Using ePortfolios to Help Students Reframe, Reflect, and Integrate Their Learning[1]

Annemarie Galeucia, Louisiana State University
Boz Bowles, Louisiana State University
Jennifer Baumgartner, Louisiana State University
Rebecca Burdette, Louisiana State University

Abstract: One of the many initiatives within Louisiana State University's (LSU) holistic Communication across the Curriculum program is the LSU Distinguished Communicator (DC) Medal program. Implemented in 2005, the program encompasses communication experiences including mentoring, in-depth training in communication in their coursework, and practice of communication in leadership positions. Finally, students who earn the medal complete the DC ePortfolio as a summative, multimodal demonstration of their ability to effectively communicate who they are, what they are capable of, and how their experiences inside and outside the classroom are relevant to their post-graduation goals. To help students reflect, frame, and integrate their disciplinary learning with intention, DC candidates complete a series of exercises fostering metacognition, audience analysis, and inquiry about effective modes and technologies given their goals and related context. In this study, we explore development of the DC ePortfolio process over an eighteen-year period, focusing on three reflective questions inspired by our programmatic goals: How might the changes in the program over time increase focus on higher-order concerns? How do the changes support a student-centered practice? How does the DC ePortfolio process, both then and now, facilitate integrative reflection that will instigate transferable skills? As we continued to dive into this work, another question arose that speaks to the role of ePortfolios at a broader institutional level: how has our history of administering an ePortfolio program reflected our increasing understanding of the challenges and opportunities that emerge when balancing small-scale program-level learning goals with institution-wide large-scale metrics for learning? We submit that the DC ePortfolio process in its current iteration is a highly effective, small-in-scale model that positions students to combine reflective practices, classic approaches to audience analysis, and opportunities for extreme customization that multimodal technologies allow. This, in turn, supports students as they foster self-efficacy and develop a narrative that is not bound to templated or academic standards, but to customized goals and contexts that are constantly evolving in a dynamic world.

One of the many initiatives within Louisiana State University's (LSU) holistic Communication across the Curriculum (CxC) program is the LSU Distinguished Communicator (DC) Medal program.

Students learn about the DC Medal program in different ways, such as first-year orientation, peers, and faculty, throughout their college years. Undergraduate students with at least three semesters prior to graduation are eligible to apply. Upon applying, students complete a form, attend an informational meeting with CxC staff and secure a faculty mentor. From that point forward, students are considered candidates for the medal and are coached through a series of requirements to earn the distinction. These steps include two major focus areas: successfully completing and earning a grade of B- or higher in a sequence of multimodal communication-intensive (C-I) courses within their discipline and completing in their final semester a scaffolded signature project in the form of a public-facing ePortfolio. The DC ePortfolio is a summative demonstration of the student's ability to communicate effectively—in a multimodal capacity—who they are, what they are capable of, and how their experiences inside and outside the classroom are relevant to their post-graduation goals.

As a showcase portfolio, the DC ePortfolio is not simply an assessment repository. Instead, the process DC candidates use to construct their ePortfolio is a student learning experience, to help students reflect, frame, and integrate their disciplinary learning with intention. As part of this work, DC candidates complete a series of exercises on their own as well as with their faculty mentor and the CxC team, fostering metacognition, audience analysis, and inquiry about effective modes and technologies given their goals and related context.

In this article, we reflect on work in the LSU DC ePortfolio composition process. This reflection included a review of the programmatic changes and requirements for the ePortfolio since the beginning of the program in 2005. We did this work to learn more about how these changes relate to our developing understanding of the role of ePortfolios in the program and students' ability to analyze audiences and demonstrate a nuanced self-narrative to those audiences.

Through this reflection process, we examined the trajectory of adjustments made over this eighteen-year period, split into three phases that include the current iteration. We found that the changes do appear to position students to combine reflective practices, classic approaches to audience analysis, and opportunities for extreme customization via multimodal narratives. We offer the lessons we learned in our context to others engaged in ePortfolio work. While the details will differ, there is evidence that these changes foster self-efficacy and develop a narrative that is not bound to templated or academic standards, but instead, to customized goals and contexts that are constantly evolving in a dynamic world. The lessons learned and structures outlined here, we believe, can help other institutions reflect on the role of a highly customized showcase or signature ePortfolio and correlated mentoring model amid concerns about institution-wide assessment versus programmatic assessment, the utility of developing rubrics that focus on higher order thinking and communication concerns, and faculty/staff bandwidth.

Program History: Focus on DC Medal History and "Why" Behind the Process

The CxC team has a culture of comfort with experimentation and a commitment to continual assessment to move us forward. The majority of the CxC team has been with the program for at least ten years, and among the authors for this paper are faculty/staff that started in 2006 and 2008. With team members holding terminal degrees from various disciplines and backgrounds, we bring to this work a respect for diverse disciplinary approaches to communication. To this effect, the LSU DC Medal Program seeks to support self-motivated LSU undergraduates who want to refine their communication skills and excel in their professional and civic arenas. Through the DC Medal Program, candidates from arts, humanities, design, social sciences, and STEM fields undergo a variety of training experiences to develop their writing, speaking, visual, and technological communication skills. They are required to build a public portfolio (the ePortfolio) demonstrating their proficiency.

They must also successfully articulate their leadership roles and experiences beyond the classroom that reflect their communication skills and their professional-development narrative. Students who successfully achieve this unique distinction are recognized with a medal at graduation and receive a permanent commendation on their official transcripts. In alumni surveys and discussions with DC Medalist graduates, we have learned that this commendation has given them significant leverage in today's job market, placing their application above others. Once they start their work, the suite of skills they can apply in professional and civic settings continues to set them apart throughout their careers. Since the DC Medal program implementation in 2005, more than 800 LSU students have met the exemplary ePortfolio standards required of the program.

While students are given a structured set of criteria for which they will be assessed, the criteria reflect global, broader concerns rather than local, specified standards, to accommodate individual disciplines and goals. There is no single structure or format for the ePortfolios. Students are not required to use a certain template or include the same materials. Instead, the DC ePortfolio is primarily a showcase portfolio of a student's skills and knowledge in their discipline using multimodal forms of communication. When students complete the ePortfolio, they are engaging a real-world experience of communicating one's knowledge and skill to an external audience. This empowers decisions about (a) multimodality encompassing written, spoken, visual, and technological communication approaches based on contexts and goals, (b) relevance to individual disciplinary values and approaches, and (c) connections to content through real-world applications. This work is not simple; it involves a significant investment of focus, and students who complete an ePortfolio must make many decisions- about the design, the content, and the viewer experience.

Grounding the Work of ePortfolios

CxC's growth from the well-established and innovative Writing across the Curriculum (WAC) and Writing in the Disciplines (WID) programs of the late twentieth century and early 2000s was a natural evolution in response to the growing importance of skill with multimodalities of communication. The bulk of contemporary literature regarding WAC/WID programs at the time of CxC's founding suggests that these authors knew their programs were on a precipice of change. There was an understanding that the roles writing would play in coming years would evolve beyond bringing traditional composition instruction into new communities (Bazerman, 1991, 1992; Bazerman & Russell, 1995), and that those roles and their features were inherent and unique across disciplines (Carter, 2007; Fulwiler & Young, 1986, 1990). The idea that writing was a way to learn as well as a thing to learn further suggested that it would be the responsibility of a larger campus community, or collection of communities, to know how to implement and assess new programs to meet a wider variety of student learning outcomes (Herrington, 1981, 1992; McLeod, 1989, 1995, 2002; McLeod & Soven, 1992; Russell, 1987, 1990, 2002; Selfe, 1997; Thaiss, 1983, 2001; Thaiss & Zawacki, 2002; Walvoord et al., 1997).

As advancing technologies facilitated more avenues for combining traditional communication modes, we recognized, along with many writing scholars at the time (Childers & Lowry, 2005; Duffelmeyer & Ellerton, 2005; Faigley, 2002; Faigley at al., 2004; Mullin, 2005; Orr et al., 2005; Price & Warner, 2005; Wysocki et al., 2004), that a deftness in employing multimodalities, whether new conventions or novel applications, would benefit students in their future endeavors. This has driven our understanding of the role of the ePortfolio.

In its early days, the DC ePortfolio reflected common portfolio practices combining pre- and post-coursework communication samples pulled from coursework, and a series of reflections submitted to articulate growth over the scope of their college journey. As a key component of LSU's reaffirmation Quality Enhancement Plan, the DC ePortfolio was developed as an experimental

program demonstrating the potential for institution-wide adoption of capstone ePortfolios. One unique aspect of the DC ePortfolio process present since its inception is that while all students must meet benchmarks at their communication-intensive course levels, the ePortfolio process is not formally tied to a single curriculum or degree requirement. In this regard, the DC ePortfolio can serve as an early example of a micro credential model.

In 2016, the DC ePortfolio shifted toward prompts and conceptual framing more aligned with portfolios focusing on the motivational utility and emphasis on higher order concerns (illustrated at the course level by Chittum 2018), as well as emerging discussions related to the concept of career portfolios (Bonsignore 2013). Further, the DC Medalist model shifted away from training students to use specific platforms in the first stage of our program (in our case, Dreamweaver) and toward criteria that emphasized integrative learning, using American Association of Colleges & Universities (AAC&U) VALUE rubrics. Along these lines, others (Benander et al. 2016) have demonstrated that the use of ePortfolios in these ways can effectively to train students in the process of integrative thinking, and that ePortfolios may be able to do this even more effectively than traditional course-level assignments. Harver et al (2019) also used VALUE rubrics to extend the conversation into the role of audience analysis as a tool for ePortfolio curation, a focus area that is also emphasized in the DC ePortfolio mode. Its current form and scope continue to reflect these approaches, and recent data from AAC&U (Finley 2021) determining that 89% of employers are more likely to consider a candidate with a portfolio of work reinforces our scope in keeping the portfolios geared toward a public audience and post-graduation goals, both for practical motivations about the utility of portfolios and for the emphasis on critical thinking to promote integration and transfer that external audiences imply.

Experiential learning models (Fry & Kolb, 1979; Rodgers, 2002) showcase the connections between experience and learning, with reflection as the key pathway. Experiential learning involves first concrete experiences that are observed and reflected upon by the learner (Morris, 2020). Next, the learner builds new abstract ideas and tests them in additional concrete experiences, and the process repeats. Space for reflection and integration of experiences is critical to capitalize on opportunities and resulting learning (Kuh et al., 2018).

But how does reflection situate, reinforce, and expand learning? For DC ePortfolios, one key departure from some ePortfolios is that the DC Medal ePortfolio in its current state emphasizes reflection as a multimodal process rather than an artifact that needs to be explicitly included in the portfolio. Reflection is useful when learners encounter confusing, novel, and difficult circumstances because it allows them to connect new learning to existing knowledge and goals (Karm, 2010; Veine et al., 2020). This point is particularly salient when considering the high degree of customization students are tasked with during the ePortfolio process. Further, engaging in reflection allows learners to bring in all parts of self: motivations, emotions, goals, previous knowledge and experiences, and world views, to integrate them, creating a space where they can communicate their growing competence.

Theories of teaching and learning have long acknowledged the importance and role of reflection. In contemporary higher education, constructivist models dominate, emphasizing learning as something created or constructed by the learner. Piaget (1952), an early constructivist, suggests that learning occurs through an interaction of experience and maturity in which an individual processes concrete experiences through assimilation and accommodation. Assimilation is a process in which a learner connects a novel experience to something they already know. For example, when a student is asked to write a paper for their first-year college course, they may assimilate this direction with previous learning activities and assignments when asked to compose a "paper." We use the term "assimilation" to describe how we incorporate new information into what we already know. When learners encounter something that is novel or doesn't fit into an existing framework, the accommodation

process allows for the creation of new frameworks and understandings. All learning is a process of assimilation and accommodation, and both are made conscious through the practice of reflection.

However, an individual's ability to reflect and learn is supported through interactions with others, especially those with additional learning and diverse experiences. What Vygotsky in his sociocultural learning theory terms a "more competent other" (1978) is provided to the DC Medalist candidate in a faculty advisor who brings relevant experience and knowledge to help the student navigate the disciplinary norms of ePortfolio content and a CxC Representative who mentors students in constructing a website that effectively communicates their knowledge, skills, and abilities to their identified audience. CxC Representatives hold terminal degrees in their respective fields and work with students and faculty in specific disciplines. Students complete self-reviews and receive formative feedback from their faculty advisor and CxC Representative on their draft ePortfolio. Then their final ePortfolio is evaluated in multiple steps: first by the faculty advisor and then in a single-blind review by at least one experienced faculty member or professional intimately familiar with the student's intended post-graduate arena. In the formative and summative stages, all parties are guided by the DC ePortfolio rubric. In its current form, this holistic rubric (shared in the next section) reflects AAC&U integrative learning assessment measures and extends fundamental WAC/WID principles to include criteria that assess the students' multimodal communication skills (written, spoken, visual, and technological); the appropriateness of included work samples, and their associated web content; and their ability to synthesize connections among their technical knowledge, learning, and leadership experiences to articulate their relevance to the intended purpose/audience.

Our Process and our Questions

To engage in a deep reflection on our own work, this project included a review of institutional materials associated with the ePortfolio process, including guidelines, rubrics, and prompts for a variety of private-facing documents and reflections that over the years were either required for the program or incorporated as personal planning guidelines while preparing the public ePortfolio. We focused on three central reflective questions inspired by our programmatic goals: How might the changes in the program over time increase focus on higher-order concerns? How do the changes support a student-centered practice? How does the DC ePortfolio process, both then and now, facilitate integrative reflection that will instigate transferable skills? As we continued to dive into this work, another question arose that speaks to the role of ePortfolios at a broader institutional level: how has our history of administering an ePortfolio program reflected our increasing understanding of the challenges and opportunities that emerge when balancing small-scale program-level learning goals with institution-wide large-scale metrics for learning?

We explored these questions through the lens of current trends in teaching and learning, an awareness of the practical demands on students balancing curricular and co-curricular responsibilities, and with the knowledge that technology has evolved significantly over the past eighteen years. The DC Medal program was founded with intentional focus on establishing proof of concept that multimodal communication skills can and should be fostered for students from all majors and disciplines, as well as with the contemporary discussions of integration and transfer in mind. This paper represents our first systematic attempt since the program's early days to analyze the program's growth via the lens of these reflective questions and serves as an initial stage of exploration into our past to further codify future goals, guiding principles and assessment models, and DC program structures. While there were minor edits to criteria and prompts made across the years, there are three significant frameworks, referred to in this paper as phases, to DC ePortfolios and related materials that have occurred over the 18-year period we reviewed for this study. Table 1 outlines the milestone moments in the development of the current criteria and rubrics and reflections in the DC program. It also previews the main data sources that we reviewed for this

project: the program criteria, their related prompts and guidelines, and the assessments used in formative and summative stages of portfolio development.

Table 1: Phases of DC Criteria and Assessments, 2005-2023

Criteria/Assessment	Phase One (2005-2016): Public and private facing portfolios	Phase Two (2016-2019): Public Portfolio, private spoken communication sample option, Dear Reviewer Letter	Phase Three (2019-2023): Public Portfolio inclusive of all modes, Dear Reviewer Letter
Program Guidelines and Reflection Prompts	Guidelines for Public and Private Portfolios	Public Portfolio Guidelines Dear Reviewer Letter Prompts	Public Portfolio Guidelines Dear Reviewer Letter Prompts ePortfolio Planning Prompts (no submission to program required.): • Translating your Skills Worksheet • Getting Started with Audience and Goals • Crafting Order and Substance
Assessment Rubrics	DC Public and Private Portfolio Assessment Rubric	DC Public Portfolio, Spoken Sample and Dear Reviewer Assessment Rubric	DC Assessment Rubrics 2019-present

Of the 800+ Distinguished Communicator alumni, we reviewed reflections and letters to reviewers, formative and summative portfolio self-assessments, and public-facing portfolios from 78 DC Medalists who provided permission for us to use their materials in this study. We also reviewed formative and summative portfolio assessments from 27 faculty advisors and Review Panelists. All samples for this study were used with consent and under approval from our institution's IRB. Our DC alumni included in the study spanned graduation years 2013–2021: 23 from Phase One, 25 from Phase Two, and 30 from Phase Three. They represent a broad range of disciplines: sciences, social sciences, arts, engineering, humanities, business, mass communication, education, and design fields. We reviewed materials from our alumni, advisors, and reviewers to assess how our prompts and guidelines fostered audience analysis, integration of skills and experiences, and a focus on transferability of these to candidates' post-graduation settings and goals.

Changes to the Distinguished Communicator ePortfolio across the Years

Phase One Criteria and Guidelines (2005-2016)

The first several years of the DC Portfolio Program included criteria for two separate, but related portfolios:

- A public-facing website communicating skills and abilities relevant to the student's post-graduation target audience.

- A private-facing, cloud-based portfolio framed as departmental assessment. This included required reflection submissions, completed over the duration of the DC Medal Program.

This structure was designed as a preliminary step in upscaling an experimental program expanding WAC/WID structures into four fully formed communication modes for the program: written, spoken, visual, and technological. The technological mode was an area we wanted to strategically scaffold over a period of years as this was the least developed communication mode in WAC/WID worlds, yet had significant potential (Bridwell-Bowles, 2009). In 2005, the use of hyperlinks themselves were considered technological communication because non-linear writing was relatively new outside of choose-your-own-adventure novels. Further, at the time of implementation for this phase (2005–2006), broadscale user website applications were limited to FTP and Dreamweaver. Wikis and blogs were still the leading edge in web communications built by the average person, and we were balancing the longitudinal goals of fully immersed multimodal representation with technological limitations. The focus of many programs like ours in the mid-2000's specifically was on communication skills, particularly written and spoken communication skills (National Commission on Writing, 2004; U.S. Department of Labor, 2006; Tufte, 2004).

The team decided that given the technology available and its associated limitations, it was more important to launch the first phase without requiring integration of embedded video and audio into a public website. This decision enabled us to stretch the limits of what at the time was often referred to as "Web 2.0," begin students and faculty on a journey toward multimodal integration, and promote a student's focus on intentional expansion of their communication skills beyond one or two modes most taught in their disciplines. As a result, the private portfolio requirement included an extensive suite of documents:

- written, spoken, visual and technological communication samples (for each mode, with one early college and one late college sample) If one sample reflected more than one mode that was allowable, if the student justified it and obtained program approval

- Abstracts detailing the student's communication skill, discussing each communication mode's early and late samples

- A reflection on a leadership experience

- A reflection on an extracurricular experience related to their major or career path (must be different from leadership experience)

- A final reflection detailing the student's growth over their undergraduate trajectory

Another significant factor in the development and implementation of Phase One was its role a university-wide initiative. As part of the university's reaffirmation process, there is a requirement to create a Quality Enhancement Plan (QEP) that demonstrates targeted approaches to deepening student learning, as well as to assess and reports on this project. Under the guidelines for assessment related to the QEP, we instituted a pre- and post-assessment requirement for the four communication artifacts. This also informed the very specific guidelines for the types of samples students were asked to include. For example, a speaking and writing sample in a second language (if the student was majoring or minoring in a language other than English) was required, as were mode examples from a first-year course, a second- or third-year course, and from capstone courses in the student's major (Bridwell-Bowles, Powell, et al. 2007). During this stage, assessment of DC ePortfolios was thoroughly connected to student learning artifacts at the classroom level.

The rubric itself had to consider the structure developed under the QEP pre- and post-assessment models, as well as the technological limitations of the time, and as a result did not prioritize integration of artifacts between the ePortfolio audience and multimodal communication artifacts in the private documents folder. It was possible for a candidate to omit a communication mode in their public facing ePortfolio (specifically, the spoken mode), yet pass because of samples they included in their private documents. Additionally, the private portfolio reflection requirements used prompting

language emphasizing best practices in metacognition (Where did I start? What did I do? What further steps do I want to take to grow?) rather than transferability (Why does this matter for my future audience? Where will I take these skills?) These latter elements often appeared, but the prompting language did not clearly identify them as priorities because at the time, they were not.

The public-facing portfolio criteria were broad enough to allow for disciplinary differences, but discreet enough to be useful as a guideline for students during their formative stages of portfolio design. Each criterion was graded on a scale of 1 (weak)–6 (strong) and included open-ended comment boxes for the Faculty Advisor and CxC Representative to make notes both during the formative and summative stages. For example, for each communication mode (written, spoken, visual and technological) the quality of work was rated on the 1-6 scale, but there were no further prompts about what constituted quality in the disciplines. Further, the rubric contained the following prompt: "appropriate focus on communication skills (written, spoken, visual and technological) for the audience and purpose" but had no notes regarding further criteria and left that to the reviewer's interpretation based on their (extensive) experience in the field or discipline. These criteria invoke the traditional rhetorical concerns about audience, message, purpose, and intention, without ever bringing in discipline-specific terms or requirements that might alienate some fields.

The latter questions on the rubric, specific to communication artifacts, included on the public-facing portfolio prompted reviewers to look not simply at the website, but at specific documents and files shared in it. At the time, we were also calibrating requirements to address disciplinary differences, learning curves associated with those differences, and common standards that an engineer, a French major, a graphic designer, and chemistry major, for example, could all equitably strive toward. There was considerable debate about how to identify what was a must-have for the public portfolio. For example, in these early stages we asked a lot of questions about how much time should be dedicated to content that is not traditionally of concern in their disciplines. How much time should a Chemical engineer spend on cinematography? Does an English major need as much technological literacy as a computer science major? Ultimately, we determined that giving the student the opportunity to demonstrate growth and skill in the private documents would give them more agency in presenting their very best modes in the public portfolio. It also, however, facilitated an assessment model that deprioritized integrative and transfer-focused exploration.

In 2015, several factors moved us to reimagine the portfolio composition process. One was the new ubiquity of template-driven website building resources. It simply became easier to build a website. At the same time, there was a shift in institutional priorities. The QEP cycle requiring pre- and post-assessment models for portfolio work were no longer priorities, and we shifted from portfolios as tools primarily for institutional assessment to portfolios demonstrating student learning outcomes. In conjunction with those developments, we initiated an adjustment to our DC guidelines and requirements and determined that it was time to shift to a more intentional structure emphasizing integration and transferable skills. It should also be noted, however, that concern for team bandwidth and commitment to efficient workflow for students, faculty, and reviewers was also a significant motivation. With this in mind, and upon review and assessment of the early guidelines and rubrics, we determined that the language and structure of the rubric in Phase One prompted a split focus: one on the public portfolio, and the other on communication samples in the private document. The second item for adjustment that we noted related to the grading scale itself; while 1-6 offered a broad scale in which to assess specifics and offer feedback, it did not make clear which benchmarks to which the student should aim; is a 4 enough? Does it need to be a 6? These reflections prompted the updated criteria and guidelines for the second phase of implementation.

Reflecting on our concern for student-focused practices, we recognized that the institutional assessment models in place in Phase One were largely serving institution reporting; while not detrimental to the student, the public/private structure of the portfolio components, and

organization and presentation of the assessment materials, prioritized the institutional reporting needs. Perhaps the strongest part of this Phase One was the work to promote student reflection in their pre- and post- reflections related to communication skills as well as their reflections related to leadership and experiential learning. As we shifted into Phase Two, the team sought to enhance the program elements that centered the student experience and long-term goals, keeping the strengths of reflection processes but blending them with more explicit promotion of the process of using communication skills to create their ePortfolio. Further, we recognized that when we decreased institution-level reporting requirements, we had more flexibility to begin to experiment with how multimodal communication skills manifest in the student learning experience, as well as how to identify the higher-order concerns across modes that could inform more practical portfolio assessment.

Phase Two Criteria and Guidelines 2016-2019

After completing the required QEP documentation cycle involving extensive pre- and post-assessments and the structure of the private and public portfolios, and as technological applications became more readily available for people working beyond design and technology fields, we began the process of shifting away from a comprehensive private portfolio. In 2016, we launched updates to the program criteria:

- A public-facing website oriented to future audiences and goals, incorporating evidence from four modes of communication, as well as leadership skills and experiential learning beyond the classroom

- Dear Reviewer Letter: One document oriented toward faculty advisors and Review Panelists detailing the choices made in creating the portfolio

- The option to include a spoken sample as a privately shared link or file if it was deemed unsuitable for the public portfolio

With the elimination of the private portfolio, the public portfolio contents became the primary measure by which a student's communication skills were assessed. This led to a shift away from emphasizing course-based artifacts as a significant content component. While still encouraged, the portfolio itself became an integrated artifact promoting adjustments from one form of media, and scope, to another.

Additionally, while the four modes were more explicitly integrated into the public ePortfolio, the team determined that in Phase Two we would encourage but not require inclusion of the spoken sample in the ePortfolio. For some disciplines, it was determined that despite technological advances the process of embedding video and audio samples was still a bigger stretch than deemed appropriate. More significantly, and thinking about again about student-centered practice, the team reflected on considerations of bias and discrimination of requiring a speaking sample. In this conversation, we considered potential discrimination associated with accents perceived as outside the mainstream of projected fields (Derwing, 2003; Gluszek & Dovidio, 2010; more recently Dragojevic, 2021). We also had questions about how requiring a spoken sample or video sample on a public ePortfolio would lead to potential discrimination against people who are neurodiverse and/or have differences in spoken affect and ability. To date, students from a variety of linguistic backgrounds, as well as openly neurodiverse students, had participated in the program. Ultimately, we determined that for Phase Two, we would encourage but not require the spoken sample on the ePortfolio, committing to further our research in intergroup communication, continually assess the process, position students to make informed decisions about how they want to present themselves, and ensure that presentation is on their terms. This work continues into Phase Three, as we continue

to explore how both our program materials and our support for effective mentoring can celebrate difference and communication skills in multimodal platforms.

In Phase Two, we also updated the rubric not only to reflect the adjustment away from a private document portfolio, but also to establish more transparent benchmarks for students and their faculty advisors. In place of the 1–6 scale indicating strength or weakness, we developed the following benchmarks, asking students and faculty to consider the average LSU student:

- Insufficient Evidence

- Below expectations

- Indicative of the average student

- Better than the average student

- Outstanding; Indicative of an LSU Distinguished Communicator

While these adjustments succeeded in streamlining workflow for students and their faculty advisors, there were still some limitations to the rubric. One of the greatest challenges with this continued to be explaining in thorough detail what each of the assessment benchmarks meant. For example, one common discussion was how to define the average student. In the DC program, if the materials are rated "average," the student does not graduate with the distinction. In their planning and formative stages, to use the terms "average" and "outstanding" clearly communicate the expectations; to be a Distinguished Communicator, one must demonstrate outstanding skills. On the other hand, in meetings and training sessions for faculty and reviewers, there were a lot of questions about what constitutes the average LSU student. While most faculty advisors have some kind of standard in mind related to the average student, this is a challenging question for the student without a context for thinking about their work in relation to their peers, and it represents an area for future reflection and study for our group.

When reflecting on Phase Two we determined that it was successful in streamlining a student-centered practice. Even amid the debates about how to define the average student, the process of this debate fostered meaningful discussions among faculty and—significantly—between faculty and their DC candidates. This, we believe, helped further promote emphasis on higher order concerns. In the process of identifying average, the student was put in a position to ask about how they see themselves, and what their goals are in being seen as outstanding. One hiccup through this process was that the shift away from institutional-wide assessment models sometimes confused the goal for both students and faculty; in the most pessimistic of terms, institutional assessment is seen by some as box-checking. When we transitioned in focus to the public portfolio only, the process of redefining portfolio goals, audience, and content because significantly less stringent and more open-ended for the student.

Another area for future study that might be helpful is to explore how these criteria are reflected in a single field/discipline. We believe that this kind of sample focusing can offer insight to the changing goal and communication approaches within a field. The CxC Team offered loose guidance to consider the typical graduating student a faculty member encounters in their programs, but this remains, even in Phase Three, an area of focus as we plan for further refinement of the assessment rubric.

Phase Two represented a transitional period, and from 2016-2019 we continued this trajectory, focusing on reflection about and edits to the language of the materials shared with students, their faculty advisors, and review panelists.

Phase Three Criteria and Guidelines (2019-2022)

In 2019, we launched another updated portfolio rubric model. This model incorporated guidance from the AAC&U Integrative Learning VALUE rubric, National Association of Colleges and Employers (NACE) competencies, the understood value of iterative feedback foundational to communication-intensive learning, and an emphasis on fostering student reflexivity on the transferability of their undergraduate experiences. The guidelines and criteria remained largely the same, with one exception: since 2019, spoken samples are now required on the public ePortfolio.

The shift of the spoken sample to the public ePortfolio represents successful completion of a trajectory set in motion from Phase One. The technological capabilities are now present. Students across disciplines are increasingly being asked to provide real-time or pre-recorded examples of their spoken communication skills and hence are motivated to proactively share samples. Additionally, during our Phase Two reflection, we determined that when promoting student agency and supporting their critical engagement with audience and personal narrative, our initial concerns about a requirement being potentially damaging or intimidating to the student were mitigated as students were motivated and engaged in the opportunity to articulate their work and their skills on their own terms. These changes also provided opportunities for neurodiverse students to showcase skills in ways that work for them. Student outreach to the CxC team and faculty interest and applications to the program continuously increased. Further, when comparing DC Medalist graduation rates from the 2019–2020 academic year (70 DC Medalist graduates) and the 2021–2022 academic year (83 DC Medalist graduates), our upward trajectory is roughly 15%. In the 2022–2023 academic year this trend continued, with 90 DC Medalist graduates. While there are several reasons why these numbers have increased, including marketing and outreach efforts and increased enrollments at LSU, the upward trajectory of DC Medalist graduates demonstrates to us that the spoken sample inclusion in the portfolio has not led to a decrease in participation. Additionally, during this time our team has developed a more robust process for collecting student self-reported data about demographics, identity, and ability, and we anticipate future studies will enable us to use that data to explore if and how our student population participating in the DC Medal program has changed since implementing these adjustments in Phase Three.

The rubric for ePortfolio launched with two significant revisions:

- In the formative stage, faculty advisors were asked to indicate whether the portfolio required moderate or significant revision. This promoted the emphasis on iterative development, for both students and faculty advisors.

- Questions specifically targeting integrative reflection and transfer were added: The candidate's public portfolio meaningfully synthesizes connections among experiences outside of the formal classroom (e.g., internships, travel abroad, co-ops, research, etc.) and articulates how these experiences inform and reflect their professional narrative and potential.

While this language reflects no new requirements for the ePortfolio (students have always had been advised to revise between the draft and final portfolio, and students have always had to speak in some measure to leadership and experiential learning activities), it did emphasize the importance of these components for the portfolio development process. These types of adjustments reflect our continued efforts to be clear and direct about priorities for effective reflection and transfer. It is our belief that these small-scale adjustments have underscored several important aspects of student-centered work focused on integration and transfer: to emphasize that the ePortfolio development must be iterative promotes continued interaction and discussions of goals and audience between faculty mentors and students, and to underscore that in this process the portfolio benefits from

continuous evolution further promotes the notion that it is intended for use in a real and meaningful way in the years following graduation. In this regard we have been able to further shift into student-centered work that fosters critical thinking and emphasizes communication as a long-term skill set beyond the life of a single student project. At the program level, this serves to emphasize the practical value of the process rather than the notion that the portfolio exists as a one-and-done activity on the path to earning a reward. In the next section, we discuss the implications of our trajectory as it relates to promoting audience awareness, multimodal integration, and equity.

Key Themes

In the following discussion, we outline some of the things we learned from this review of our practices. Specifically, we offer lessons related to focus on audience, multimodal communication, and equity for the larger field's consideration, discussion, and future inquiry.

Thinking More about Audience: The Movement Toward Focusing on a Public-Facing Website

In the review of the materials, one distinct theme emerged: The revisions of documents and criteria through the years reflect our team's growing appreciation and comfort level with a website designed to communicate with an external audience. From the beginning, the aim of the program has been to foster transferable skills for life beyond graduation, though we may not have used those terms in the beginning. Over the years, we've developed a clearer understanding of how to explicitly target this, as well as support and training for students to articulate the transferability of their skills.

While in the beginning, an awareness of the audience prompted the separation of materials into internal and external portfolios, over time we found that the separation did not promote the integration and transfer we identified as a long-term goal. This was reinforced by feedback from DC alumni. One alum from 2013 stated candidly that the "Private document submission didn't really seem to have much of a purpose," reflecting a disconnect or inauthenticity of preparing materials to demonstrate communication skills without an external audience. Although the private document submissions were not seen as valuable to this student—an understandable conclusion since the private documents folder's genesis was due to a need to gather assessment documents for the QEP—the alum reported that years after graduation, he was still updating and sharing his public-facing portfolio. Likewise, other alumni from earlier years noted their desire for increased emphasis on how to integrate their experiences holistically into the public-facing site.

These observations and feedback led us to explore processes for applying the reflective prompts toward the creation of the public portfolio in more direct and explicit capacities. With the elimination of the private portfolio and the institution of the Dear Reviewer Letter, we more directly prompted students to discuss their audience, goals, and how the choices they made in designing and incorporating content into their public portfolios reflect those audiences and goals. This significantly streamlined focus and efforts toward completing the DC ePortfolio, and facilitated substantive conversations among the students, their advisors, and the CxC Team.

Prior to making this shift to audience focus for private documentation, students commonly either wrote an effusive thank you letter to the CxC team and their faculty or articulated their learning with a focus on the teachers and CxC team as the subjects of the process and the students as direct objects—in both grammatical and conceptual senses. This 2013 reflection, for example, discussed the students' learning, but framed the learning as a testimonial for the experiences they had while in CxC programming:

> I have finally come to the end of my CxC journey, and I have to say that it has been one of the best learning experiences I could have had. I never thought that I would seek out the good, the bad, and the ugly from my papers, my reports, my presentations, my programs—anything, really. It has challenged and shaped the way I approach a project; I now look at what a professor told me I could improve upon in the last assignment first and focus on that aspect in the new assignment. I have told countless people that they need to do the program because it's really that good. On my last internship, the company told the interns that they had to do a practice presentation first so all of the bad things could be worked out. It surprised me that many of them made mistakes that the CxC pointed out to us early on in our college years. I told people about CxC and that's when I learned about how unique this program was. LSU students are extremely lucky to have this college-wide program, and I am happy that with each year, more and more students are recognizing the facts as well. Although my communication skills have improved drastically since I entered college, I am not done with any of them. They are always changing, so I will keep learning. (2013 STEM graduate)

This reflection speaks specifically to skills developed in the classroom and used in settings beyond the classroom. In this regard, it successfully achieved program goals in fostering synthesis and transfer. It also, however, represents common notes provided in DC Medalist private portfolios, wherein the framing focuses on where the student received the learning rather than what the learning was and how the student as an active agent has chosen to apply and further cultivate the learning and skills. This reflection, while a very generous testimonial to CxC, centered CxC rather than the student and the skills she had taken the time to cultivate and apply in different settings.

While transitioning to a more intentional focus on audiences beyond LSU, in 2016 CxC began articulating that the Final Review Panelists may not necessarily be a faculty member from the candidate's field. Instead, we communicated that they will be someone with relevant knowledge of and appropriate qualifications in the field in which candidates expected to transition. This shift in audience articulation for the official review process was motivated by the goal of emphasizing focus on the student's—and the portfolio's—long-term audiences. This reflects the program's longer-term goal of ensuring that students see the ePortfolio less as a box-checking measure toward an award, and more as a valuable, long-term tool in and of itself. This, combined with things such as cutting the private documents folder submissions, led to a greater demand for training on what was expected of the student, the advisor, and the portfolio itself, throughout the composition process.

One significant discovery through the Phase Two transition was that in the absence of such extensive private audience reflections, reviewers were, for the first time, put in a position to ask a lot of questions as an outsider to the students' thought process and experiences. The reviewers' limited awareness of the candidates' thoughts and choices (previously shared via extensive reflection papers and class assignments) led to more robust questions and more intentional reviews. Whether or not the reviewer happened to know the student, this change allowed the reviewer to behave more like an external audience. In earlier phases, a faculty member also serving as a reviewer received less guidance and coaching on how to distinguish between what they know about the student personally and what they see and hear on the student's website. Receiving class assignment documents via a private portfolio submission behind the scenes further muddied this for them. Since implementing Phase Two and emphasizing for students and advisors that reviewers are considering only what they see via the public portfolio website and a single Dear Reviewer Letter, this has led to extensive discussions and increased advisor and reviewer training sessions to help them assess the ePortfolio on its own merit.

The transitional Phase Two period uncovered several areas of growth for the program:

- the need to refine guidance and prompts in the early portfolio planning stages,

- the need to refine the portfolio rubric to be more useful during formative assessment, and

- the need to refine the prompts for the Dear Reviewer Letter to provide enough context for the reviewer to act without giving the reviewer an additional several thousand words to read demonstrating the students' reflections and course assignments over the trajectory of their college career.

We recognize that students and faculty alike are too busy for busywork, so we wanted the Dear Reviewer Letter to be thorough and focused, but reasonable in terms of demands on advisors' and students' limited bandwidths, so we gave specific prompts and limited the letter to 1200 words. More to the point, we wanted the focus to be less on how much a student has grown in their undergraduate tenure and more on who they are as emerging professionals. We wanted to put students in a position to understand the full stakes of a public website when a stranger looks at it. The current Dear Reviewer Letter, as the single private document, includes prompts that focus on why the student made the choices they made for their portfolio, the skills they are highlighting, and how they intend to use them. This "behind the scenes" reflective activity positions the students to have to articulate their process, integration, and transfer of their experiences. Building in the professional reflection step to the ePortfolio process has been key to facilitating transfer of the communication skills to professional contexts. From a practical standpoint for program administration, it also enables a reviewer to compare intention and impact in the public-facing portfolio. While minimal, this provides guidance for the reviewer to get a sense for the students' intended focus, removing some of the guess work for audience and goals. While in a practical setting beyond this program a portfolio wouldn't have such a behind-the-scenes addendum, it does allow for us to preempt some questions from reviewers in addition to providing the reflective space for professional discussions of process and goal for the students. In the next section discussing multimodality, we include samples demonstrating the shift over time from students focusing on CxC and their teachers as the resources and more on themselves and their post-graduation audiences.

Thinking More about Where They Are Going: Customizing Multimodal Communication in ePortfolios

With the change in audience, a significant difference between the prompts and requirements from our earlier models and those we use in Phase Three is that Phase Three students are more directly prompted to think not about where they have been, but about where they are going and what skills and experiences they will bring with them. This also, significantly, reflects the reality that unlike a faculty advisor or a CxC representative who makes the promise to review each page and all content within those pages, the external audience may feel no such compulsion. Instead, students are asked to consider what different audiences that might view the ePortfolio would want to know. For example, an education student may prepare a section of their ePortfolio for a principal to review but may also choose to have some sections that would be meaningful to families of future students.

In the early stages of the DC ePortfolio, guidelines and prompts were directly targeted toward explaining four modes of communication, student samples of them largely from classes, and what they learned: written, spoken, visual and technological examples. Since 2016, we've shifted guidelines and prompts away from a "show and tell" about communication skills and towards the use of communication skills to demonstrate comprehensive skills, experiences, and characteristics that a student wants their audience to see. In short, less telling and more showing. Whereas in the early phase of the DC portfolio process students received a highly specified list of what constituted an effective communication sample, from 2016 onward they have been prompted to ensure that

reviewers can see how the student has used their skills in writing, speaking, visual and technological communication to show who they are and what they will bring to their audience.

This has manifested in the overall design of the ePortfolio above and beyond the contents included in it. This is easily seen in the navigation and independent page/tab titles included in students' ePortfolios. Prior to the change, the navigation bars looked somewhat like Figure 1, which includes a sample of a navigation that appears in a 2013 DC Medalist public portfolio from an engineering graduate. While some of the material included items that were topical to their field, the navigation itself did not communicate the specific skills the DC Medalist was putting forward in their resume and cover letter, targeted toward engineering positions.

HOME	RESUME	WRITING SAMPLES	PRESENTATION DOCUMENTS	PHOTOGRAPHY SAMPLES

Figure 1: Phase One (2013) Example of Navigation, as Represented by Independent Page/Tab Titles

The navigation bars included in portfolios after the changes (sample seen in Figure 2) provide a more targeted focus on different types of experiences the audience might be seeking. This navigation, while still generalized to experiences that might mirror a resume structure, allows the audience more agency in determining where to click next for specific skills and information.

HOME	ABOUT ME	CLINICAL EXPERIENCE	RESEARCH & EDUCATION	INVOLVEMENT	HONORS & AWARDS	CONTACT ME

Figure 2: Phase Three (2020) Sample Navigation, as Represented by Independent Page/Tab Titles

Other students since 2016 have embraced the challenge to use navigation as a storytelling tool in even more discreet topics. One 2021 graduate preparing for communications and public policy work in international settings opted for highly specified navigational topics, given her focus in cross-disciplinary work (see Figure 3).

HOME	ABOUT	RESEARCH	HUMANITARIAN WORK	POLICY WORK	COMMUNICATION SAMPLES	CONTACT

Figure 3: Phase Three (2021) Sample Navigation, as Represented by Independent Page/Tab Titles

As someone planning to work in a communications field associated with international policy, this student opted to include a communication samples page but built out other pages to demonstrate her training and focus on specific topics and skills to broaden her appeal to her audience. This advanced focus on external audience suggests that the intervention developed in Phase Three was successful in establishing guidelines and materials to ensure the student is thinking about practical usage and transferable skills in their life beyond their undergraduate career.

Students graduating from 2016 onward include specific discussion about how they've opted to integrate their skills in narrative that both considers audience and how the student wants to be known to their audience. These largely reflect a focus on realistic intention rather than on adhering to a standardized structure. One student shares how they began to think about the organization of their portfolio:

> I am a graduating senior pursuing dual degrees in international studies and mass communication, and my professional background is oriented toward community service and public policy. This upcoming year, I am applying to several Master of Public Policy programs in France and Germany, and my portfolio is therefore catered toward their graduate admissions teams. Because of my professional experience and field of interest, I

> chose to organize my projects intentionally into "Research," "Humanitarian Work," "Policy Work," and "Communication" themes representing my site's core navigation. These categories give even a casual viewer a very specific look into my areas of expertise as both a professional and an academic. The aim of my organization of various projects across pages was to present an easily digestible format that quickly translated my experience and which could be examined in more detail at the audience's discretion. This directly influenced my decision to give large titles and limited yet efficient descriptions of each project while linking more depth which could be explored at will in the form of examples of my work (such as pdfs of presentations of survey samples) or external links (such as organization websites and my LinkedIn and blog pages). (grad in communication and foreign policy, 2021)

In some cases, students made the personal choice to emphasize a broad suite of communication skills in their portfolios. These decisions were stimulated by the portfolio guidelines and preparation materials, workshops, and consultations that occur between the student, their faculty advisor, and their CxC Representative. In these cases, multimodal communication was discussed in direct correlation to the students' future paths. For example, a mechanical engineering major emphasized his work across four communication modes to discuss how these combined skills positioned him to develop industry-insider materials and translate industry materials for funders or the general public. Several pre-med students included sections about the multiple ways interpersonal communication skills manifest, and how this is vital to effective bedside manner and educational outreach for patients and patient advocates. The following excerpt from a reflection from a graphic design major illustrates the decision-making process, consideration of audience, and how she incorporated her communication skills:

> The work included in my portfolio was not chosen by the standard idea of whether it is my "best" body of work. Of course, I wanted each project to be professionally valuable, but I also chose work that reflected what I enjoy creating and what I was most proud of. I chose to include work outside of just my graphic design because I do not see myself as solely a graphic designer. I like to explore many mediums [sic] and wanted that to be well-communicated. I also chose to link my [redacted] store as well as my Instagram to show employers that I am thinking entrepreneurially and using my experience from my job as the Social Media Coordinator for [redacted] to create my own design Instagram that will keep me relevant within the modern sphere of social media. (grad in design, 2020)

The shift to a greater focus on demonstration of communication skills in the ePortfolio, while subtle, has had significant impacts. In reflections and artifacts, we discovered less emphasis on checking boxes in modes to earn recognition and more language and discussion on how these modes of communication appear in the portfolio to illuminate the student's goals and accomplishments. When we adjusted our prompts to focus on audience and the students' career or civic goals rather than requiring specific communication samples, we reframed our primary goal to consider communication as the means by which students can reach their comprehensive goals.

During our habitual program reflection, and especially considering adjustments made from our first phase into our second, we realized that we had several effective prompts in place to foster synthesis and transfer. The challenge was that they were buried under a variety of other prompts and requirements that were less effective, and not all students noticed or used them. With some minor adjustments from previous prompts, starting in 2019 we began to share a series of worksheets at incremental stages of portfolio planning and development.

During the initial ePortfolio preparation, students receive a Translating Your Skills Worksheet. This worksheet supplies a basic introduction to the rhetorical triangle to stimulate focus on researching and adapting for one's audience. This also puts them in a position to identify seemingly random or unrelated activities and consider the skills and accomplishments from those activities, including if and how they might be articulated usefully in service to their future goals. They also receive a worksheet asking them to focus on audience and goals. Finally, they are prompted to complete a worksheet asking them to focus on the organization and design elements. While students are advised to complete these worksheets as part of their journey and are encouraged to communicate their responses to the worksheet with their Faculty Advisor, they are not required to submit the document at any point. After reviewing students' completed portfolios and Dear Reviewer Letters, it seems this emphasis on the ePortfolio as the significant artifact, and the worksheets are working as prompts for the deep reflection throughout their process, has been working well.

With fewer requirements overall, we found that more students began to focus on the prompts to help them complete their ePortfolio. We also incorporated them more intentionally into our communications with students, and into portfolio preparation sessions. CxC Representatives also work directly with the students to make this transition from reflecting to curating and designing their portfolios. Thus, the emphasis is placed on using the worksheet to create the portfolio, which promotes critical thinking about how to translate an idea, experience, or goal into the format of the portfolio itself. Here is how a recent alum reflected on this process:

> The process of creating this portfolio was beyond insightful and introspective. Throughout my four years, I have partaken in many organizations, experiences, leadership positions, etc., but throughout it all, it is easy to forget to connect the dots. Making this portfolio was an enlightening experience for myself to realize how all of my experiences throughout LSU have been delicately interconnected for a greater reason than each themselves. I was able to reflect, collect, and refine my skills and experiences to those I now find to be the most relevant and formative for my future endeavors. I decided to only include my experiences that I found to be directly formative for my medical career aspirations. I made certain to try to connect each experience back to my overall main goal, in order to make my narrative clear and linear, aiming towards one main objective of my intention on attending medical school. (grad in pre-medicine and Spanish, 2020)

This connecting of dots across experiences is also reflected in how students are challenged to integrate written, spoken, technological and visual communication throughout their ePortfolios. As we reflected on the impacts of changes over time in the ePortfolio guidelines, reflection prompts and assessment materials, we not only noticed a greater focus on communication in general, but also a greater intentionality incorporating multi-modal communication into their comprehensive narrative. These more global changes have impacted how each of the four modes are included in ePortfolios. As the world increasingly engages multimodal communication, this work may help other ePortfolio programs introduce and expand the focus of communication beyond conventional artifact displays of written, verbal and/or visual communication. In the following sections we discuss the impacts as it relates to spoken and technological communication, respectively, to demonstrate some of the discreet adjustments these global changes have instigated.

The Spoken Mode

One of the most significant transformations in guidelines and rubrics is related to the evidence of spoken communication skills. From 2006–2019 the requirements and guidelines for the spoken communication sample underwent several iterations. In Phases One and Two, students could omit demonstration of their spoken communication skills from their public portfolio and instead only

include this information in their private portfolios. In addition, students were not asked to provide context for the spoken samples. For example, they could include video of a speech they gave in their first-year public speaking course, with no specific relevance to their current goals, either in content or in the way they discussed the content. While the students participating in the program took these requirements seriously and shared samples and explanations of their samples with intention, the prompts did not emphasize a connection between demonstrating the skill in speaking and thinking critically about how that skill would realistically manifest in a student's projected arena. Here is an example from a 2013 DC Alum accounting major who was seeking a position in an accounting firm:

> The link below will take you to an etiquette speech I made during an advanced public speaking course. I was tasked with creating a 3-minute speech that covered an issue along with a solution. Injecting humor was recommended if possible, I received a perfect score. I have revisited this speech in the second link to demonstrate my improvement and showcase how it might appear in a presentation or training video for new hires in any corporate environment. (grad in business, 2013)

The content of the student's speech focused on the importance of being what he referred to as "breath aware," ensuring that you have checked the quality of your breath when encountering others, and making sure to accept a mint or piece of gum when someone offers it to you. This student was, admittedly, interested in infusing humor and personality into his everyday activities. He did not want to be known as a dry accountant. Thus, this was intentionally a bit tongue-in-cheek. When faculty and the CxC team assessed his spoken communication skills via the "breath aware" sample, he was effective and received high marks. Given the timing that this candidate went through the program, however, the student knew that only faculty members and CxC staff would see this video. Topically, the speech does not relate to the skills, projects, or experiences that a person would traditionally highlight on their public-facing portfolio for a potential employer if one were applying to work as an accountant. While this student succeeded in meeting the requirements, our requirements didn't meet the moment in helping him translate this skill publicly for his audience.

In the early stages of the DC portfolio process, although the spoken communication was present, its connection to an overall presentation of communication skills was not yet integrated. This can be seen in the rubrics and prompts from the early stages of the program. In their reflections, students articulated their spoken communication skills development and detailed the progress they had made from their early undergraduate years to their final semester, emphasizing their progress. This offered substantive metacognition association with personal growth, but less discussion about transferability of spoken communication skills to their future audiences.

We know that hiring managers both prioritize spoken communication and see this as one of the biggest skills gaps in early-career professionals (NACE 2021). We also know from reflections and anonymous surveys conducted with LSU students that spoken communication skills are an area they identify as both challenging and vital to success (Waggenspack et al., 2013; Liggett et al., 2016). Since the shift to requiring a consideration of public audience and clear application in Phase Three, students are sharing a broader array of speaking samples, including a 1-minute flash talk explaining a research project they are currently working on, a sample video lesson plan in K-12 education, a voice-over explaining a 3D model, an elevator pitch on their homepage, and a podcast discussing current world events and their historical grounding, to name a few. Today, in both content and transfer, the spoken communication skill is integrated in such a way that reflects the audience, goal, and the students' metacognition. Further, in reflections and self-assessment rubric materials, students are highlighting the planning and intention it took to identify and execute the right speaking evidence in their portfolios. There is also guidance or emphasis placed on clarity in recording and composition to make the speaker clearly identifiable and crisply heard. Providing students with

instructions about how to prepare clear and accessible portfolio components is important work for ePortfolio programs. Reflecting on bandwidth for team members administering programs such as these, we suggest that energy put into guidelines around what makes an artifact accessible to the audience can help support a broader range of student disciplines and goals, but also promote transferability of higher order concerns for long-term learning.

The Technological Mode

When the first DC candidates were composing their ePortfolios in 2005–2007, the technological landscape was quite different than today. Websites were still mostly static postings that might feature a clever .gif or two but were otherwise limited to fixed photos and text. The newness of the medium necessitated a great deal of instruction be devoted to student workshops with titles like "WYSIWYG Design" and "File Transfer Protocol for Dummies." Workshops on web design largely focused on button pushing to help a student create a website from scratch. It is interesting to note, however, that over time, the greatest engine for change in our understanding of the technological mode has been the students themselves. It was students who first showed us websites offering free design templates and web hosting. It has often been the students who introduce us to the latest gadgets, whether wearable cameras, or portable cameras with USB connectors. Of course, all media became more accessible with the pervasiveness of smartphones. This evolution of technological possibility has allowed the CxC team to evolve in its engagement with students. Instead of complicated design processes and how-to workshops, we now facilitate a series of collaborative discussions between the student, their Faculty Advisor, and their CxC Representative, emphasizing the process by which a student selects the right tool for their disciplinary conventions and engages in an iterative process to learn it.

This has also had significant implications on how students think about and integrate technological communication into their ePortfolios. In the early years of the program, students included a sample of technological communication from a class that may or may not relate to their long-term goals. For engineering and design students, the relevance was often clear in both content and application, as technological communication is common in their fields. For students in fields like humanities and cultural studies, however, technological communication was less common. That these students participated in workshops about Dreamweaver and developed a website set them apart from their peers, but they struggled to fully articulate how the use of technological communication was relevant topically to their worlds. As noted, this recognized technological challenge reflects the time in which the program launched, and since then digital humanities, educational technology and other field-specific forms of technological communication have emerged.

In today's DC ePortfolio development process, the choice of website is one first step toward cultivating higher-order concerns to engaging new technologies. In keeping with other studies emphasizing the value of students customizing their platform (Fallowfield et al., 2019; Thibodeaux et al., 2017), our experience suggests that the student choice in platform is a significant part of their audience analysis, and technological communication skill itself. Students are prompted to explore what website platforms are common for the arenas they intend to engage, which platforms provide an effective user experience when building (i.e., which platforms are easiest for them to use based on their skill level), and which platforms are going to have the desired visual effect. The current robust suite of applications that are user friendly across a broad range of fields also positions the student to think critically about what to build into their portfolios, and what to omit. Engineering and design students still have a variety of samples that are obviously technological and related to their fields; students in other disciplines are seeing increased opportunities to demonstrate their technological skills through the website design itself. The deep appreciation for disciplinary differences along with the flexibility of the templates positions students to ask effective questions when encountering a new

technological tool (e.g., how does this technology help me communicate my message?) rather than remember which button to push in a particular software.

Thinking More About Equity

When we reflected on the shifts in the DC process over the past seven years, specifically, we found that one of the most significant aspects has been the embrace of a common practice in Universal Design for Learning (UDL): the removal of required components that served little or no purpose in supporting the program goals of helping students articulate their skills and accomplishments. As we streamlined efforts in training and preparation for students while also allowing for disciplinary customization and, significantly, student-centered processing and procedures, this not only reduced the number and type of requirements but allowed for greater intention and transparency about meaning and contribution of the requirements.

The shift away from a series of required written documents and toward the students' focus on creating a multisensory professional narrative using multiple modes of communication also supports the learning and communication approaches highlighted in Universal Design for Learning. For example, previous years privileged writing in assessment of the students' communication skills, simply by virtue of the fact that it was the method by which the information was communicated. Despite a programmatic focus on the value of multimodal communication, the early criteria placed exponential emphasis on writing for all students, regardless of their background, experiences, or the forms of communication most valued in their desired fields of work. This emphasis, as previously discussed, was informed largely by limitations of technology and by institutional assessment measures associated with the QEP at that time. We know that brilliant people are not always first and foremost writers, and that genre and audience are vital considerations to the writing process. Valuing written communication over other types of communication marginalizes students and limits the potential growth for writers of all comfort and experience levels (Fritzgerald, 2020).

What we noticed is that by de-emphasizing the importance of writing in a specific format, and in high volume, we've recalibrated and strengthened our focus on audience analysis and applying higher-order thinking concerns to the process of building an effective and robust professional narrative. Within this process students are still required to write effectively, and are assessed on the effectiveness of their writing, but in this more recent model students are given the support and opportunity to identify what forms of writing are most vital for their goals and audiences. Further, following guidance promoting the value of supporting student agency and in valuing vernacular forms of communication (Allen, 2010; Inoue, 2015; Condon & Young, 2016), we do not provide specific writing style or formatting requirements beyond general best practices in brevity for web text.

In addition to what to include and how, we have leaned into UDL once again to reflect on and adjust due dates and steps, making the path more transparent and in some cases, easier, for students. We shifted away from arbitrary portfolio deadlines and focused instead on the deadlines that matter because of the time it takes for students, faculty and staff to move through feedback, revision and assessment. Further, we have moved away from worksheets as mandatory submission items, and instead have embedded them into a variety of live and asynchronous materials so that students can access the information on their terms and in their timeframes. Students who do not have time to meet in person can access the worksheets and guidelines via the DC Medal website. Students who operate better in environments where they can see samples and ask questions can attend in-person or real-time web meetings. Students who operate best one-on-one can also opt to do so with their CxC Representative.

Through the process of reflection and research for this paper, we've also discovered that one key aspect of UDL—that of embracing customization in project learning (Fritzgerald, 2020)—has been a historic keystone of the program since its inception. Working consistently with their CxC Representative provides the student with supportive learning spaces while they drive the decision-making process about what to include in their portfolio and how to include it. In addition to further promoting student agency in creation and communication, the habitual 1-1 connection reflects best practices advised by the AAC&U in promoting direct and constant interaction between students and mentors/teachers. The significant advantage that we've seen to emphasizing the customization of the ePortfolio is that it puts students in a position to think critically and with agency about how they want to present themselves. While we provide feedback about language, tone, style, color choice, and overall design and content, we do not place any specific requirements about those on the student. While students work with the CxC Representative and faculty adviser to obtain guidance on the portfolio, ultimately, they design for their goals and their own futures.

We've also worked to create greater transparency about the reasoning behind the prompts and guidelines, which gives us the opportunity to connect with students on a more effective level than simply providing hoops to jump through and the promise of a reward at the end. Anecdotally, in recent years we've observed students joining the DC Medal program describe their concern for enhancing their communication skills, moving past conversation or presentation anxiety, and identifying further tools to help them in their future. While still present, we are seeing fewer students join the program articulating their concern for adding the accolade as a resume line. There are several compounding factors for this, no doubt: the desire for connection in the new era that COVID has drawn us into, increased anxiety about equipping ourselves for the unknown future, and the simple change in tide for the typical characteristics of a university student. Regardless of the reason, we view this shift in focus away from a resume line and toward substantive learning and growth as a positive development, and through this project have been grateful to connect our evolving programmatic practices and substantive, practical approaches to student learning.

Through the process of collecting and reviewing our programmatic changes over these phases, the need for more structured and intentional assessment related to inclusive practices has become clear. As a team, we have been dedicated to reducing barriers for students—and in review of our program's history were pleased to note that we've laid early groundwork for this. Having said that, more work needs to be done. Future directions for increased access and inclusion of guidance for students include the development of an on-demand learning module in our institution's learning management system, a more structured program assessment model to continue to check ourselves on our progress, and an increased discussion related to creation of accessible websites during the portfolio-building process, and why that matters. The first two goals are in place to enable more students to access the info and support they need while building their portfolio; the last is to further their critical thinking as it relates to living and working in a world where difference matters and should be considered and respected and considered. As the ePortfolio moves boldly forward pursuing goals of transferability and accessibility, gold standard tools for communication will become increasingly important. Through the instructional guidance, we both model and explain the importance of communication that reaches all.

Conclusion

This project allowed us to engage in the reflective work we ask students to do, and our challenges mirrored many of theirs. In reviewing eighteen years of DC portfolio-related materials, we were gratified to see that our evolution as a program and the changes that have occurred are clearly a result of our learning journey as our context unfolds in new ways. Our reflections on the program presented here are consistent with other work showing that effective rubrics and iterative feedback

are significant factors in fostering critical thinking and reflection (Tur, et al., 2019). We submit that our continued program evolution does mirror an increased focus on higher-order concerns and facilitating integrative reflection to instigate transferrable skills. While our context and program are unique, we humbly offer the lessons we have learned to the larger conversations around ePortfolio.

We have focused on audience analysis in a way that transcends traditional inward-facing ePortfolios. We did this by removing the separation of materials into internal and external portfolios and now focus on self-assessments with artifacts. This change shortens the reflection step, but also focuses it. By transitioning prompts away from discussing communication artifacts and toward using communication skills to demonstrate a comprehensive skill set and professional narrative, we are seeing more practical, audience-appropriate, and targeted ePortfolios. This approach might be useful to other programs utilizing ePortfolios toward correlative durable skills such as leadership, community engagement, ethical decision-making, etc. We hope that what we offer here further inspires colleagues elsewhere to be comfortable starting first with the practical aspects of guiding students through building an ePortfolio and using that as a springboard to explore higher order concerns. For us, this reflective experience has cemented that much of what we did because we felt it streamlined work also led to streamlined, deep, and meaningful learning experiences for students that transcended a single project or degree. One might suggest, in fact, that by modeling backward design in portfolio development we were able to identify prompts and rubrics that nudged us closer to higher-order concerns for our students.

Another theme in this work is the focus on student autonomy for determining the intentions, goals, and approaches to the ePortfolio project. In the review of our program, we found that the impact of the changes made over the years, and one that speaks to the process of integration and transfer, is that the ePortfolios students prepare today reflect where they are going rather than where they have been. The support and focus of the criteria, scaffolding exercises and reflection prompts have led to greater synthesis, integration and transfer of college-time experiences outlined in the ePortfolios. Our Dear Reviewer Letter and rubrics are much more oriented toward integration and transfer than they used to be, and our students are creating portfolios that reflect their skills and interests both within and beyond activities traditionally associated with their degrees. This approach to ePortfolio work reflects the value of student voice. As the world is increasingly automated, and communication consumed with language generated using language learning models, it seems critical to empower the human approaches and goals in communication.

Building on this idea, our emphasis on multimodality, and the customization that occurs when using multiple modes and audience-specific media, reflects our commitment both to higher-order concerns and to student-centered work. To be multimodal in project focus reflects the skills needed for a dynamic world and increases student reflection and design opportunities when they are creating their ePortfolios. From a teaching and learning standpoint, it promotes multimodal communication as opportunity to develop and share a narrative on the student's own terms, allowing them to lean into communication skills in which they excel while providing supportive spaces to stretch into the communication skills with which they may be less comfortable or less familiar. We encourage colleagues to continue to reflect on how they might provide broad perimeters for content inclusion, as this promotes critical thinking not just about what to include, but about what form it should take, better equipping students to internalize their experiences, skillsets and areas of specialization and be prepared to demonstrate them in scenarios beyond their portfolio.

As we support students' development and use of ePortfolios, issues of creating co-curricular programs that scale up, allowing for greater outreach and access, will continue to challenge our field. We have historically been student-centered in our practice, and this project's review of our programmatic shifts confirms we remain rooted in this. Our team is continuing to think about how changes in ePortfolio criteria, reflections and assessment tools might improve vis a vis striving for

equity. One area of focus now is on the highly customized coaching experience. Individual attention not only provides opportunities to support and emphasize audience analysis and higher-order questions in our prompts and rubrics, but also puts us in a stronger position to apply UDL practices. A strength is that we are not teaching to a template, and this means that we're not holding students accountable to impractical requirements. By emphasizing inquiry and reflection, we position students to be active agents in the development and execution of their ePortfolios. We recognize that the extreme customization of this experience means these approaches are likely not a scalable model to institution-wide adoption. While recognizing the uniqueness of this program in the ePortfolio landscape, this work contributes to the larger discussion in our field about practical, equitable approaches to ePortfolios.

As discussed through this paper, there are several areas for further inquiry that have emerged because of this reflective project. We've made good and important progress regarding our guidelines and coaching process for the ePortfolio; as a team we are continuing to think about the rubrics we use in our ePortfolio work, and how we can use them to facilitate formative discussions and feedback. We confirmed that our practices are already representing vital foundational approaches to universal design for learning; we know we have more to do about codifying our internal checks and assessment related to designing inclusive process. Collaboration with colleagues in other programs to compare/contrast ePortfolio models and equitable programming could expand our understanding of the multiple forms that best practices for ePortfolios can take.

Finally, we understand that our evolution as a program has been a mix of our team responding to shifting institutional and departmental strategic goals, rapidly evolving technologies, and our own desires to improve teaching and learning in our spaces. It is difficult to marry large-scale institutional goals with small scale program goals, and we make no claims that a program like ours could work like it does on most other campuses. It has been successful on our campus because we realigned our programming so that our most scalable practices—those supporting development for communication-intensive courses—are the areas for which we focus institutional goals. The DC ePortfolio, while a significant and steadfast keystone to CxC programming, remains an experimental space for us to foster connection and explore deep learning without the pressure of macro metrics, which in turn helps foster our creativity as we refine other aspects of our program (including our approaches to supporting institutional assessment measures.) We recognize that our programmatic improvements have been the result of numerous small experiments that required us to be a little loose and perhaps a little brave during their development. We constantly strove to meet institutional benchmarks while continuing to honor student voice and intentionality. What has worked for us has been specific to the contexts of our times. We encourage others to embrace these small experiments and small-scale programs to gain larger insights for themselves. Just like a one-size-fits-all portfolio could never serve every student, our insights may or may not benefit other programs. But in the same way that our highly customized prompts lead a student through steps to self-discovery and learning, this odyssey through the last two decades has helped us remain intentional about our own goals while remaining responsive to evolving technologies and diverse student needs. Finding your program's path through a similar process could be equally as valuable.

References

Allen, Brenda J. (2010). *Difference matters: Communicating social identity* (2nd ed.). Waveland Press, Inc.

Bazerman, Charles. (1991, February). The second stage in writing across the curriculum. *College English, 53* (2), 209-212.

Bazerman, Charles. (1992). The interpretation of disciplinary writing. In Richard Harvey Brown (Ed.), *Writing the social text: Poetics and politics in social science discourse* (pp. 31-38). Aldine de Gruyter.

Bazerman, Charles, & Russell, David R. (Eds.). (1995). *Landmark essays: On writing across the curriculum (1st ed., Vol. 6)*. Routledge.

Benander, Ruth, Robles, Rich, Brawn, Debbie, & Refaei, Brenda. (2016). Assessment without standardization: Can general education competencies be assessed from ePortfolios across the university? *The Journal for Research and Practice in College Teaching*, *1*(1), 1-10. https://journals.uc.edu/index.php/jrpct/article/view/618/584

Bonsignore, Karen. (2013). Career ePortfolios: Recognizing and promoting employable skills. In Katherine V. Wills & Rich Rice (Eds.), *ePortfolio performance support systems: Constructing,presenting, and assessing portfolios* (pp. 109-120). The WAC Clearinghouse. https://doi.org/10.37514/PER-B.2013.0490.2.06

Bridwell-Bowles, Lillian, Powell, Karen E., Choplin, Tiffany Walter, Louisana State University. (2009, January 19). Not just words anymore: Multimodal communication across the curriculum. *Across the Disciplines, 6*, 1–29. https://wac.colostate.edu/atd/special/technologies

Bridwell-Bowles, Lillian, Powell, Karen E., Liggett, Sarah, & Adokpaye, Anino. (2007, December 6). Assessing communication skills in disciplines across the University: First returns on an investment in digital portfolios. [Paper presentation].Southern Association of Colleges and Schools' 112th Annual Meeting of the Commission on Colleges, New Orleans, LA.

Carter, Michael. (2007, February). Ways of knowing, doing, and writing in the disciplines. *College Composition and Communication, 58*(3), 385-418.

Childers, Pamela B., & Lowry, Michael J. (2005, December 3). Connecting visuals to written text and written text to visuals in science. *Across the Disciplines, 2.* https://doi.org/10.37514/ATD-J.2006.3.2.03

Chittum, Jessica R. (2018). The theory-to-practice ePortfolio: As assignment to facilitate motivation and higher order thinking. *International Journal of ePortfolio, 8*(1), 27-42. http://www.theijep.com/pdf/IJEP297.pdf

Condon, Frankie, & Young, Vershawn Ashanti (Eds.). (2016). *Performing Antiracist Pedagogy in Rhetoric, Writing and Communication.* The WAC Clearinghouse; University Press of Colorado. https://doi.org/10.37514/ATD-B.2016.0933

Derwing, Tracey M. (2003, June). What do ESL students say about their accents? *Canadian Modern Language Review*, *59*(4), 547–567. https://doi.org/10.3138/cmlr.59.4.547

Dragojevic, Marko, Fasoli, Fabio, Cramer, Jennifer, & Rakić, Tamara. (2021). Toward a century of language attitudes research: Looking back and moving forward. *Journal of Language and Social Psychology, 40*(1), 60–79. https://doi.org/10.1177/0261927X20966714

Duffelmeyer, Barb Blakely, & Ellertson, Anthony. (2005, December 3). Critical visual literacy: Multimodal communication across the curriculum. *Across the Disciplines*, *2*. https://doi.org/10.37514/ATD-J.2006.3.2.02

Faigley, Lester. (2002, December). [Review of the book *Multimodal discourse: The modes and media of contemporary communication*, by Gunther Kress and Theo van Leeuwen]. *College Composition and Communication, 54*(2), 318–320.

Faigley, Lester, George, Diana, Palchik, Anna, & Selfe, Cynthia. (2004). *Picturing texts*. WW Norton & Company.

Fallowfield, Stephen M., Urtel, Mark, Swinford, Rachel, Angermeier, Lisa, & Plopper, Allison S. (2019). A case study in ePortfolio implementation: A department-wide perspective. *International Journal of ePortfolio, 9*(2), 111–118. http://hdl.handle.net/1805/23689

Finley, Ashley. (2021). *How College Contributes to Workforce Success: Employer views on what matters most.* American Association of Colleges & Universities.

Fritzgerald, Andratesha. (2020). *Antiracism and universal design for learning: Building expressways to success.* CAST.

Fulwiler, Toby, & Young, Art (Eds.). (1986). *Writing across the disciplines: Research into practice.* Boynton/Cook.

Fulwiler, Toby, & Young, Art (Eds.). (1990). *Programs that work: Models and methods for writing across the curriculum*. Boynton/Cook.

Fry, Ronald, & Kolb, David. (1979). Experiential learning theory and learning experiences in liberal arts education. *New directions for experiential learning*, *6*, 79–92.

Gluszek, Agata, & Dovidio, John F. (2010, March 10). The way they speak: A social psychological perspective on the stigma of nonnative accents in communication. *Personality and Social Psychology Review, 14*(2), 214–237.https://psycnet.apa.org/doi/10.1177/1088868309359288

Harver, Andrew, Zuber, Pilar D., & Bastian, Heather. (2019, May 31). The Capstone ePortfolio in an undergraduate public health program: accreditation, assessment, and audience. *Frontiers in Public Health*, *7*. https://doi.org/10.3389/fpubh.2019.00125

Herrington, Anne J. (1981, April). Writing to learn: Writing across the disciplines. *College English*, *43*(4), 379–387.

Herrington, Anne J. (1992). Composing one's self in a discipline: Students' and teachers' negotiations. In Marie Secor & Davida Charney (Eds.), *Constructing rhetorical education* (pp. 91–115). Southern Illinois University Press.

Inoue, Asao B. (2015). *Antiracist Writing Ecologies: Teaching and assessing for a socially just future.* The WAC Clearinghouse; Parlor Press. https://doi.org/10.37514/PER-B.2015.0698

Karm, Mari. (2010, September). Reflection tasks in pedagogical training courses. *International Journal for Academic Development, 15*(3), 203-214. http://doi.org/10.1080/1360144X.2010.497681

Kuh, George D., Gambino, Laura M., Ludvik, Marile. Bresciani, & O'Donnell, Ken. (2018, February). Using ePortfolio to document and deepen the impact of HIPs on learning dispositions (Occasional Paper *No.* 32). Urbana, IL: University of Illinois and Indiana University; National Institute for Learning Outcomes Assessment (NILOA).

Liggett, Sarah, Bowles, David, Galeucia, Annemarie, & Hull, Warren R. (June, 2016). Insights from focus groups: A qualitative assessment of students' perceptions of their communication skills. *Proceedings of the American Society of Engineering Education.* New Orleans, LA.

McLeod, Susan H. (1989, October). Writing across the curriculum: The second stage, and beyond. *College Composition and Communication, 40(3)*, 337–343. https://doi.org/10.2307/357778

McLeod, Susan H. (1995). WAC and assessment. *Composition Chronicle Newsletter for Writing Teachers, 8*(7), 8–9.

McLeod, Susan H. (2002). WAC in international contexts: An introduction. *Language and Learning Across the Disciplines, 5*(3), 1–10.

McLeod, Susan H., & Soven, Margot (Eds.). (1992). Writing across the curriculum: A guide to developing programs. Sage.

Morris, Thomas Howard. (2020). Experiential learning—a systematic review and revision of Kolb's model. *Interactive Learning Environments, 28*(8), 1064–1077. https://doi.org/10.1080/10494820.2019.1570279

Mullin, Joan A. (Ed.). (2005, December 3). WAC, WID, ECAC, CAC, CXC, LAC – VAC? Incorporating the visual into writing/electronic/communication/learning across the curriculum [Special Issue]. *Across the Disciplines, 2*. https://doi.org/10.37514/ATD-J.2006.3.2.01

National Association of Colleges and Employers (NACE). (2020). *NACE job outlook 2021*. Bethlehem, PA.

The National Commission on Writing. (2004). Writing: A ticket to work...or a ticket out: A survey of business leaders. *College Board Report. https://archive.nwp.org/cs/public/download/nwp_file/21479/writing-a-ticket-to-work-or-a-ticket-out.pdf?x-r=pcfile_d*

Orr, Susan, Blythman, Margo, & Mullin, Joan. (2005, December 3). Designing your writing/writing your design: Art and design students talk about the process of writing and the process of design. *Across the Disciplines*, *2*. https://doi.org/10.37514/ATD-J.2006.3.2.05

Piaget, Jean, & Cook, Margaret T. (1952). *The origins of intelligence in children*. International University Press.

Price, Margaret, & Warner, Anne Bradford. (2005, December 3). What you see is (not)what you get: Collaborative composing in visual space. *Across the Disciplines, 2*. https://doi.org/10.37514/ATD-J.2006.3.2.04

Rodgers, Carol. (2002, June). Defining reflection: Another look at John Dewey and reflective thinking. *Teachers College Record, 104*(4)*,* 842–866.

Russell, David R. (1987). Writing across the curriculum and the communications movement: Some lessons from the past. *College Composition and Communication, 38(2)*, 184–194.

Russell, David R. (1990). Writing across the curriculum in historical perspective: Toward a social interpretation. *College English, 52*(1), 52–73.

Russell, David R. (2002). *Writing in the academic disciplines, 1870-1990: A curricular history.* Southern Illinois UP.

Selfe, Cynthia L. (1997). Contextual evaluation in WAC programs: Theories, issues, and strategies for teachers. In Kathleen Blake Yancey & Brian Huot (Eds.), *Assessing writing across the curriculum: Diverse approaches and practices. Perspectives on Writing: Theory, Research, Practice (Vol. 1*, pp. 51–67). Ablex.

Thaiss, Christopher J. (1983). *Writing to learn: Essays and reflections on writing across the curriculum*. Kendall/Hunt.

Thaiss, Christopher. (2001). Theory in WAC: Where have we been, where are we going? In Susan H. McLeod, Eric Miraglia, Margot Soven, & Christopher Thaissl. (Eds.), *WAC for the new millennium: Strategies for continuing writing-across-the-curriculum programs* (pp. 299–326). National Council of Teachers of English.

Thaiss, Christopher, & Zawacki, Terry Myers. (2002). Questioning alternative discourses: Reports from across the disciplines. In Christopher Schroeder, Helen Fox, & Patricia Bizzell (Eds.), *ALT DIS: Alternative discourses and the academy* (pp. 80–96). Boynton/Cook.

Thibodeaux, Tilisa, Cummings, Cynthia, & Harapnuik, Dwayne. (2017). Factors that contribute to ePortfolio persistence. *International Journal of ePortfolio*, *7*(1), 1–12. https://www.theijep.com/pdf/IJEP257.pdf

Tufte, Edward R. (2004). *The Cognitive Style of PowerPoint: Pitching out corrupts within.* Graphics Press, LLC.

Tur, Gemma, Santos, Urbina, & Forteza, Dolors. (2019, June). Rubric-based formative assessment in process eportfolio: Towards self-regulated learning. *Digital Education Review, 35*, 18–35.

U.S. Department of Labor. (2006-2007). *Occupational Outlook Handbook (OOH).* U.S. Bureau of Labor Statistics, [online].

Veine, Sven, Anderson, Martha Kalvig, Andersen, Nina Haugland, Espenes, Thomas Christian, Søyland, Tove Bredesen, Wallin, Patric, & Reams, Jonathan. (2020). Reflection as a core student learning activity in higher education - Insights from nearly two decades of academic development. *International Journal for Academic Development*, *25(*2), 147–161. https://doi.org/10.1080/1360144X.2019.1659797

Vygotsky, Lev S. (1978). *Mind in society: Development of higher psychological processes*. Harvard University Press.

Waggenspack, Warren N., Liggett, Sarah, Hull, Warren R., Bowles, Boz, & Davis, Paige. (2013, June). Development and assessment of an innovative program to integrate communication skills into engineering curricula [Paper presentation]. 2013 American Society of Engineering Education Conference Proceedings, Atlanta, GA.

Walvoord, Barbara E., Hunt, Linda Lawrence, Dowling, Jr., H. Fil, & McMahon, Joan D. (1997). I*n the long run: A study of faculty in three Writing-across-the-Curriculum Programs*. National Council of Teachers of English.

Wysocki, Anne Frances, Johnson-Eilola, Johndan, Selfe, Cynthia L., & Sirc, Geoffrey. (2004). *Writing new media: Theory and applications for expanding the teaching of composition*. Utah State UP.

Notes

Contact Information

Annemarie Galeucia, PhD
Associate Director
Communication across the Curriculum
Louisiana State University
Email: agaleu1@lsu.edu

Boz Bowles, MFA
Director of Student and Faculty Engagement
Chevron Center for Engineering Education
Louisiana State University
Email: dbowles@lsu.edu

Jennifer Baumgartner, PhD
Faculty Chair, Communication across the Curriculum
Associate Professor, School of Education
Louisiana State University
Email: jbaum@lsu.edu

Rebecca Burdette, PhD
Director
Communication across the Curriculum
Louisiana State University
Email: rburdette@lsu.edu

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