The Journey of Designing and Implementing an Institution-Wide e-Leadership Portfolio

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This case study analyzes a 10-year process of designing, implementing, and continuously improving an e-Leadership portfolio required of all undergraduate students. The case study documents the evolution of the e-Leadership portfolio, from originally focusing on leadership learning outcomes through its expansion to include general education essential learning outcomes and outcomes generated through a wide array of higher education high impact practices. The case study describes learning lessons gained through the design and implementation process, including the importance of integrating ePortfolios in institutional strategic planning and assessment processes, expanding collaborations between academic and student affairs and strengthening the use of ePortfolio assessment results.

ePortfolios are an increasingly utilized higher education high impact practice for fostering student learning, a powerful technique in demonstrating student learning growth, and a mechanism for addressing accountability demands (Amaya et al., 2013; Association of American Colleges and Universities, 2021; Hubert, 2016). The research literature highlights the rapid expansion of ePortfolio use in higher education institutions. As the number of institutions and students engaged in constructing ePortfolios continues to rise at an exponential rate, it is essential to examine design and implementation case studies to gain insight on effective ePortfolio strategies.

The growth of ePortfolios as a reflective learning and assessment technique has been well-documented within academic, general education, and co-curricular programs. Research studies continue to provide evidence of their effectiveness in fostering deeper learning, reflection, and ownership of the learning process, leading the Association of American Colleges and Universities (AAC&U) to name ePortfolios as the eleventh high-impact practice (HIP) in higher education (Watson et al., 2016). The continued expansion and widespread use necessitate a need for deeper study of institution-wide ePortfolio initiatives that are designed to foster student learning across multiple learning contexts.

Context

In Fall 2009, a public comprehensive master's degree granting institution in the southeast United States embarked upon designing and implementing a new 4-year, e-Leadership Portfolio for undergraduate students in all academic majors. In this study, I analyze the process of designing, implementing, and continuously improving an e-Leadership Portfolio required of all undergraduate students over a 10-year time period. Students enrolled within this institution were primarily traditional-aged, full-time students in a residential college setting with academic majors ranging from business and engineering to education and disciplines within the liberal arts.

The e-Leadership Portfolio initiative was driven by the desire to develop an assessment strategy for measuring both individual and aggregate student leadership skills growth over time. The institution was also highly focused on delivering this ePortfolio in both academic leadership courses and experiential leadership experiences through a collaborative partnership of faculty and student affairs professionals. The e-Leadership Portfolio was originally conceptualized as a method for assessing student leadership growth, as student learning outcomes and embedded ePortfolio assignments were originally intended to be built into freshmen and sophomore leadership courses as well as junior and senior leadership experiential learning environments. However, after the first year of implementation, the e-Leadership Portfolio quickly expanded to be embedded within the general education program, academic majors, and a wide array of higher education HIPs.

Literature Review

A review of the research literature confirms the growth of ePortfolios as a powerful driver of student learning and assessment technique used within higher education institutions. Research studies also assert that ePortfolios are highly effective in fostering deep learning, reflection, and ownership of the learning process (Amaya et al., 2013). In addition to ePortfolios being added by AAC&U as the eleventh higher education high-impact practice (HIP) in 2017, there is a growing body of research that suggests ePortfolios are a "meta-HIP" due to their ability to foster strong connections and strengthen the student learning in other HIPs (Hubert et al., 2015; Kuh et al., 2018; Watson et al., 2016).

Effective ePortfolios integrate many aspects of HIPs, including reflection, demonstration of learning, and growth through feedback, as well as foster great synergies with other HIPs including internships, study abroad experiences, and first-year experience courses (Hubert et al., 2015; Kuh et al., 2018). Furthermore, ePortfolios empower learning through student ownership, the ability to make learning growth visible, assessing longitudinal growth and development over time, and in deepening learning through reflection (Eynon & Gambino, 2017; Kuh et al., 2018). However, a review of the literature highlights that, although ePortfolio assessment is becoming more common, student learning is enhanced and instructor attitudes toward assessment have improved, there is still research needed on how assessment data from ePortfolios can be used to improve the educational environment (Crowel & Calamidas, 2016).

In addition to fostering deeper learning, studies by Klampfer and Köhler (2013) and Shroff et al. (2013) have suggested that ePortfolios can also help foster engagement in the learning process itself. Klampfer and Kohler (2013) and Shroff et al.'s (2013) research provided valuable insight about student learning, attitudes, benefits, motivation, and acceptance of ePortfolio technology. The studies showcased the strong role ePortfolios can play in generating feelings of value for the learning processes itself, being in control, and taking responsibility for one's own learning processes. The studies indicated that ePortfolios were extremely powerful vehicles for fostering ownership in the learning process (Klampfer & Kohler, 2013; Shroff et al., 2013). Student engagement with and appreciation of the role of the ePortfolio in their learning is highly dependent upon how faculty and institutions integrate ePortfolio practice within the learning environment (Hubert, 2016). ePortfolios provide a powerful tool for collectively viewing student learning growth, which can foster a shared sense of responsibility for curricular outcomes (Hubert, 2016). Several research studies have examined the use of ePortfolio assessment data to enhance student learning.

Research by Kertesz (2016) described how ePortfolios provided evidenced-based competency and those important conditions that must be established for ePortfolios to be successful. Kertesz (2016) also described the increasing regulatory environment and the role of ePortfolios in helping to address expectations emerging from new regulatory requirements. Ring et al. (2016) assessed faculty development strategies that support the adoption and utilization of ePortfolios. Their findings suggest that use of ePortfolios and engagement in assessment activities fostered a continuous improvement culture that encouraged excellence in the classroom.

Many ePortfolio initiatives leverage AAC&U's (2009) VALUE rubrics in their assessment of student learning and expansion of a culture encouraging continuous improvement. Research on the AAC&U VALUE rubrics provides strong evidence of their effectiveness in assessing student learning (McConnell et al., 2019). Moreover, VALUE rubric research has indicated high reliability and validity with small standard deviations and low variation among faculty scorers (Finley, 2012; McConnell et al., 2019; McConnell & Rhodes, 2017). In addition, Baris and Tosun (2013) described dialogue in the educational community over recent years about the use of ePortfolios to assess student learning. Much of the existing literature has concentrated on attitudes and motivation associated with ePortfolios. An experimental design was used, placing students into experimental and control groups. The assessment scores were much higher for students who used ePortfolios to demonstrate their learning. In addition, a research study by Ada et al. (2016) provided a solid discussion of the perceptions held by higher education faculty about the impact of ePortfolios. The study indicated positive attitudes toward ePortfolios and made recommendations for professional development training to strengthen the use of ePortfolios for enhancing learning.

Eynon and Gambino (2018) provided a compelling case for the power of ePortfolios as a deeper learning catalyst. For students and higher education institutions to fully experience the power of this catalyst for fostering deep learning, ePortfolios must be taken to scale at the institutional level (Eynon & Gambino, 2018). Eynon and Gambino's (2017) Catalyst Framework includes a comprehensive approach for institutionalizing ePortfolios to achieve their full potential longitudinally and horizontally across multiple learning contexts, noting that ePortfolios are most effective when they combine faculty learning and organizational learning with student learning. Eynon and Gambino (2017) noted five areas central to achieving this institutional integration, including integrative social pedagogy, professional development, outcomes assessment, technology, and scaling up.

Students who engage with fully integrated ePortfolios in their programs are more likely to be retained and earn higher grades (Eynon & Gambino, 2017). Eynon and Gambino's (2017) research asserts that the principles of inquiry, reflection, and integration are central to fostering deeper student learning through ePortfolios and deepen outcomes assessment initiatives (Finley, 2019). Reflection can deepen our understanding of assessment findings and aid the campus community in seeing student learning more broadly across different contexts and integrating the data to make more powerful continuous improvements (Eynon & Gambino, 2017; Eynon et al., 2014).

Methodology

Given the complexity of designing and implementing an institution-wide ePortfolio for all undergraduate students, this study employs a case study as its methodological approach. This methodology was most advantageous to the research due to the focus of case studies on discovering meaning, examining processes, and gaining in-depth insight into a group or context (Lodico et al., 2006). The case study approach also provides the ability to view the study through a bounded system framework (Lodico et al., 2006) with the use of 10-years of findings within a single institution and a comprehensive 4-year e-Leadership Portfolio. To gain valuable insight into this bounded system, the triangulation of assessment techniques within the e-Leadership Portfolio was particularly important in achieving a more holistic view of the institution's design and implementation process as well as resulting student outcomes. Within the case study structure, three open-ended qualitative interviews were also conducted with a faculty member, student affairs professional, and an assessment leader who were knowledgeable about the e-Leadership Portfolio development and implementation.

e-Leadership Portfolio Design and Implementation Strategies

In Fall 2009, a public comprehensive master's degree granting institution in the southeast United States designed and implemented a 4-year e-Leadership Portfolio for undergraduate students in all academic majors. At the beginning of the e-Leadership Portfolio design process, a guiding institutional committee was created with representatives from each of the institution's five academic schools, information technology department, and a wide array of student affairs functional areas. The guiding committee made several foundational decisions that impacted the design and implementation process, as well as the portfolio structure that has endured over the past 10 years, including:

- Adoption of Taskstream Learning Achievement Tools (LAT) platform to collect, store, and assess student work since the institution was already utilizing the Taskstream Accountability Management System (AMS). Adoption of an outsourced tool enabled the institution to quickly gain momentum within the ePortfolio implementation.
- Identification of specific learning outcomes that would be assessed through the e-Leadership Portfolio.
- Designation of a course and activity-based design where e-Leadership Portfolio assignments would be required and embedded in specific courses or activities and assessed.
- Creation of a required new student leadership fee that covered a 4-year ePortfolio software subscription for all undergraduate students and faculty.

During the 2009-2010 academic year, the e-Leadership Portfolio launched and was required of all freshmen. All sections of the institution's freshmen experience course included a class session in a computer lab where students registered their ePortfolio software and were trained on the purpose of the e-Leadership portfolio, its embedded requirements for their freshmen year and how to navigate the system and retrieve their assessment results. These sessions included a big picture approach of what an ePortfolio might look like after four years and how it could be used to showcase their work in job search processes. Likewise, presentations for faculty occurred in pre-semester course meetings, which covered the benefits of ePortfolios, a tutorial on navigating the software, and assessing student work within the ePortfolio.

In the initial launch year, the e-Leadership portfolio was originally conceptualized as a method for assessing student leadership growth, as student learning outcomes and embedded ePortfolio assignments were originally built-into freshmen experience courses, freshmen ethical reasoning seminars, and the co-curricular leadership day service-learning activities. Embedded assignments included both written essays and student self-ratings of their learning. Course instructors and service-learning student affairs professionals scored the embedded assignments using common rubrics.

During the following academic year, the e-Leadership Portfolio expanded to include both freshmen and rising sophomores with three additional embedded assignments. At the same time, the institution was revising its general education learning outcomes, curricula, and assessment strategies. As more faculty members and student affairs professionals teaching in the freshmen seminar course and interdisciplinary leadership courses gained experience with the e-Leadership Portfolio, the ePortfolio initiative gained strong advocates throughout the campus learning environment. The advocacy and exposure to student learning via the e-Leadership Portfolio fostered discussion and gained consensus to assess general education learning outcomes via the ePortfolio. Immediately following the revision of the new general education learning outcomes, the institution integrated those learning outcomes within the required e-Leadership Portfolio to foster student learning as well as the collection, scoring, and reporting of student performance data.

As the institution expanded the e-Leadership Portfolio to include assignments from the general education program, the institution's assessment committee made several important decisions that enhanced the design and implementation process, as well as the enduring ePortfolio structure, including:

- Identification of specific learning outcomes that would be assessed through the e-Leadership Portfolio. The four general education learning outcomes embedded within the required e-Leadership Portfolio included written communication, quantitative reasoning, critical thinking, and ethical reasoning skills.
- Designation of common course assignments in the e-Leadership Portfolio for each of the learning outcomes within each undergraduate year. For example, ethical reasoning skills assignments were built within the freshmen ethics seminar, the sophomore leadership seminar, junior co-curricular ethical enrichment experience, and the senior leadership seminar. Written communication assignments and assessments were embedded within freshmen English courses, sophomore literature courses, junior leadership courses, and senior capstone courses.
- Adoption of AAC&U's (2009) VALUE rubrics for the assessment of general education assignments.
- Expansion of co-curricular and academic leadership assignments and assessments.

The e-Leadership Portfolio relies on an established set of direct assessment measures to provide evidence about achievement of learning outcomes. Each year, students must submit papers or other written assignments into their e-Leadership Portfolios that document their achievement of outcomes. These papers, presentations, and projects are judged by an interdisciplinary team of trained faculty using the national AAC&U VALUE rubrics for written communication, ethical reasoning, quantitative reasoning, and critical thinking. The evidence is collected from students documenting their progress on all four outcomes over their college career. Scores using the VALUE rubrics are entered into the e-Leadership Portfolios, providing students with feedback about performance, and providing the institution invaluable data about student progress over time. Student performance data are collected semi-annually and annually from the e-Leadership Portfolio and developed into reports that are shared with academic units. Summary and detailed reports are provided to academic units that provide results—positive and continuous improvement areas—delineated by outcome. Data are reviewed and interpreted at all levels of campus leadership.

Following the success of integrating both leadership and general education program learning experiences and assessments within the e-Leadership Portfolio HIPs were also added. The HIPs included international study abroad programs, undergraduate student research projects, and first-year experience courses, service-learning experiences, and capstone projects. These HIPs were also assessed with AAC&U VALUE rubrics for cultural competence, community engagement, and inquiry and analysis. Many academic units also elected to use the e-Leadership Portfolio in their own academic degree programs and drawing upon freshmen and senior comparative learning outcome data for their enrolled majors.

The use of assessment data to improve students' e-Leadership Portfolio learning experiences were a central focus after initial implementation. Continued professional development opportunities were an important component of these continuous improvement efforts. Calibration exercises were conducted with faculty to ensure high inter-rater reliability. The institution also instituted an annual Assessment Gathering event to share best practices as well as an Assessment Awards program to recognize faculty and staff members engaged in innovative assessment practices. All the initial award recipients used the data gained from the e-Leadership Portfolio in their continuous improvement efforts.

Findings and Recommendations for Practice

There were several valuable learning lessons gained through the institution's design and implementation of the e-Leadership Portfolio. These learning lessons included the importance of integrating ePortfolios in institutional strategic planning and assessment processes, fostering collaboration between academic and student affairs, and use of ePortfolio assessment results. The following sections provide a discussion of each of these key learning lessons.

Integration in Institutional Strategic Planning and Assessment

Higher education institutions can gain valuable synergies and operational efficiencies when internal institutional processes are intentionally and carefully integrated (Hinton, 2012). This is especially the case when institutional processes are as impactful and far-reaching as ePortfolio high impact practices are across diverse college functional areas and as impactful to student learning, institutional strategic planning, and learning outcomes assessment. Commonalities in ePortfolio implementation, institutional strategic planning, and assessment of student learning make this synergy even more powerful. For example, each of these institutional processes focus on a

common purpose of enhancing student success and improving student learning outcomes. To be highly effective, ePortfolio implementation, planning, and assessment of student learning processes also rely upon institution-wide collaboration (Hinton 2012; Suskie 2018). These institutional processes have additional commonalities associated with their implementation, including functioning on multi-year planning horizons, being data-rich and evidence-based, leveraging organizational learning and continuous improvement goals, and requiring broad and consistent campus-wide communication (Hernon 2006; Hornor, 2020; Strike 2017; Suskie 2018).

Linking student learning assessment and strategic planning can be especially powerful to ePortfolio implementation due to the collaborative nature of the work and the criticality associated with enhancing student learning outcomes. ePortfolio implementation can be complex due to its very nature of coordinating the efforts of a broad array of campus functional units that must collaborate to continuously improve student learning outcomes. The intricacies of constructivism and active learning theories also impact the complexity of ePortfolio implementation processes, necessitating both the need for higher education institutions to recognize individual student differences and meet students where they are in the learning process.

Making intentional and thoughtful linkages between ePortfolio implementation, institutional strategic planning, and student learning outcomes assessment can improve all three of these institutional processes. The benefits to ePortfolio implementation are especially impactful, in fostering greater campus-wide collaboration and understanding of both the complexity and importance of ePortfolio use as a high impact practice, gaining trustee-level and senior administration visibility, and appropriation of financial resources. Institutional strategic plans assert powerful statements about institutional missions, values, and overarching priorities. Including ePortfolios prominently within institutional strategic plans is critical in communicating their value and importance. Making the intentional linkage between these processes has four essential steps, including (1) creating a planning architecture that makes systemic linkages and processes transparent, (2) integrating campus planning efforts, (3) prioritizing and funding institutional priorities, and (4) integrating assessment data to strengthen institution-wide ePortfolio collaboration and the culture of continuous improvement (Hornor, 2020).

Academic and Student Affairs Collaborations

e-Leadership Portfolio collaborations between academic and student affairs professionals played an important role in enhancing student learning as well as raising the prominence and visibility of the ePortfolio initiative. As more faculty members and student affairs professionals teaching in the freshmen seminar course and interdisciplinary leadership courses gained experience with the e-Leadership Portfolio, the ePortfolio initiative gained strong advocates from different units on campus. Creating opportunities for these advocates to share their experiences with other faculty and staff was critically important. The advocacy and exposure to student learning from ePortfolio practice fostered discussion of additional ways in which ePortfolios could be used to enhance student learning within the institution. For example, faculty members and career center student affairs professionals who became familiar with the e-Leadership Portfolio from teaching freshmen seminar courses, partnered to embed joint e-Leadership Portfolio assignments within internship courses to engage students in reflection on career readiness that both units used within their annual assessment plans. Another noteworthy collaboration occurred when faculty members teaching service-learning courses for juniors and seniors within academic degree programs partnered with student affairs professionals in the institution's leadership center who administered a required 10-hour service-learning co-curricular activity for all sophomores. A reflective assignment on the service-learning experience was added within the e-Leadership Portfolio assessed by the AAC&U Civic Engagement VALUE rubric, enabling both units to consider the learning growth that occurred between the two service-learning experiences.

It also fostered rich conversations about student learning and assessment data between academic and student affairs professionals. The following quote from a student affairs professional highlights the impact of collaborative efforts with faculty members.

> The e-Leadership Portfolio provided us with an opportunity and shared student learning space to collaborate with faculty members on assessing intercultural competency using AAC&U's intercultural knowledge and competence rubric. The study abroad office and faculty members leading study abroad trips are passionate about learning gained from international travel. Embedding a shared assignment in students' e-portfolio gave both units needed assessment data and led to important conversations on strengthening student learning.

These synergies and opportunities for collaboration were largely discovered over time and resulted from engaging with the e-Leadership Portfolio through an institutional initiative like the freshmen seminar or interdisciplinary leadership program. An important lesson learned by this experience is the value in creating more intentional opportunities where both faculty and student affairs professionals can learn about potential collaboration areas earlier in the implementation process.

The findings from this study suggest several key implications for innovative student affairs practice, including continued expansion of the student affairs role as instructional partners in the classroom and co-curricular experience as well as in ePortfolio initiatives. Consistent with the ACPA and NASPA's (2015) Competency Areas for Student Affairs Educators, student affairs professionals were active partners in the design and implementation of the e-Leadership Portfolio, serving as instructors in many of the first-year experience courses and interdisciplinary leadership seminars where e-Leadership Portfolio assignments were embedded.

Additional focus on integrating the student voice during the design phase would have strengthened the e-Leadership Portfolio implementation process. During the implementation process students provided valuable ideas about terminology used in the ePortfolio software as well as supporting instructional aids for navigating the software. For example, students recommended using visual graphics within the software to ease navigation, particularly in viewing components they used less frequently like their annual learning growth report. Students also requested labeling assignments with their associated courses or co-curricular experiences as well as using terminology they encountered frequently, including the terms "assignment" or "activity" versus "artifact," which was in the delivered software. Having student feedback earlier in the design process would have enhanced the implementation process. An experienced faculty member observed, "Students often peer mentor other students in the construction of ePortfolios, so investing time to empower student ownership is helpful in the implementation process." Seeking feedback and suggestions from students about potential ways to market and message the e-Leadership Portfolio to students while in the design phase would also speed up the implementation process. Gaining feedback and recommendations from student tutors and peer advisors early in the implementation would be advantageous.

Use of ePortfolio Assessment Results

The implementation of an institution-wide e-Leadership Portfolio strengthened the institution's culture of assessment and better integrated the use of learning outcomes and assessment data to improve student learning. The e-Leadership Portfolio provided a shared collaborative space to consider assessment results in a holistic manner across multiple learning contexts. Seeing student learning outcome growth over time was a powerful driver of both faculty and staff buy-in as well as e-Leadership Portfolio momentum. Another influential driver of buy-in was the ability for stakeholders to see linkages in the ePortfolio that would strengthen their current learning outcomes and assessment processes. The importance of shared values is also highlighted by an assessment leader on the project team who stated,

> The e-Leadership Portfolio provides a view of both individual and cohort student learning growth over time. Because the ePortfolio leverages essential learning outcomes for undergraduates, this centralized shared workspace houses assessment data that is important to academic and student affairs units throughout the institution. And prevents units from needing to re-create the wheel and duplicate assessments. These shared values surrounding student learning outcomes being measured provide a powerful foundation for collaboration and a more efficient way of connecting data for improvement.

The use of AAC&U's (2009) VALUE rubrics was a central component in this momentum, enhancing both cross-discipline communications and collaboration. The e-Leadership Portfolio leveraged several AAC&U VALUE rubrics, including written communication, critical thinking, ethical reasoning, quantitative literacy, civic engagement, intercultural knowledge and competence, teamwork, and inquiry and analysis. These student learning outcome domains proved helpful in assessing leadership growth as well as other higher education high impact practices. Embedding these rubrics within courses created a robust dataset of benchmarks for students each year, enabling academic programs and student affairs units to utilize these benchmarks to assess their students' learning growth over time. The cross-disciplinary nature of the AAC&U value rubrics enhanced ePortfolio buy-in and expansion of use.

A key early challenge identified in the design process was stakeholder perceptions of e-Portfolios as exclusively a student learning tool. Showcasing the dual value of ePortfolios as a powerful assessment tool was instrumental in the implementation process. In addition, placing additional emphasis on the cross-use of assessment data in the design phase would have encouraged more early adopters of the software. For example, showcasing how written communication e-Leadership Portfolio assignments could also be leveraged within academic program assessment plans would have been helpful in fostering earlier adoption by more academic units.

Limitations and Future Research

The use of a case study approach to examine the design and implementation of ePortfolios over time lends itself to several potential limitations and recommendations for future research. The study was

conducted at one higher education institution using a case study approach, which may limit the extent to which the results can be generalized to other institutions and types of students. For example, the students enrolled within this institution were primarily traditional-aged, full-time students in a residential college setting. Therefore, the results may not be generalizable to institutions whose students are primarily non-traditional aged or part-time non-residential student populations. Future research studies incorporating multiple institutions and a more diverse sample of students may improve the generalizability of the findings. The utilization of other qualitative or quantitative methodologies may also provide additional lens or perspectives on important factors in the design and implementation of ePortfolios.

Conclusion

ePortfolios are a critically important domain of study as a higher education high impact practice (AAC&U, 2021). Effective assessment of HIPs distinguishes higher education institutions and their high impact practices from other institutions (Finley, 2019). Examination of an institution-wide ePortfolio initiative highlights multiple opportunities for leveraging synergies within a common educational environment. The findings from this case study suggest that integrating e-portfolios in institutional strategic planning and assessment processes, fostering ePortfolio collaboration between academic and student affairs, and expanding the use of ePortfolio assessment results can strengthen and expand the use of ePortfolios within the learning environment.

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