completing, and incorporating assignments into ePortfolio, and presenting the final product (ePortfolio). Inquiry, one of three design principles of Eynon and Gambino’s (2017) model engages learners through interaction, which was depicted in the first theme: demanding educational tool. According to Eynon and Gambino (2017), inquiry involves “problem-based learning” (p. 33), which directly highlights the experiences of the participants. This course challenged students to grow personally, and in turn professionally, through overcoming difficulties with initial ePortfolio usage.

The second design principle is integration (Eynon & Gambino, 2017). Littlefield et al. (2015) along with Eynon and Gambino (2017) have discussed the significance of integrating technology, instructors, and universities into the education of college students. All of these resources are readily available on most university campuses; however, there is a lack of integration throughout universities and there is a need to continue to bridge this gap. As an educational praxis, educators have evolved past the banker model of education (McAuliffe, 2011; Sharifi et al., 2017). Educators cannot solely deposit information into students; there is a need for purposeful and intentional engagement between students and the course content (Bond et al., 2020; Katz et al., 2014). Participants expressed their appreciation for the opportunity to incorporate creativity into their education with the use of ePortfolio.

The third and final design principle is reflection (Eynon & Gambino, 2017). Reflection highlights making connections and meaning making through the ePortfolio experience (Eynon & Gambino, 2017). Chang et al. (2013) and Lam (2022) highlighted the significance of deliberately identifying activities for the ePortfolio experience. This purposefulness was applied in the creation of this study with key requirements being identified for the course. Reflection aligns with the participants experiencing an increase in ownership of their education while using the ePortfolio software. Participants found value in this experience and thus created a meaningful experience out of the assigned tasks (Eynon & Gambino, 2017; Lin et al. 2013). While ePortfolio can be a useful tool for academia overall, we will now explore the specific implications for the field of human services.

Implications for the Use of Digital Pedagogy in Digital Human Services Education

The findings of our exploratory study suggest that human services educators could incorporate ePortfolio into their human services curriculum as a meaningful way to provide students with an opportunity to engage with technology. ePortfolio challenges students to actively engage with the material and enhance their organizational, written communication, and critical thinking skills. Specifically, ePortfolio could be an asset in courses that include a culminating project to showcase learning. Through learning to develop an ePortfolio, participants were not only able to showcase their learning of the material but also their ability to construct an ePortfolio. In addition, other key aspects of the courses could be captured through ePortfolio development, such
as writing skill development, creativity, and students’ ability to reflect on how course concepts relate to the profession. ePortfolio would also serve as beneficial in intensive writing courses with a focus on developing student writing for the field of practice, capstone courses, and service-learning focused courses.

Human services education should mirror the direction of the profession with the use of technology. Eynon and Gambino (2017) indicated that “pedagogy should drive technology,” and the present study reinforces this point. Students had the opportunity to engage with technology in a way that pushed them beyond their comfort zones. This is significant as the profession is experiencing a period of growth with the implementation of electronic records and remote working environments. Ludwick and Doucette (2009) and Tsai et al. (2019) stated that the integration of electronic records is a vital tool in decreasing medical disparity across the world. Additionally, electronic records have also supported the increased usage of telecommuting within the workforce. The ability to access electronic records allows for a greater ability to serve the community. Therefore, students require exposure to the integration of technology within the profession to enter the field. Overall, the participants gained a greater appreciation for digital pedagogy in human services through this course design. This experience will increase their flexibility within the workplace and ensure their marketability in an evolving profession.

Limitations

Despite the significance of the findings in this study, there are limitations. The first limitation is the sample size. Qualitative research often includes a smaller sample size; however, as a phenomenological approach was utilized, it would be beneficial to increase the sample size as much as possible in future studies (Creswell & Poth, 2018; Hays & Singh, 2012; Kvale, 1996). There is a need for the replication of this study at various universities and colleges throughout the country with larger sample sizes to increase the rigor and impact factor of the findings. Another limitation is the data collection method. A survey or questionnaire for data collection could build upon the current findings. Tools such as these would produce more specific findings on the utility of ePortfolio and on the specific skills, which may be learned throughout the process. Only human services students were included in this study, thereby limiting the generalizability of these findings to other fields. The results suggest that the use of ePortfolio fosters skill development in an array of areas, such as creativity, technology literacy, and creative writing. As these skills are prevalent in other fields of study, it is likely that similar results may be found in studies inclusive of other fields. Further research into the utility of ePortfolio in other fields of study is needed, however. A final limitation is the lack of demographic information collected on the participants, which was omitted to maintain anonymity. Specific demographics of participants would be helpful in future research to determine if experiences differ based on demographics.

Conclusion

The utilization of technology that provides students with a platform to showcase and reflect on educational activities is an important aspect of the development of competent human services professionals. This study highlights key benefits of the use of ePortfolio to benefit students in their continued development as human services professionals. In the field of human services, the use of technology is salient, as demonstrated through the common use of electronic medical records, platforms that store and organize case notes, and electronic case files. The use of ePortfolio within the classroom can aid in preparing students to utilize these electronic tools in the field by exposing them to technology prior to entering the field, providing experience with archiving data, showcasing experiences, reflection, and writing development. This study provides evidence of the numerous skills that can be gained and fostered using ePortfolio. The findings of this study demonstrate the ways in which ePortfolio challenges students to take ownership of their education while fostering creativity and critical thinking skills. These results provide insight into the evolution of post-secondary education from pedagogy to heutagogy in fostering self-directed learning.

References


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Appendix A
The WordPress Eportfolio Template Designed for the Program Evaluation Course

Cover Page:

Brief Introduction to the Project:
Describe Self, Career Goals, and Ambitions:

About Me

Include a picture of yourself and a discussion of yourself include your career goals and ambitions.

The Resume Creation Template:

Resume

Include a current resume and remove any personal contact information such as addresses or phone numbers.
Tasks Template for Reflective Letter:


Findings
Role: Student
Audience: Professor
Format: Letter
Task: Reflection

ePortfolio Reflective Letter Assignment

In this assignment, you will look back on your experiences and work within the course, discussing what you have learned and how. Your Reflective Cover Letter is a source-based writing; consider using hyperlinks to directly link to the artifacts/evidence from within your cover letter. Also, consider addressing a spectrum of classroom activities as evidence of your learning; such as in-class writing, blogs, class discussion, emails, essays (including process work, such as drafts, homework, peer reviews, etc.), presentations, and editing.

Content

Closing Discussion on Overall Views of Developing ePortfolio:

Closing

Wrap up your portfolio with a closing that discusses your overall views of developing this portfolio and experience putting it together.
Appendix B

ePortfolio Reflective Letter Assignment Instructions

In this assignment, you will look back on your experiences and work within the course, discussing what you have learned and how. Your Reflective Cover Letter is a source-based writing; consider using hyperlinks to directly link to the artifact/evidence from within your cover letter. Also consider addressing a spectrum of classroom activities as evidence of your learning, such as: in-class writing, blogs, class discussion, emails, essays (including process work, such as drafts, homework, peer reviews, etc.), presentations, and editing.

Content

1. Persuade, both your instructor and the institution, that your work meets the objectives for this course. Discuss your learning experiences in this course, including any details that are unique to your own learning process, especially as represented by the contents of your ePortfolio. The course objectives are as follows:

   - To effectively conduct a program evaluation.
   - To understand the role of research in the evaluation process.
   - To understand the use of evaluation in program planning.
   - Recognize the components of an evaluation i.e., research methods, agency description, understanding population, stakeholders, and research.
   - Understand similarities differences in the evaluator’s role and stakeholder’s role in the evaluation process.
   - Learn to recognize stakeholders.
   - Utilize stakeholders in the evaluation process.
   - Understand the role of evaluation in the field of Human Services.

2. Answer the following questions, using links or excerpts (visual, audio, or written) from your ePortfolio to illustrate your answers:

   - Where is your learning demonstrated in the course?
   - What areas did you feel you were most successful, or improved the most?
   - How do you see this course’s content intersecting with your field or career?
   - Have you been able to apply concepts you have learned in the course to what you do at work or in other courses?
   - How, when where and why you might use this information or skill in the future?