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ePortfolio Assessment as Faculty Development: Gathering Reliable Data and Increasing Faculty Confidence

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An ePortfolio Assessment Institute (AI) structured as a faculty development opportunity was undertaken to increase faculty confidence in teaching and assessing ePortfolios and to collect reliable data about student performance on four learning outcomes associated with an institution-wide ePortfolio initiative. Faculty raters participated in the two-day AI and received more than a day of training to use a summative rubric consistently. Faculty were asked to rate their own confidence in teaching and scoring each of the outcomes before coming to the AI and at the end of the AI. Generalizability-theory was used to estimate rater pair consistency. After establishing that the data were reliable, we analyzed the data to reveal a wide range in performance across ePortfolios. The survey of faculty showed statistically significant improvement in confidence across both teaching and evaluating for all outcomes. The study thus demonstrates that structuring an AI as a professional development activity increases faculty confidence in teaching and assessing outcomes related to ePortfolios. The study also demonstrates that ePortfolio initiatives can be successfully assessed even if commercial platforms that standardize and privilege assessment are not used and the ePortfolios themselves remain in the control of students rather than the institution.

ePortfolios have recently been named by the American Association of Colleges and Universities (AAC&U) as a high-impact practice (HIP) because of the substantial evidence that they have an impact on student learning across a number of domains (Watson, Kuh, Rhodes, Light, & Chen 2016). For example, Buzzetto-More (2010) demonstrated that ePortfolios allow students to synthesize their learning experiences, connect their course work to real world practices, consider what evidence demonstrates their skills and abilities, and compose reflective descriptions that build metacognition. As Watson et al. (2016) point out, however, "the keys to employing ePortfolios as a HIP are effective implementation and integration" (p. 67). Professional development activities that support faculty as they integrate ePortfolios into the curriculum are essential to both implementation and integration (Eynon & Gambino, 2016).

Because the process of creating an ePortfolio can have an impact on students, our public, higher-research activity, land-grant university enrolling a total of 28,000 students in undergraduate, professional, and graduate programs chose ePortfolios as the Quality Enhancement Plan (QEP) for our Southern Association of Colleges and Schools Commission On Colleges (SACSCOC) reaffirmation in 2013. Because we knew the importance of faculty involvement in implementing ePortfolio thinking throughout the curriculum, we designed our ePortfolio Project (hereafter Project) to include significant attention to faculty development and support (Bhika, Francis, & Miller, 2013; Hoekstra & Crocker, 2015) through a Faculty Cohort, essentially creating a Faculty Learning Community (FLC), a structure that has been shown to have a positive impact on student learning (Herman & Crowley, 2014; Jetton, Cancienne, & Greever, 2008; Smith et al., 2008) and on faculty (Cox, 2013; Cox & Richlin, 2004; Nadelson, 2016; Wagner et al., 2015).

From the beginning, our vision has been to provide students and faculty alike with a rich learning opportunity. For students, ePortfolios create an occasion to reflect on curricular and co-curricular experiences, discover common threads throughout those experiences, and articulate the meaning and significance of those experiences to themselves and professional audiences in a holistic way. Creating this kind of ePortfolio allows students to practice the higher order thinking of synthesis and evaluation (Peet et al., 2011). For faculty, ePortfolio implementation invites consideration of what students from their program should be able to showcase, where the skills they expect students to demonstrate are taught, where students receive feedback that guides and redirects them, and where individual courses overlap and connect to contribute to the educational experience. Structured to encourage such reflection and collective conversation by faculty, an ePortfolio initiative creates an opportunity for faculty to reconsider programmatic priorities and values and then to reexamine the curriculum to discern the extent to which it aligns with and supports those priorities and values. For instance, if faculty members determine that they want graduates from their program to demonstrate an ability to communicate to different kinds of audiences, then faculty are forced to consider where in the curriculum they are teaching students to do such work and giving them opportunities to practice before expecting masterful performances. ePortfolios are both a process and a product, and we believe that the reflective work that happens throughout the process of both creating

ePortfolios and implementing ePortfolio thinking is valuable, whether or not external audiences look at the ePortfolio-as-product.

Many universities that have begun ePortfolio initiatives use ePortfolios as an assessment tool (e.g., see the descriptions at http://c2l.mcnrc.org/category/campus-stories/outcomes-assessment-stories/). Because their focus is on other learning outcomes—often those of general education or required for professional certification—ePortfolio initiatives that focus on assessment usually ask that students include similar documents, limit the design decisions that ePortfolios can invite, and may give less attention to the value-added experience of composing the ePortfolio or the curricular and pedagogical adjustments that ePortfolios can require of faculty. Such assessment-driven ePortfolios can be seen by students and faculty as bureaucratic requirements rather than opportunities for additional learning. Assessment-driven ePortfolios are typically "owned" by the institution so that they remain stable over time, and if students want to use their work for an external audience as they seek post-graduation employment or entry into advanced studies, they must often construct a separate ePortfolio that can remain in their own control. Though ePortfolios can have the additional benefit of exposing students to issues of professional identity, conventions expected by different professional audiences, and issues of visual, technical, and ethical literacy, they do so best when the ePortfolio is framed as a vehicle for representing themselves and their learning experiences to a professional but external audience. But professional identity, audience expectations, and the ethical literacy at play in crafting an integrated and professional representation are complicated issues which are more difficult to manage when assessment is privileged over individual choices because the difficult decisions students need to make are too often stripped away in the name of stability or consistency of assessment data.

In choosing outward-facing, integrative, professional ePortfolios as our institution's QEP, we opted for:

- privileging student choice and ownership over ease of assessment;
- using free platforms rather than expensive ones that claim backend assessment functionality but limit individual choices;
- encouraging the creation of unique professional identities instead of requiring standard templates that promise to make evaluation more consistent;
- inviting faculty in all disciplines to think through the messiness of teaching both visual literacy and the ethical considerations introduced when digital technology is made public whether or not they think of their discipline as visual or requiring advanced technical skills; and
- asking faculty and students alike to reconsider what they think about effective communication and critical thinking when the audience is both public and professional but not necessarily academic.

We admit that ePortfolios created as professional but personal websites controlled by individual students raise difficulties for institutions needing to assess these sites as evidence of student learning. In choosing to privilege student learning and student ownership, we also chose to grapple with those assessment challenges as additional opportunities for faculty development and engagement. We do not regret the choices we made, and in other contexts we have provided evidence that our Project has supported both effective implementation and integration into the curriculum (Bartlett, Stuart, Owensby, & Davis, 2016). We believed initially that faculty in the disciplines would be able to evaluate their students' ePortfolios using their own deep understanding of disciplinary expectations and their familiarity with the careers their students pursued. We assumed that faculty would generate assessment data for our Project by including in their evaluations the learning outcomes we had identified as most connected to the choices students would make in creating an outward-facing, integrative, professional ePortfolio, namely: critical thinking through reflection, visual literacy, technical competency, and effective communication. But as our Project developed, we recognized that the assessment data we were able to collect from departments were problematic. This article describes how we reorganized our assessment of student ePortfolios through an ePortfolio Assessment Institute (AI) in order to generate both reliable data about student performance and as another opportunity for faculty development. We report on the evidence of our success in achieving both these goals despite the challenges of student control, individuality, and the lack of consistency caused by privileging learning over assessment. We detail here how we prepared for and organized the AI, created and then trained faculty to use a summative rubric, and produced data about student performance that are reliable. In short, we demonstrate that it is not only quite possible to assess ePortfolios and the learning objectives associated with ePortfolio projects without having a platform do it for you, but that the activity of assessment can further faculty engagement, thinking, and confidence in teaching and evaluating ePortfolios.

Background

In this section, we outline the institutional context for our Project, the work done to revise an initial rubric for assessing the four learning outcomes associated with

our Project, and the difficulties with our assessment data that led to the creation of the ePortfolio AI.

Institutional Context

Our Project was selected to be the university's QEP in part because it built on a university-wide writing initiative that began in 2010. The writing initiative was the result of a faculty task force charged with investigating more than 10 years of National Survey of Student Engagement (NSSE) data in which students consistently reported having fewer writing assignments than their peers at comparable institutions. After two years of comprehensive work, the task force recommended creating an Office of University Writing (OUW) that would help faculty embed significant writing experiences in every undergraduate major and offer students support through an expanded writing center. Departments created writing plans to integrate writing into existing courses and submitted those plans for review and approval by a faculty committee. In reviewing these plans, it became clear that many programs were asking students to complete multimodal writing assignments, synthesize learning experiences in capstone-type courses, and in some cases, create a personal website or portfolio. Unfortunately, little infrastructure existed to support faculty and departments in these efforts. Our Project thus aimed to:

- build on existing efforts;
- expand the ways that the writing initiative had already begun to address the institutional concern that more attention to communication skills was necessary; and
- provide additional support for faculty as they embedded ePortfolios and the reflective writing such personal websites require throughout the curriculum.

We chose to focus our Project on integrative, outward-facing, professional ePortfolios that students would complete by the time of graduation, but because of the diversity of programs in our institution, we built in structures that would let programs use ePortfolios in a variety of ways. Some programs join our Project as they begin to think about whether ePortfolios would be useful to their students and their curricular objectives. Other programs join when they have already decided to require students to complete a senior ePortfolio. Programs also join with different numbers of faculty involved in integrating ePortfolio thinking into the curriculum, guiding students in producing ePortfolios, or assessing the results. Our Project is opt-in, and students who want to complete an ePortfolio but who are enrolled in a major that has not joined our Project, have the support of the OUW—which serves as the administrative home for the Project and offers programs for faculty and students—as well as the Career Center, the Writing Center, and the Media and Digital Resources Lab.

Student Learning Outcomes (SLOs)

In developing our Project, we drew on examples from other institutions and the research conducted by the Inter/National Coalition for Electronic Portfolio Research (ncepr.org). Because we were committed to using ePortfolios as an additional learning experience rather than as a tool to measure learning experiences that happened elsewhere, we identified outcomes that would happen as a result of creating an ePortfolio and settled on four student learning outcomes: (1) critical thinking through reflection, (2) visual literacy, (3) technical competence, and (4) effective communication. For our on-site SACSCOC visit we prepared an initial rubric for these outcomes modeled loosely on the AAC&U's Valid Assessment of Learning in Undergraduate Education (VALUE) rubrics (see AAC&U, 2017). This initial rubric was treated as a beginning point and programs that joined our Project were actively encouraged to make it more specific to their needs or expand it to include additional items. As our Project grew and faculty learned more about the kind of thinking ePortfolios encourage, our outcomes began to have more specific elements. When faculty engaged in conversations about the examples students produced, we began to distinguish not only the different outcomes and the elements within those outcomes, but different levels of performance, as well. Effective communication, for example, initially seemed to mean everything and too often relied on the reader understanding the content of specific documents or artifacts students included rather than on effective communication across the entire ePortfolio. Over time, effective communication began to reference more regularly the consistency of choices for a chosen audience and the creation of a coherent story that provided evidence via the artifacts chosen to support claims made by the student author about their experiences and skills. Critical thinking through reflection likewise narrowed to refer not to every choice the student made, but only to the way in which reflective thinking was made visible in the contextual prose students wrote for the artifacts they included.

Revising the Project Rubric

As our Project grew, it became clear that programs in our faculty cohort were handling assessment in very different ways. We thus undertook a systematic process to observe program-level assessment of ePortfolios, including talking with faculty responsible for assessing ePortfolios and

reviewing program modifications to the initial ePortfolio rubric. We noted that assessment practices within a program became more sophisticated as student work improved, as more faculty became familiar with ePortfolio practices, and as these faculty members had more opportunities to develop a shared culture of expectations. We used what we learned about program-level assessment practices in two different ways: first, we created opportunities for faculty to share what they were doing with other members of the faculty cohort; and second, we began to revise the initial rubric to better reflect developing expectations and deeper levels of understanding.

The initial rubric was also used by a faculty committee to recognize exemplary student work for an annual ePortfolio award, but we could see the possibilities and limitations of that initial rubric in this context, as well. On the one hand, the initial rubric created a framework for faculty from different disciplines to evaluate student work, discuss their expectations and judgments, and decide which students to recognize. On the other hand, the committee members needed training, practice, and discussion in order to use the rubric consistently. With changes in committee membership each year, a training process would help individuals understand the outcomes and apply the performance criteria to ePortfolios from very different disciplines, setting aside their own disciplinary expectations and content knowledge to concentrate on the performance across the ePortfolio. Like the faculty working to evaluate ePortfolios in programs, the awards committee was developing more refined expectations for student work, expectations that the original rubric did not always or consistently reflect.

The revised rubric, now referred to as the formative rubric (see Appendix A), went through multiple iterations during the summer of 2015 and was repeatedly tested on existing student ePortfolios. The formative rubric was also circulated among members of the faculty cohort and committee members. We asked faculty to try the rubric on student ePortfolios they had access to or on the ones we made available in a gallery on our Project website. We used the feedback to reshape both the substance of the rubric and the way it was designed, crafting the formative rubric as both a teaching tool and an evaluative instrument. The newly revised and redesigned formative rubric was launched in the fall of 2015, with faculty discussions and workshops focused on explaining the revisions, but not systematically training faculty to use it for consistent assessment.

At the same time, we were rethinking the way in which we were collecting assessment data from programs. Because assessment was being done so differently across different programs, we were uncertain that the data provided to us by programs were reliable or consistent enough to guide decisions at the university-level or to serve as adequate evidence in our mid-cycle report to SACSCOC. In crafting the formative rubric as a teaching tool, we had included language about ePortfolio creation processes and eliminated specific behavioral anchors tied to features that could be observed directly in the ePortfolio. We worried that these choices would make the formative rubric harder to use for the purpose of consistent assessment.

In preparing for the AI, we conducted a test-day with 10 faculty and four student ePortfolios. Our goal for the test-day was both to refine the training process we would use at the AI and to test the effectiveness of the formative rubric when used by multiple raters. Sure enough, scores from the test-day did not achieve inter-rater reliability. Based on faculty feedback, we concluded that the lack of behavioral anchors in the rubric and the nine levels of performance included in the formative rubric were contributing to the lack of consistency in scores. Recognizing that a different rubric was needed to produce reliable assessment data, we undertook another rubric revision to resolve these problems and created what we now refer to as the summative rubric (see Appendix B).

Based on the outcomes and descriptors outlined in the formative rubric, we created an initial draft of the summative rubric, with only four levels of performance and observable behavioral anchors for each element. In multiple sessions during early spring of 2015, a team of four to five individuals from the OUW collaborated to draft and test iterations of the summative rubric using existing student ePortfolios. Before each session, members of the team would individually rate student ePortfolios and highlight sections of the rubric that needed more work. Each time the team met, scores were shared and the rubric was discussed and collectively revised. Conversations during these sessions included differing interpretations of meaning at specific points in the rubric, missing or incorrect language in descriptors, and individual perceptions of student work and how these impacted the evaluation scores. These discussions were also considered in relation to the test-day training session and the training planned for the AI; we knew we would need examples that would elicit rich discussion of the rubric and allow faculty to practice recognizing specific elements of the outcomes in various ePortfolios. Once the revisions of the summative rubric were complete, the team tested it on multiple ePortfolios until inter-rater reliability was achieved across ePortfolios from a variety of disciplines. Finally, the summative rubric and the planned training process was tested in April of 2016 with the Awards Committee.

Collecting Reliable Data

In addition to the problems created by a rubric that was less-than-ideal for consistency in assessment, our

processes for collecting the data that resulted from program-level evaluations of student ePortfolios were fraught with difficulties. For example:

- Though some programs had faculty collaborate to assess student work, faculty in other programs did not always agree on how (or whether) to use the rubric;
- Not all programs conducted training in using the rubric, and even where they did, not all faculty participated in these norming exercises to ensure that the rubric was being used consistently across different faculty raters;
- Programs did not submit the evaluation data in the same format; sometimes grades were submitted rather than rubric-guided scores;
- Faculty in administrative positions often assumed responsibility for assembling the data from their program and reporting it to the OUW, but changes in these department-level leadership positions meant that there was confusion about what data were needed and how these requests for data were different from other institutionally-required assessment reports;
- As our Project grew, the numbers of programs that needed to be asked for data on a regular basis also grew, but with a predictable range of positive and negative responses.

Taken together, these logistical problems created gaps in our data and a growing reluctance to trust the data as reliable indicators of student performance. We determined that an AI would be an alternative way of collecting direct evidence of student performance on our four outcomes that could resolve these difficulties. We enlisted the expertise of the Director of Academic Program Assessment to help us design the AI, modeled after similar AIs used for other purposes.

Method

Our AI was designed as a two-day faculty development event held after graduation in May 2016. Because we planned to publish the results, we sought and received Institutional Review Board (IRB) approval to recruit faculty whose programs were already participating in our Faculty Cohort and students who we believed would have created an ePortfolio since the beginning of our Project. An email invitation with a consent document was sent to selected Faculty Cohort, members chosen to reflect the diversity of disciplines participating in our Project. The faculty members who received the original email were asked to nominate another faculty member from their department whom they would like to have as their partner, preferably someone who was not already deeply involved in our Project. These new nominees then received an invitation to join the AI in which the other person from their department who had agreed to participate was named. We thought this approach would lessen potential personality clashes because faculty would have a voice in identifying a colleague with whom they would feel comfortable and whom they felt was likely to be interested in knowing more about our Project. We aimed to deepen participation across the programs by including faculty who had not already been active in the Faculty Cohort and we wanted to see if the level of engagement of the faculty and their familiarity with our Project influenced their scores. However, we saw this first AI as merely laying the ground work for potential studies more carefully focused on faculty and their level of engagement with professional development activities connected to our Project.

Faculty participants were compensated $1,000 for completing both days of the AI. A total of 34 participants served as raters for the AI, most from programs already in the Faculty Cohort. To fill in last minute withdrawals and strengthen collaborations with other units responsible for faculty development and assessment, we included a total of five professional staff members from the OUW, including two who were responsible for leading the training, two from the Center for Teaching and Learning, and one from the Office of Academic Assessment.

To solicit student ePortfolios, we compiled a contact list of university students who met one or more of the following conditions:

- graduated between August 2012-May 2016 from a program that had joined the faculty cohort;
- attended workshops related to our Project;
- received a nomination for an ePortfolio award;
- held a leadership position as an ePortfolio Ambassador; and
- served as a writing center tutor trained to help others with ePortfolios.

A total of 705 students were contacted through their student email addresses and invited to participate. The email (Appendix C) included a link to a survey that served as the electronic consent. The survey (Appendix D) asked students to select which existing demographic data—such as major, grade point average (GPA), transfer and first generation status, scores from the American College Testing or Scholastic Assessment Test (ACT/SAT), ethnicity, gender, etc.—they were willing to have us access. The survey also asked students how they had used their ePortfolios, and when they had completed it, and allowed them to provide one or more Uniform Resource Locators (URL) if they were willing to allow us to use their ePortfolio in the AI. To

encourage participation in the study, student participants were eligible to pick up a promotional item valued at less than $5 from the OUW. In addition, each student who completed the survey link in the email was entered into a random drawing to receive a $50 Amazon gift card. A total of 79 students responded and completed the survey (11.2% response rate), with 61 students providing a URL to their ePortfolio and consenting to have it used at the AI. We identified several factors that could have led more students to answer the survey than were willing to provide us with a URL. First, students would have needed to maintain their ePortfolio after graduation, or at least remembered the URL they had used. Second, some students would have started ePortfolios in courses, but not all would necessarily have finished them. Finally, even though students had nothing at risk in how their ePortfolios were evaluated, we suspect that students need a certain level of pride in and confidence that their ePortfolios were good in order to give faculty access to them.

Before arriving at the AI, faculty raters were asked to complete a survey (see Appendix E) indicating their confidence in teaching and evaluating each of the four learning outcomes associated with our Project. The survey was designed on a 5-point Likert scale (1 = *not confident at all*, 5 = *highly confident*). At the end of the AI, raters were asked to complete the survey again, answering these same questions and providing feedback about the training and the overall experience. Faculty raters had not seen the summative rubric until they arrived at the AI, though those who had been participating in the faculty cohort had seen the formative rubric.

Because we had some faculty raters who were new to our Project and to ePortfolios, the training process included an overview of the learning outcomes associated with our Project. The purpose of the training exercises was to elicit discussion of features we had learned would create difficulties for at least some raters and to develop a common understanding of the elements within each outcome and the differences in performance represented by the rubric. The schedule for the AI is included as Appendix F. Other training components on the first day included:

- writing and discussion of the assumptions and experiences individuals have of ePortfolios to move faculty raters to set disciplinary expectations or personal preferences aside and rely on the language of the rubric;
- individual and small group work on key terms in the rubric to ensure that everyone was familiar with the rubric and had thought about the language used across the different levels of performance;
- guided practice in using the rubric with a single ePortfolio with time to read through the ePortfolio before scoring one outcome at a time. Key points for each outcome were identified and participants were encouraged to share their interpretations and the rationale for the scores they gave;
- individual practice with an ePortfolio with raters having 30 minutes to read and score and then 50 minutes for the whole group to compare scores and discuss so that elements of the outcomes and performance levels became clearer and typical issues of difference were considered; and
- a wrap-up exercise that asked participants to consider how they might use anything that had happened in their first day in their own programs or courses.

The second day of training began with a brief discussion to answer any questions participants had and a norming session where a single ePortfolio was scored by all raters. This ePortfolio had also been scored in advance by the AI organizers and so was used as a control that would serve as an anchor score for comparative purposes in analysis. In this norming session, raters were reminded that they were allowed to give half points on the 4-point scale. Once the scoring was completed, all scores across all elements of the rubric were within one point on this norming sample.

Throughout the training process, we emphasized returning to the language of the rubric, grounding judgments in the rubric rather than in individual preferences or disciplinary expectations. For example, we were especially careful to talk about the difference in a student's statements of religious faith and the consistency and judgment in making such statements for the intended audience. The emphasis on interpretation and reading practices was confusing at first to some faculty, especially those from science, technology, engineering, or mathematics (STEM) disciplines that rely on quantitative data and who assumed that scoring with a rubric would not involve interpretations of either the rubric language or the students' choices.

Because we are interested in the learning that happens as students create an ePortfolio, we encouraged raters to see the ePortfolio holistically and to check on artifacts included in the ePortfolio only to the degree that they provided evidence to support claims or matched reflective contextualizing. We also prioritized reading the ePortfolio holistically because our experience suggested that few readers—employers or faculty—spend time with each artifact. We regularly asked faculty to set aside their disciplinary practices or assumptions to consider ePortfolios that were outside their discipline as capable of demonstrating the elements on the rubric. This was especially difficult in

the case of visual literacy, since we have many programs that are related to the visual arts or design, including studio arts, architecture, graphic and industrial design, apparel design, and interior design. Raters in these design-related disciplines are accustomed to looking for particular visual features and have strong opinions about what constitutes "good" design. On the other hand, raters who are not in design-related disciplines too often assume that students in their disciplines have nothing visual to include and little need to attend to design choices. Such faculty raters either ignore design choices or are overly impressed with any visual content.

Finally, we asked raters to see the topmost performance level as aspirational and use it only for truly exceptional performances. During the training we modeled negotiating different scores, which would be a part of the adjudication process at the end of the individual scoring, by having raters who scored above or below the majority of participants explain their thinking. We let raters change their scores both during the training and during the adjudication process, but we did not require them to do so. During the training process, however, all raters could see the collected scores during the discussion and the entire group could see where we were scoring consistently and where we were not. During the adjudication process, however, teams could see only their own scores and did not have any information about how their scores matched or differed from those of other teams.

Following the rubric training, each rater was provided with eight scoring sheets (Appendix G) that matched the summative rubric. Each scoring sheet contained a unique URL for the ePortfolios the rater would be assessing during the AI. Laptop computers were provided for raters to access the ePortfolios. Raters were asked to work independently to score eight ePortfolios. As noted above, 61 students provided a URL to their ePortfolio, consenting to have it scored at the AI. Each of these ePortfolios was scored by at least two teams of raters at the AI, creating at least four scores for each ePortfolio. When distributing the ePortfolios, we aimed to lessen the interference of disciplinary knowledge and to eliminate bias from knowledge that raters might have of students outside the ePortfolio. Therefore, we assigned ePortfolios to raters who were not in the same department or a closely aligned discipline. Before the scoring began, we also asked raters to identify any student they knew personally from whatever context and then reassigned those ePortfolios to a different rater. Raters were reminded that ePortfolios could have been created at different points in the student's career and under different conditions. Therefore, the raters were to evaluate the evidence of the four learning outcomes associated with our Project rather than the potential of the student or the limits imposed by the conditions of creation. Raters were encouraged to take notes during the evaluation of each ePortfolio that might be useful to them during the adjudication with their team member. As raters completed their scoring of each individual ePortfolio, they were asked to submit the scoring sheet. We believed immediate submission would lessen the temptation to score by comparing ePortfolios rather than by relying on the rubric. A lunch break was provided, but raters were asked not to talk about any of the ePortfolios they had scored in order to lessen the chance that comments would influence raters who were yet to score that ePortfolio.

At the end of the scoring session, scoring sheets were returned to the teams, and they were asked to adjudicate any differences, but to concentrate on elements where their scores were more than one point apart. The adjudication process afforded each pair of raters the chance to discuss why each ePortfolio received the score it was given, and to connect those scores to specific language in the rubric. The primary goal of the adjudication process was to determine why the ePortfolio received different scores from each rater, and then move toward consensus about what the rubric means. It was not our explicit intention to have raters change their scores, but rather to determine whhether the raters missed something, deviated from the rubric, or became convinced that their interpretation the rubric or the ePortfolio was incorrect.

A debrief discussion at the end of the second day served as the wrap-up and was framed as helping the organizers to plan the next AI and create follow-up programs for Faculty Cohort members. Following our IRB approved protocol, any notes faculty had made, all scoring materials, and the list of ePortfolios assigned to each rater were collected, and URLs were erased from the laptop computers raters had used. The statistical analysis on the data from the surveys completed by the raters, as well as the student ePortfolio scores supplied by the raters, was conducted through the use of Statistical Package for the Social Sciences (SPSS). Statistical Analysis System (SAS) was used to conduct G-score analysis on the reliability of the paired raters.

Results

Reliability

We began our analysis by exploring whether the data provided by rater teams were reliable. In other words, were the scores given by raters a reflection of consistent use of the summative rubric? Generalizability theory was used to determine G-coefficients for each rater team. These coefficients are reliability estimates, ranging from 0-1, with higher estimates reflecting greater reliability. Typically, 0.70 is

Figure 1
G-Coefficients for Paired Teams Based on all ePortfolios Scored by the Team

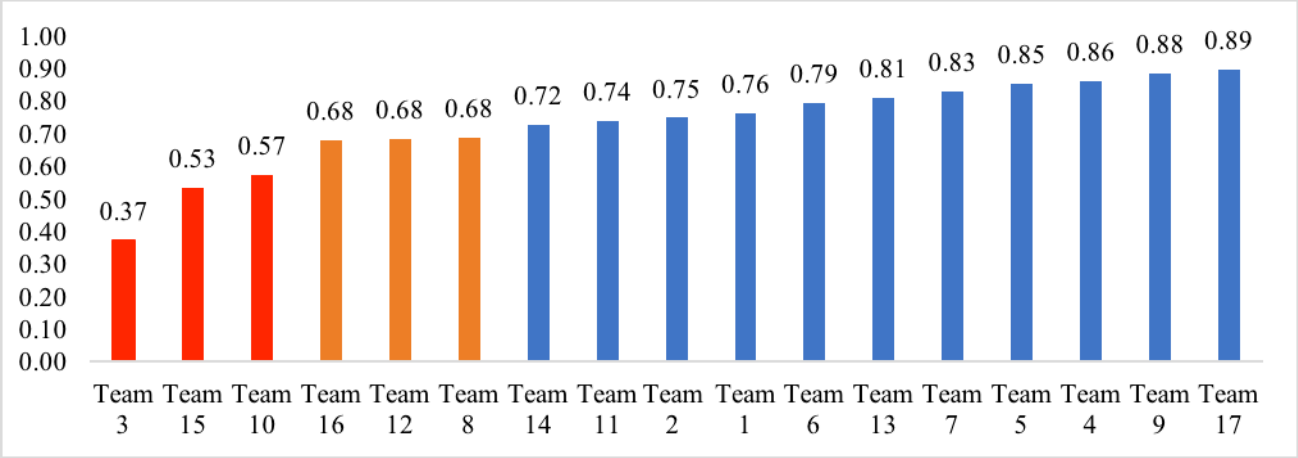


Table 1
Comparison of Means Using all Scores To Only Scores From Most Reliable Teams

Rubric element	*All data*	*Most reliable teams*
Critical thinking through reflection		
A. Artifacts	2.52	2.55
B. Arrangement	2.37	2.43
C. Reflective writing	2.21	2.31
Visual literacy		
D. Visual elements	2.38	2.34
E. Design choices	2.33	2.38
Technical competency		
F. Navigation	2.62	2.66
G. Attention to technical details	2.63	2.61
H. Ethical literacy	2.13	2.16
Effective communication		
I. Coherent message for intended audience	2.48	2.51
Overall average	2.41	2.44

Note. The scale is 1 = *beginner*, 2 = *developing*, 3 = *mature*, and 4 = *professional.*

a general cut-off for acceptable reliability. Figure 1 shows the G-coefficients for each paired team, based on all of the ePortfolios they rated. Eleven of the 17 teams had a G-coefficient greater than 0.70, three teams were very close to 0.70 (i.e., 0.68), and three teams had less consistent scoring patterns.

Given that some of our teams were more reliable than others and that all ePortfolios were scored by more than one team, we needed to make a decision about whether to base future analysis on the average score of all teams that scored a particular ePortfolio or to use only the scores from the more reliable team. To determine whether shifting procedures would make a difference in the scores, we did a comparison of the different means across each element on the rubric. Since some ePortfolios were scored by the same two teams and others were scored by randomized teams, we separated the data for each ePortfolio and chose only the scores provided by the teams with the highest G-score. The scores from the most reliable teams were then averaged to determine the mean for each element. Table 1 shows the mean scores for each element, first by using the scores of all raters who scored each ePortfolio and then by looking at only the scores from the most reliable team who scored each ePortfolio. Our analysis shows the means from the most reliable teams for most elements is only slightly higher than the means from all of the raters.

Faculty Confidence

We turn now to the question of whether the AI itself had an impact on the faculty who participated in terms of

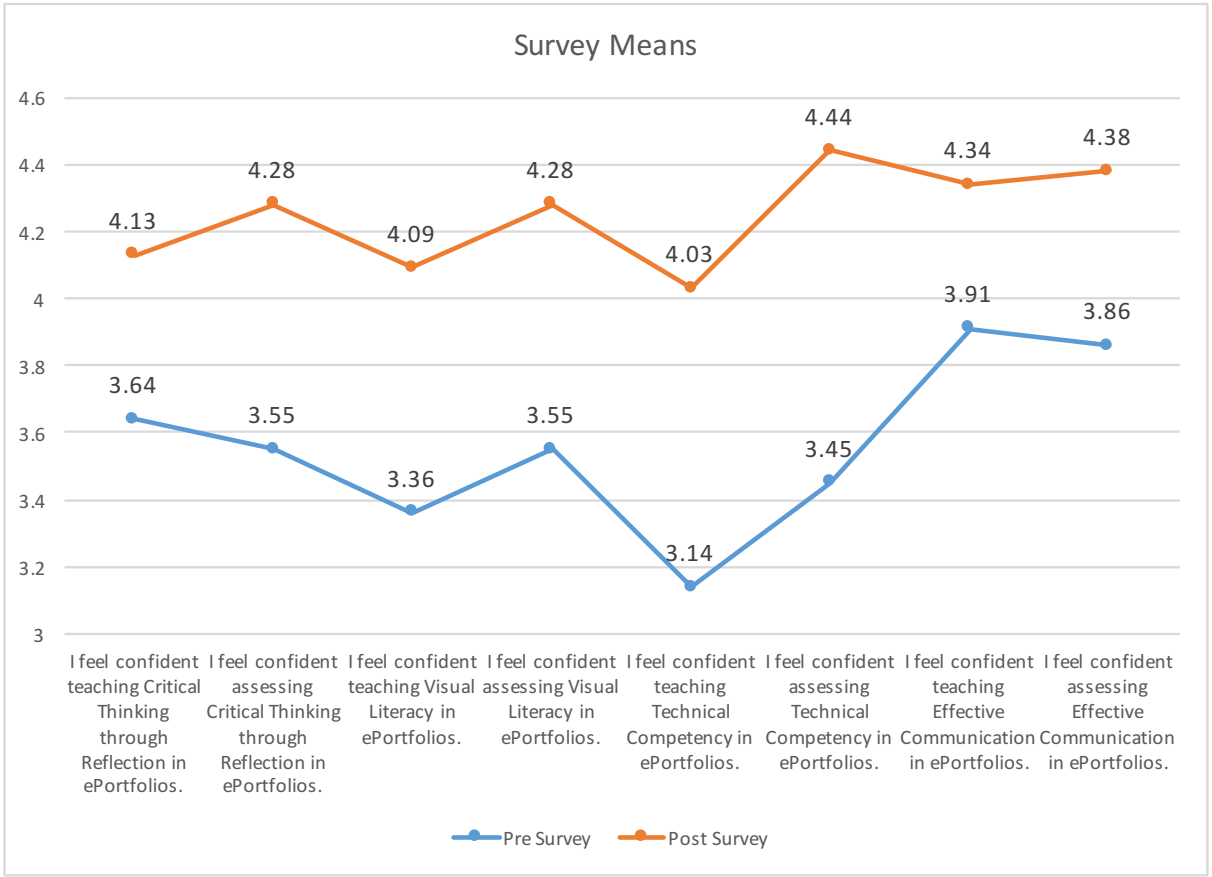
their confidence in evaluating or teaching each of the outcomes associated with our Project. Our pre and post surveys asked faculty simply to indicate their level of confidence in teaching and assessing the four student learning outcomes using a 5-point Likert-type scale. Figure 2 below shows the means for each question. Because the assumption of normality was violated and the data were not distributed in a typical bell-curve, the use of a *t* test would be inappropriate. Instead, a Wilcoxon signed-rank test (the nonparametric equivalent of a *t* test) was conducted. The Wilcoxon signed-rank test showed that the results of the post-survey were significantly different from the pre-survey ($Z = -2.533$, $p = 0.010$) and indicate a significantly higher level of faculty confidence in teaching and assessing the four student learning outcomes. The mean scores on the pre/post survey revealed an average increase of 0.69 across all questions. In addition, we noted that every participant except one, a member of the least reliable team, had a higher level of confidence after the AI than before it began on every outcome and for both teaching and assessing. That one participant scored their confidence level prior to the AI as a 5 for every item, leaving no room for improvement on our scale.

In addition, we invited faculty to provide other feedback in an open-ended question. Comments indicated that participants felt the AI was helpful to them as they considered teaching elements of ePortfolios in their own courses and evaluating the ePortfolios created by students in their programs. We found no significant difference in the increased confidence of faculty who had been participating in the faculty cohort for some time and those who were new to our Project. We therefore concluded that the increased confidence is likely attributed to the AI itself and that the AI functioned as an effective professional development opportunity for those who participated regardless of their prior experience with ePortfolios.

Discussion and Conclusion

Though the structure of our Project has focused on student learning as students create integrative, outward-facing, professional ePortfolios to represent themselves

Figure 2
Pre-Post Confidence Comparisons



and their learning to an external audience, our decision to allow students to use a variety of platforms and maintain control of their own ePortfolios has created some challenging assessment issues. Our learning outcomes have remained consistent, but our ability to articulate what is involved in each of those outcomes and how those outcomes are made visible in ePortfolios has evolved and deepened as our Project has matured. We have seen faculty and students come to understand the possibilities of ePortfolios in more sophisticated ways as they create ePortfolios or integrate ePortfolio thinking into courses. In essence, both faculty and students change their understanding of, and their expectations for, the four learning outcomes by doing ePortfolios. Though we had an original rubric that included behavioral anchors, we would not have been able to create the formative or summative rubric earlier; we simply did not know enough until we all had gained more experience. Creating a formative rubric that serves as a teaching tool but that is less effective for collecting consistent assessment data was an important step in developing the kind of language necessary for a summative rubric and gave us specific examples of where readers can have difficulties evaluating student performance in ePortfolios. These examples were essential to the training we provided for faculty raters during the AI. Creating a summative rubric with four levels of performance and clear behavioral anchors for each element and each level of performance was necessary to generate reliable assessment data. Inviting faculty to participate in an ePortfolio AI and training them to use the summative rubric to score a variety of ePortfolios outside their own disciplines accomplished two important goals for our Project: (1) we were able to gather reliable assessment scores for each of the learning outcomes; and (2) we increased faculty participants' confidence in teaching and evaluating those outcomes.

We conclude from our analysis of G-coefficients that most of the raters were able to use the rubric consistently to score the ePortfolios they were assigned. Some teams were harsher or more lenient than others, but all but one of the teams achieved a reliability estimate near or above 0.70. We eliminated the one team (Team 3) that did not achieve reliability from all analysis. When comparing whether to use an average of all remaining teams who scored a particular ePortfolio or to average only the scores from the most reliable team that scored each ePortfolio, we determined that it would be better to use only the scores from the most reliable team, essentially eliminating the scores from the other two less reliable team members. We plan to continue the analysis of our data to better understand the relationship between such factors as GPA, test scores, involvement in our Project and scores assigned by raters at the AI. As we continue to analyze our data and consider the scores in relation to the survey answers students provided about their use of their ePortfolios and the demographic data they consented for us to access and compare, we will use only the scores from the most reliable team in each case.

Our analysis of sources of error suggests that our training was effective enough to produce reliable data and that we can trust the scores that remain to be reasonable indicators of student performance. When we repeat the AI with new student ePortfolios, we will be able to compare those scores, assuming those scores also prove to be reliable, to see if students are improving across the four learning outcomes associated with the our Project. We will repeat the AI in May 2018 with student ePortfolios created between May 1, 2016 and May 1, 2018. We then plan to do a comparative analysis to determine the extent of improvement in the quality of student ePortfolios over time. We recognize, however, that students who created ePortfolios at the beginning of our Project were likely to have been highly motivated and that as more students produce ePortfolios, we may see a larger range of performances. Likewise, those students who maintain their ePortfolios after graduation and the initial job search may be more likely to grant us access than those who abandon their ePortfolios, further skewing the range of performances away from a normal distribution. We are interested in conducting follow-up interviews with students who participated in this study to see if we can uncover the factors that motivate students to create and maintain an ePortfolio or to grant us permission to use it for assessment of our Project. Finally, we are interested in related studies focused on faculty, including how they use the experience of participating in the AI in their own teaching.

Assessment is not the focus of our Project, but we believe we have established that reliable assessment data can be generated without asking students to utilize a standard platform or follow a rigid set of requirements about what artifacts to include as they integrate their experiences and present themselves to an external audience. The question of whether such institutional initiatives have any impact on faculty is also at least partially addressed in the data we have collected here, demonstrating that faculty confidence can be increased by structuring assessment activities as opportunities for faculty learning.

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LESLEY ERIN BARTLETT teaches and writes in the Department of English at Iowa State University. Prior to her work at Iowa State, she served as Assistant Director of University Writing for the ePortfolio Project at Auburn University. She earned her PhD in composition and rhetoric with a specialization in women's and gender studies from the University of Nebraska-Lincoln. Her scholarship focuses on composition theory and pedagogy, feminist rhetorical theory, rhetorical performance, and ePortfolios.

ASHLEE MILLS DUFFY is a PhD candidate in educational psychology at Auburn University. She is currently the Program Assistant for the Auburn Center for Evaluation and was previously the Program Assistant for Research and Assessment for the Office of University Writing at Auburn University, where she helped revise the rubrics used to assess ePortfolios and worked with faculty on assessing writing and ePortfolios. Her scholarly interests include service learning in education, program evaluation theory and practice, and the use of social network analysis in

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STEPHEN POWELL holds a master's degree in teaching and languages and is now a PhD candidate in educational psychology at Auburn University. He currently serves as the Program Assistant for Research and Assessment for the Office of University Writing at Auburn University. Previously he worked as a Graduate Teaching Assistant and Service Learning Coordinator for the College of Education at Auburn. His scholarly interests include the philosophy and methodology of research, interdisciplinary studies, as well as current research investigating stress and emotional regulation.

Acknowledgements

We wish to thank Dr. Megan Good, Director of Academic Assessment, for her generous help in designing and conducting the ePortfolio AI, participating in the revision and testing of the summative rubric, and her calculations of the G-Coefficients. Her knowledge of G-theory and her experience with similar assessment events were essential to this study. We also thank the many faculty members who have participated in our Project and without whom it could not exist. Finally, we thank the students who shared their ePortfolios with us and who were so willing to help us assess our Project.

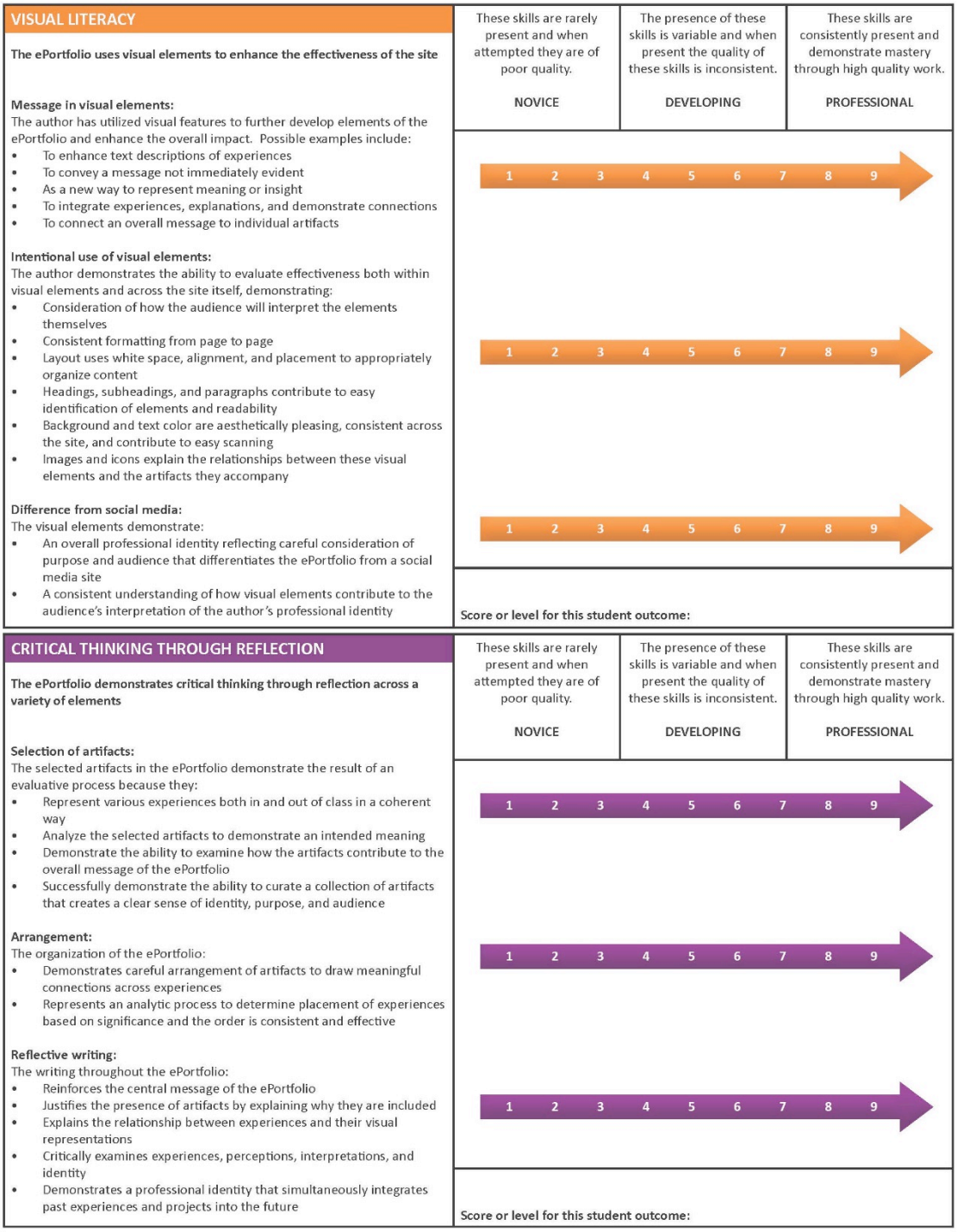
Appendix A
Formative Rubric

ePORTFOLIO PROJECT
LEARN IT. LIVE IT. SHARE IT.

Auburn ePortfolio Rubric

EFFECTIVE COMMUNICATION	These skills are rarely present and when attempted they are of poor quality. NOVICE	The presence of these skills is variable and when present the quality of these skills is inconsistent. DEVELOPING	These skills are consistently present and demonstrate mastery through high quality work. PROFESSIONAL
The ePortfolio demonstrates strong and consistent communication skills **Message:** • The central message of the ePortfolio is consistently clear • Artifacts have been carefully selected to support a central message and consistently function as evidence that supports the claims made in the ePortfolio **Audience and purpose:** • The number and kinds of artifacts are well selected and demonstrate careful attention to audience and disciplinary expectations **Revision and editing:** All components of the ePortfolio show consistent attention to conventions and proofreading: • Artifacts have been revised to demonstrate mastery • Where unrevised artifacts are included, they have been purposefully selected to exhibit growth and their presence is explained	1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9		
	Score or level for this student outcome:		

TECHNICAL COMPETENCY	These skills are rarely present and when attempted they are of poor quality. NOVICE	The presence of these skills is variable and when present the quality of these skills is inconsistent. DEVELOPING	These skills are consistently present and demonstrate mastery through high quality work. PROFESSIONAL
The author uses technical features to enrich the delivery of the message **Navigation and user experience:** Navigation is thoughtful and intuitive, adds to user experience, and demonstrates the ability to think about the user's needs: • Navigation guides the user within the ePortfolio, connecting artifacts and experiences across pages or relevant details • Components of the ePortfolio are clearly labeled and easily used • Information like resumes and contact information is easily located **Intentional use of technology:** Technical features of the site: • Effectively reinforce the central message • Convey a consistent professional identity to the intended audience • Demonstrate a thoughtful application of technical features (slide shows, scroll bars, hyperlinks, animation, etc.) **Attention to technical details:** Attention has been given to ensure that technical features work as intended and support the professional identity. Possible examples include: • Photos and graphics are of high quality with attention paid to size, resolution, and color • Artifacts that utilize video or sound are well edited and of good quality • Care has been taken to ensure the entire site works in different browsers and devices • Links are active and well labeled and artifacts are easily accessed • Strategies for making the ePortfolio accessible to different users have been utilized effectively **Ethical literacy:** There is clear consideration of intellectual property and fair use: • When another's work is used, credit is given with correct formatting • There is reference to personal authorship and ownership of materials • There is consistent and appropriate use of others' likeness, work, and/or images The content of the ePortfolio itself reflects an awareness of the public nature of the internet: • Careful consideration of privacy issues is evident • Anonymous individuals are not treated as objects in service of the author's message	1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9		
	Score or level for this student outcome:		



VISUAL LITERACY

The ePortfolio uses visual elements to enhance the effectiveness of the site

Message in visual elements:
The author has utilized visual features to further develop elements of the ePortfolio and enhance the overall impact. Possible examples include:

- To enhance text descriptions of experiences
- To convey a message not immediately evident
- As a new way to represent meaning or insight
- To integrate experiences, explanations, and demonstrate connections
- To connect an overall message to individual artifacts

Intentional use of visual elements:
The author demonstrates the ability to evaluate effectiveness both within visual elements and across the site itself, demonstrating:

- Consideration of how the audience will interpret the elements themselves
- Consistent formatting from page to page
- Layout uses white space, alignment, and placement to appropriately organize content
- Headings, subheadings, and paragraphs contribute to easy identification of elements and readability
- Background and text color are aesthetically pleasing, consistent across the site, and contribute to easy scanning
- Images and icons explain the relationships between these visual elements and the artifacts they accompany

Difference from social media:
The visual elements demonstrate:

- An overall professional identity reflecting careful consideration of purpose and audience that differentiates the ePortfolio from a social media site
- A consistent understanding of how visual elements contribute to the audience's interpretation of the author's professional identity

These skills are rarely present and when attempted they are of poor quality.	The presence of these skills is variable and when present the quality of these skills is inconsistent.	These skills are consistently present and demonstrate mastery through high quality work.
NOVICE	DEVELOPING	PROFESSIONAL

1 2 3 4 5 6 7 8 9

1 2 3 4 5 6 7 8 9

1 2 3 4 5 6 7 8 9

Score or level for this student outcome:

CRITICAL THINKING THROUGH REFLECTION

The ePortfolio demonstrates critical thinking through reflection across a variety of elements

Selection of artifacts:
The selected artifacts in the ePortfolio demonstrate the result of an evaluative process because they:

- Represent various experiences both in and out of class in a coherent way
- Analyze the selected artifacts to demonstrate an intended meaning
- Demonstrate the ability to examine how the artifacts contribute to the overall message of the ePortfolio
- Successfully demonstrate the ability to curate a collection of artifacts that creates a clear sense of identity, purpose, and audience

Arrangement:
The organization of the ePortfolio:

- Demonstrates careful arrangement of artifacts to draw meaningful connections across experiences
- Represents an analytic process to determine placement of experiences based on significance and the order is consistent and effective

Reflective writing:
The writing throughout the ePortfolio:

- Reinforces the central message of the ePortfolio
- Justifies the presence of artifacts by explaining why they are included
- Explains the relationship between experiences and their visual representations
- Critically examines experiences, perceptions, interpretations, and identity
- Demonstrates a professional identity that simultaneously integrates past experiences and projects into the future

These skills are rarely present and when attempted they are of poor quality.	The presence of these skills is variable and when present the quality of these skills is inconsistent.	These skills are consistently present and demonstrate mastery through high quality work.
NOVICE	DEVELOPING	PROFESSIONAL

1 2 3 4 5 6 7 8 9

1 2 3 4 5 6 7 8 9

1 2 3 4 5 6 7 8 9

Score or level for this student outcome:

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Revised by Ashlee Duffy on 7/23/2015
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Appendix B
Summative Rubric

ePORTFOLIO PROJECT
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Summative ePortfolio Rubric

ePortfolios can take many forms, but for the purpose of assessing the outcomes associated with this project, we expect an ePortfolio to tell a coherent story about the student's learning experiences both in and out of classes, synthesize and present those experiences for a general, external, professional audience. ePortfolios of this kind provide evidence of skills and interests through a curated selection of artifacts and craft in the process a professional identity.

Critical Thinking Through Reflection

Critical Thinking Through Reflection focuses on evidence of critical thinking (analysis, synthesis, evaluation, creation) as it exists in within artifacts, arrangement, and reflective writing and across the ePortfolio as a whole.

	Beginner: 1	Developing: 2	Mature: 3	Professional: 4
A: Artifacts	Included artifacts show little connection to the overarching story or the story itself is missing. Artifacts are not contextualized so their meaning is supplied more by the viewer than the author. There is little variety of skills, experiences, and learning represented and not enough evidence to support the claims being made. Most artifacts are of the same kind or from the same kind of experience (for example course papers or images of design work).	Some artifacts contribute to the story being told, but some may not. The story is present, but limited and individual artifacts have little contextual information to support their inclusion. There is some variety of skills, experiences, and learning represented. While the overarching story is not supported by all of the artifacts, there are some moments where artifacts do substantiate the claims.	Most artifacts provide evidence of the story being told and most support the claims being made. Artifacts are contextualized so that the reason for their inclusion is almost always clear. The artifacts provided demonstrate a variety of skills, experiences, and learning across a range of courses or co-curricular experiences.	Artifacts provide strong evidence of the story being told and claims being made. Artifacts are well contextualized so that their presence in support of a message is clear throughout. The artifacts provided demonstrate a variety of skills, experiences, and learning and draw from a wide range of experiences both in and out of formal courses.
B: Arrangement	Arrangement is overly simplistic, for example organized by the course or level or presented as a simple gallery or list. There is no evidence of synthesis of learning and the arrangement of artifacts makes the overarching story confusing.	Arrangement is mostly logical though predictable. Some items may be misplaced, disconnected, or underdeveloped. There is limited evidence of synthesis in learning so that the overarching story is vague or in places confusing. The reader has to do too much of the work to interpret the connections.	Arrangement usually reinforces the story and the ePortfolio almost always functions as a curated collection of evidence. There is some evidence of synthesis of learning experiences through the use of repeated themes, links within the ePortfolio, or other motifs that are not overly cliched.	Arrangement consistently reinforces the story. The ePortfolio functions as a carefully curated collection of evidence intentionally assembled to demonstrate synthesis of, and sophisticated thinking about, various learning experiences. The story is clear and nuanced.
C: Reflective Writing	Reflective writing is limited to description. Where attempts to go beyond description occur, they seem simplistic, formulaic, or cliched. The writing is often repetitious and may have numerous errors at the sentence level.	Reflective writing is present and occasionally includes more than description by connecting artifacts together, saying why an experience was important, or connecting lived experience to other sources of knowledge. The writing is almost always correct, but does not fully construct a coherent individual identity.	Reflections often make connections, explains importance, or project into the future, but not consistently so. Where the writing indicates critical thinking, it does so by making connections to specific artifacts and to the story being told across the ePortfolio as a whole. The writing is generally correct and constructs a sense of individual identity, though at times it is overdone or repititious.	Reflections are insightful and work together to consistently synthesize learning experiences and demonstrate critical thinking about the meaning and application of these experiences without being overdone or repetitious. Across the whole ePortfolio the writing constructs a sophisticated and nuanced identity.

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Summative ePortfolio Rubric

Visual Literacy Visual Literacy focuses on how the author uses visual elements to provide evidence, construct deeper meaning, and support and enhance the message of the ePortfolio. "Visual elements" refer to any non-text elements such as boxes, icons, buttons, or photographs.				
	Beginner: 1	**Developing: 2**	**Mature: 3**	**Professional: 4**
D: Visual Elements	Visual elements *decorate* the ePortfolio without attention to how they function. They do not support the message or help create identity.	Visual elements *illustrate* the message but inconsistently or visual elements exist mostly because they are artifacts of design or artistic creation. *In either case*, visual elements do not consistently contribute to the message or identity.	Visual elements function to illustrate the message or provide evidence of experiences or skills, *and* almost always sync together with the text to provide additional meaning and craft an identity maintained throughout the ePortfolio.	Visual elements are used both to illustrate and provide evidence, *but always* with attention to syncing the image and the text and to constructing an appropriate identity. The visual elements included are unique, creative, sophisticated, and convey another layer of the meaning without functioning simply as artifacts.
E: Design choices	Design choices like color, font, space, and layout are haphazard and distract from the message and identity.	Design choices are often appropriate, but some choices of color, font, space, or layout are ineffective in supporting the message or distract from the identity being created.	Design choices are consistently appropriate, support the message, and aid in the construction of identity. Some of these choices are sophisticated, original, or creative.	Design choices are consistently appropriate, support the message, and aid in the creation of identity. These choices are consistently sophisticated and original/creative.

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Summative ePortfolio Rubric

Technical Competency

Technical Competency focuses on the application of technical elements that should enhance the way information is conveyed to an audience, differentiating an ePortfolio from other products (social media sites, blogs, commercial websites) to construct identity. "Navigation" refers to the way the site is set up to let users move through the site and within individual pages. "Technical details" include features like slide shows, scroll bars, hyperlinks, quality or size of graphics, etc.

	Beginner: 1	**Developing: 2**	**Mature: 3**	**Professional: 4**
F: Navigation	Navigation in the ePortfolio is confusing or awkward suggesting little consideration of user experience or limited technical skill.	Navigation is not always consistent or intuitive. There are repetitions in navigation that do not enhance the user's experience or navigation choices that make the user's experience more difficult.	Navigation is thoughtful and facilitates the user's experience, but isn't consistently sophisticated or effective.	Navigation is thoughtful, supports the story being told, and is original/creative even if a template has been used. Navigation within the ePortfolio is sophisticated and improves the user's experience.
G: Attention to Technical Details	Major technical issues detract from the effectiveness of the ePortfolio.	Minor technical issues occur, but these generally do not interfere with the effectiveness of the ePortfolio. Some features are inappropriate *or* do not contribute to the message or the construction of identity.	No technical issues are detected with the ePortfolio. It is clear how to use the technical features of the ePortfolio. The features used are mostly appropriate *and* usually contribute to the message and construction of identity.	No technical issues are detected, the features used are appropriate and consistently contribute to the message and identity.
H: Ethical Literacy	Choices in *both* texts and images are ethically problematic demonstrating little awareness of the public nature of ePortfolios or the necessity for respecting others in this public format. Citations are missing.	Choices in *either* texts *or* images are ethically problematic. Questions arise about fair use, ownership, or appropriateness because of the lack of credits or or their inconsistency.	Choices in either texts or images are *mostly* respectful of others and *generally* demonstrate an awareness of the public nature of ePortfolios. Credits and acknowledgement exist but are not consistent across the ePortfolio *or* are not well-handled.	Choices in texts and images *consistently* respect others *and* demonstrate awareness of the public nature of ePortfolios. *No* questions arise about fair use, ownership, or appropriateness because credits and acknowledgements are well-handled throughout the ePortfolio.

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Summative ePortfolio Rubric

Effective Communication Effective Communication is focused on the message of the overall ePortfolio rather than individual components.				
	Beginner: 1	**Developing: 2**	**Mature: 3**	**Professional: 4**
I. Coherent Message for Intended Audience	The textual and visual elements do not work in unison to construct a consistent identity and central message. The purpose of the ePortfolio as a whole is unclear or overtly clunky (I want a job) or the reader has to do too much of the work to supply that message.	Some elements of the ePortfolio as a whole obscure the message or create confusion about the purpose or the author's identity. There are several moments of public disclosure that do not serve to support the author's message or contribute positively to the construction of identity.	The ePortfolio as a whole is almost always effective in both its message and the construction of identity. Most elements work well together so that the reader is drawn in and feels engaged in learning more about the author and his or her experiences, but there are some points where the pieces do not all work together to demonstrate sophistication in the message or construction of identity.	There is a coherent and effective message being told by the ePortfolio as a whole and an identity is consistently and effectively constructed because all elements work together and demonstrate sophistication and originality/creativity.

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Appendix C
E-mail Invitations

Dear [student name],

As you know, Auburn University began an ePortfolio Project in 2012. We understand that you might have completed an ePortfolio during your time at Auburn. We are planning an Assessment Institute to have faculty members learn to evaluate ePortfolios and will publish the results of this assessment as part of a research study. We would like to use your ePortfolio in this Assessment Institute. *If you agree to respond to the attached survey, which includes the opportunity to provide the URL of your ePortfolio, you will be entered into a drawing for a $50 Amazon gift card. All participants are also invited to come to the Office of University Writing (3436 RBD Library) to select a promotional item.*

Additional details of our study are provided below. Please read this consent information carefully and **if you agree, follow the link to the survey provided at the end of this information.**

(NOTE: DO NOT AGREE TO PARTICIPATE UNLESS IRB APPROVAL INFORMATION WITH CURRENT DATES HAS BEEN APPLIED TO THIS DOCUMENT.)

INFORMED CONSENT
for a Research Study titled
"ePortfolio Assessment and Faculty Development"

You are invited to participate in a longitudinal research study to measure the improvement of student produced integrative, outward-facing, professional ePortfolios. The study will invite faculty members from the ePortfolio Project Faculty Cohort to attend an ePortfolio Assessment Institute where they will be trained to use the Project rubric and then read and score student ePortfolios from a variety of disciplines.

The study is being conducted by Dr. Margaret J. Marshall, Director of University Writing in conjunction with Dr. Lesley Bartlett, Assistant Director of University Writing, and Dr. Megan Good, Director of Academic Assessment. You were selected as a possible participant because you are or were a student at Auburn who we believe produced an ePortfolio.

What will be involved if you participate? If you decide to participate in this research study, you will answer a few questions about the experience of creating an ePortfolio and your use of that ePortfolio. You may also provide us with the URL of your ePortfolio(s) for use during the Assessment Institute. We will not be able to make changes to your ePortfolio(s). If you give us permission to use your ePortfolio, it may be used in future Assessment Institutes for comparative purposes.
You will also have the opportunity to give us separate permissions to:

- access your demographic information (major, GPA, gender, race, transfer status, first generation status, ACT/SAT, date(s) of changes in major) from the Office of Institutional Research (OIR)
- quote from your ePortfolio or use screen shots of sections of your ePortfolio that could be captured without revealing your identity or revealing the URL to others
- contact you at a later date for a short follow-up interview about your ePortfolio use

Are there any risks or discomforts? The risks associated with letting us use your ePortfolio are breach of confidentiality and potential for psychological or social discomfort because faculty participating in the Assessment Institute will see your entire ePortfolio.

Steps we will take to minimize these risks:

- We will ask faculty participants to sign an agreement that they will not share the URL to your ePortfolio with anyone and will not talk about the ePortfolios they assessed with anyone outside the Assessment Institute.
- The Institute will be designed so that no faculty members from your major or minor are asked to read and score your ePortfolio.
- If you give us permission to capture screen shots, we will ensure that your identity is not revealed and the screen shots do not include pictures of you or other identifying information.
- Any demographic information you agree to let us access will be kept separate from your name and ePortfolio and will not be seen or used by faculty during the Assessment Institute.

Are there any benefits to yourself or others? If you participate in this study, your ePortfolio will be used to gather assessment data that will serve to improve the ePortfolio Project and student learning at Auburn.

Will you receive compensation for participating? As outlined above, you will be entered in a drawing with other participants to win a $50Amazon gift card. Only one gift card will be awarded each time we conduct an Assessment Institute. Your chances of winning depend on the number of participants but we estimate that number to be 1 in 200. All participants are also invited come to the Office of University Writing at 3436 RBD Library to select a promotional item of your choice.

Are there any costs? There are no costs to you associated with this study other than the time you will spend responding to the survey. The survey should take you no more than 15 minutes.

If you change your mind about participating, you can withdraw at any time during the study by closing your browser. If you decide to withdraw at a later date, you may contact Dr. Margaret Marshall at mjm0030@auburn.edu or at 334-844-7574. Your participation is completely voluntary. If at any time you choose to withdraw, all information and records of your participation will be deleted. Your decision about whether to participate or to stop participating will have no impact on your future relations with Auburn University, the ePortfolio Project, or the Office of University Writing.

Your privacy will be protected. Any information obtained in connection with this study will remain confidential. Information obtained through your participation may be reported to faculty and administrative decision makers at Auburn and/or presented at conferences or published in scholarly journals but you will not be personally identified.

If you have questions about this study, please contact Dr. Margaret J. Marshall at mmarshall@auburn.edu or 344-844-7474. You may print a copy of this document to keep.

If you have questions about your rights as a research participant, you may contact the Auburn University Office of Human Subjects Research or the Institutional Review Board by phone (334)-844-5966 or e-mail at hsubjec@auburn.edu or IRBChair@auburn.edu.

HAVING READ THE INFORMATION PROVIDED, YOU MUST DECIDE WHETHER OR NOT YOU WISH TO PARTICIPATE IN THIS RESEARCH STUDY.

IF YOU ARE WILLING TO PARTICIPATE IN THE SURVEY, ACCESSING IT WILL SERVE AS YOUR CONSENT TO PARTICIPATE. WHEN COMPLETING THE SURVEY, YOU WILL HAVE OPPORTUNITIES TO CONSENT TO THE LEVELS OF INVOLVEMENT OUTLINED ABOVE.

Link to Survey

_____ 11-16-2015
Primary Investigator Date

Margaret J. Marshall
Printed Name

Decline to participate to be removed from the contact list

Appendix D
Student Survey

Student ePortfolio AI Research Survey

Q1 I agree that I am at least 19 years old and want to participate in this research study.
- ❍ No
- ❍ Yes

Q2 Thank you for taking the time to help the ePortfolio Project! If you complete this survey, you will be entered to win a $50 Amazon gift certificate. Your chances of winning are 1 in 200. Please stop by the Office of University Writing in the RBD Library to pick up a promotional item of your choice!

Q3 You may withdraw from this study at any time by contacting [redacted] at [redacted] or by phoning her at [redacted]. If you wish to withdraw during this survey, you may do so by closing your browser without hitting the submit button at the end of this survey and any answers that you have provided will be eliminated from the study.

Q4 Please enter your first and last name below.
First Name
Last Name

Q5 We are interested in how students use or plan to use ePortfolios when they transition to graduate school or professional careers.

	Please select your response below.				
	Strongly Disagree (1)	Disagree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
The process of creating an ePortfolio helped me think about what I wanted to do after graduation. (1)	o	o	o	o	o
I used or plan to use my ePortfolio while looking for a job or applying to graduate school. (2)	o	o	o	o	o
Creating an ePortfolio helped me see connections among my experiences. (3)	o	o	o	o	o
Creating an ePortfolio helped me explain my interests and skills. (4)	o	o	o	o	o
I have evidence my ePortfolio helped me secure a position or admission to a graduate program. (5)	o	o	o	o	o

Display This Question:
If We are interested in how students use or plan to use ePortfolios when they transition to graduate school or professional careers; I have evidence my ePortfolio helped me secure a position or admission to a graduate program. - Please select your response below. - Agree Is Selected
Or We are interested in how students use or plan to use ePortfolios when they transition to graduate school or professional careers; I have evidence my ePortfolio helped me secure a position or admission to a graduate program. - Please select your response below. - Strongly Agree Is Selected

Q6 What is the evidence your ePortfolio helped you secure a position or admission to a graduate program?

Q7 I give the ePortfolio Project permission to use my ePortfolio(s) for the purposes described. Your identity will be visible to the faculty scoring your ePortfolio, but steps are in place to ensure that your participation is confidential.

- ❍ No
- ❍ Yes

Display This Question:
If I have read the Information Letter provided and give the ePortfolio Project permission to use my ePortfolio for the purposes described. Yes Is Selected

Q8 How many ePortfolios do you currently have?

- ❍ One
- ❍ Two
- ❍ Three

Display This Question:
If I have read the Information Letter provided and give the ePortfolio Project permission to use my ePortfolio for the purposes described. Yes Is Selected

Q9 Please provide your ePortfolio link below.
My ePortfolio URL:
Approximate date of completion:
Approximate date of last update:

Display This Question:
If I have read the Information Letter provided and give the ePortfolio Project permission to use my ePortfolio for the purposes described. Yes Is Selected
And How many ePortfolios do you currently have? Two Is Selected
Or How many ePortfolios do you currently have? Three Is Selected

Q10 Please provide your second ePortfolio link below.
My ePortfolio URL:
Approximate date of completion:
Approximate date of last update:

Display This Question:
If I have read the Information Letter provided and give the ePortfolio Project permission to use my ePortfolio for the purposes described. Yes Is Selected
And how many ePortfolios do you currently have? Three Is Selected

Q11 Please provide your third ePortfolio link below.
My ePortfolio URL:
Approximate date of completion:
Approximate date of last update:

Q12 I give the ePortfolio Project permission to access the following demographic data from the Office of Institutional Research for the duration of this study only and in compliance with all FERPA regulations. The ePortfolio Project will keep your data stored separately from your name and ePortfolio URL. Anonymized data will be kept indefinitely.

	Yes (1)	No (2)
Major (2)	O	O
GPA (3)	O	O
Gender (4)	O	O
Race (5)	O	O
Transfer Status (6)	O	O
First Generation Status (7)	O	O
ACT/SAT Score (8)	O	O
Date of any changes in major (9)	O	O

Display This Question:
If I give the ePortfolio Project permission to use my ePortfolio(s) for the purposes described. Yes Is Selected

Q13 I give the ePortfolio Project permission to use anonymized parts of my ePortfolio for publications or conferences. The ePortfolio Project will only use quotes or anonymous screenshots in publications or presentations. Privacy settings on your ePortfolio will not be changed and steps will be taken to ensure that quotes or anonymous screenshots will not permit your ePortfolio to be found through common search engines if your privacy settings have prohibited public access.

- ❍ No
- ❍ Yes

Display This Question:
If I give the ePortfolio Project permission to use my ePortfolio(s) for the purposes described. Yes Is Selected

Q14 The ePortfolio Project is interested in following up with students to find out about how students use ePortfolios after leaving Auburn. Please indicate if we may contact you later to ask follow up questions.

- ❍ No
- ❍ Yes

Q15 I would like to be notified of any publications or reports using these survey results.

- ❍ No
- ❍ Yes

Appendix E
Pre/Post Faculty Confidence Survey

One goal of the Assessment Institute is to foster a deeper understanding of the four student learning outcomes for the ePortfolio Project. We are interested in seeing how your understanding changes as a result of participating in the institute. Please respond to the following statements.

	Strongly Disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly Agree (5)
I feel confident teaching Critical Thinking through Reflection in ePortfolios. (1)	O	O	O	O	O
I feel confident assessing Critical Thinking through Reflection in ePortfolios. (2)	O	O	O	O	O
I feel confident teaching Visual Literacy in ePortfolios. (3)	O	O	O	O	O
I feel confident assessing Visual Literacy in ePortfolios. (4)	O	O	O	O	O
I feel confident teaching Technical Competency in ePortfolios. (5)	O	O	O	O	O
I feel confident assessing Technical Competency in ePortfolios. (6)	O	O	O	O	O
I feel confident teaching Effective Communication in ePortfolios. (7)	O	O	O	O	O
I feel confident assessing Effective Communication in ePortfolios. (8)	O	O	O	O	O

Appendix F
AI Schedule

ePortfolio Assessment Institute
Auburn University

DAY 1 Tuesday, May 10th

8:00 – 8:15	arrive, coffee, settle in
8:15 – 8:45	introductions and details
8:45 -- 9:30	overview of ePortfolio Project with examples
9:30	break
9:45 – 11:30	understanding the summative rubric
11:30 – 12:30	lunch
12:30 – 3:20	training with the rubric
3:20	break
3:30 - 4:50	norming session
5:00	collection of all materials and leave

DAY 2 Wednesday, May 11th

8:00 - 8:15	arrive, coffee, questions from yesterday
8:20 – 9:30	norming session
9:30 – 2:00	scoring your packet
11:30	lunch will be out; take your lunch and other breaks as you wish
2:00-3:20	adjudication/discussion with your scoring partner
3:20	break
3:30-4:50	debrief on the experience of the Assessment Institute
5:00	collection of all materials and leave

Appendix G
Scoring sheet

ePORTFOLIO PROJECT
LEARN IT. LIVE IT. SHARE IT.

SCORER:					URL				
	Critical Thinking Through Reflection			Visual Literacy		Technical Competency			Effective Communication
	a	b	c	d	e	f	g	h	i
EP									
Notes on ePortfolio									
Adjudication Notes									
SCORES AFTER ADJUDICATION									
	Critical Thinking Through Reflection			Visual Literacy		Technical Competency			Effective Communication
	a	b	c	d	e	f	g	h	i
EP									

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