

How Authors and Readers of ePortfolios Make Collaborative Meaning

Ruth Benander and Brenda Refaei
University of Cincinnati Blue Ash College

This article reports on a case study, using a think-aloud approach (Boren & Ramey, 2000; Jaspers, Steen, van den Bos & Geenen, 2004; Kilsdonk et al., 2016), to investigate how different types of audiences interpret ePortfolios. During recorded viewing, students, instructors, and business professionals narrated their experience of reading two ePortfolios. Consistent with findings by Conrad and Bowie (2006), Ramirez (2011), and Gallagher and Poklop (2014), interpretation of an ePortfolio's purpose varied depending on the audience reading the ePortfolio. Navigation through the ePortfolio was most consistent across all 3 groups, with participants interpreting the navigation menu order as a recommendation of reading order by the author of the ePortfolio. Motivation to continue reading, interpretation of personalization, and perception of reflective writing also varied depending on the audience reading the ePortfolio. This study provides evidence that an important element of teaching students how to build an ePortfolio is awareness of the purpose of the portfolio and the intended audience. In addition, the responses of the 3 different audiences suggest that multi-purpose ePortfolios may not be as successful in engaging audiences as targeted, single purpose ePortfolios.

ePortfolios in the 21st century address the new necessity for students to communicate through digital rhetoric (Clark, 2010; Yancey, 2009). ePortfolio practice, both as pedagogy and technology, answers this challenge by offering a digital space where students compose digital artifacts, negotiate with multiple audiences, and develop digital identities. Current research indicates that these skills contribute to the strength of ePortfolios in assessment, reflection, and knowledge integration, although more empirical studies of effectiveness are needed (Bryant & Chittum, 2013; Chertoff, 2015). Specifically, Rhodes, Chen, Watson, and Garrison (2014) called for further research in ePortfolios that includes both quantitative and qualitative methodologies to explore ePortfolios' impact with multiple stakeholders such as employers, as well as students and instructors. This study seeks to address this call by examining how three different audiences approach reading ePortfolios using a think-aloud method to illustrate how they negotiate the design of a portfolio and make meaning from what they see.

Ramirez (2011) observed that the audience can actively influence the creation of the portfolio. In order to move beyond intuition concerning what is effective for ePortfolio readers, evidence from a range of reader experiences in comparable contexts could be helpful. Fortunately, the present literature on how different audiences read ePortfolios is moving towards more evidence based recommendations. Conrad and Bowie (2006) studied the experiences of ePortfolio readers through interviews with six readers showing distinct differences in the ways the ePortfolios were read, depending on the purpose of the ePortfolio. Lievens (2014) examined career ePortfolios. His study focused on the literature on labor market economics as well as human resource management to outline what the

ePortfolio should include. Gallagher and Poklop (2014) interviewed eighteen students and six instructors over a 3-year period and analyzed eighteen students' ePortfolios to investigate the students' conceptualization and responsiveness to perceived audiences. They identified three key rhetorical moves that supported multiple audience needs, which included clear design and navigation, context for artifacts, and use of multiple voices.

In this study, we extend the work of Gallagher and Poklop (2014) by looking at three different groups of readers, keeping the ePortfolios as a constant, and focusing on how each group navigated the ePortfolio and created meaning from it. To explore how specific audiences read ePortfolios, we asked students, faculty members, and business professionals to read the same two ePortfolios. The findings from this comparative study inform how we help our students create more effective ePortfolios for different audiences and purposes. Instructors need to help students understand the key rhetorical moves needed to accommodate reader styles, which will allow students to establish their ethos for both academic and professional audiences.

Literature Review

Although ePortfolios have been used for years, they are still an emerging genre that defies easy definition (Batson, 2015). In defining genre, Swales (2009) wrote, "The work of genre is to mediate between social situations and texts that respond strategically to the exigencies of those situations" (p. 14). If ePortfolios are the "texts," what are the "social situations" to which they respond? Two common situations are to find employment and to document learning, each of which requires different texts or ePortfolios to achieve their respective purposes.

A general description of an ePortfolio is

a digital collection of authentic and diverse evidence, drawn from a larger archive, that represents what a person has learned over time, on which the person has reflected, designed for presentation to one or more audiences for a particular rhetorical purpose. (National Learning, 2003, as cited in Cambridge, 2008b)

The key element of this definition is that the ePortfolio is “designed for presentation to one or more audiences for a particular rhetorical purpose.” This specification suggests that one text or ePortfolio can be used for different rhetorical purposes. It also implies that ePortfolio creators are aware of these audiences and are able to make rhetorical choices to achieve a particular purpose with each one.

In addition to considering the correct rhetorical choices for particular audiences, ePortfolio creators must keep in mind that ePortfolios require a different type of reading or viewing than traditional texts. The reader navigates the text using links and encounters other elements, such as images, videos, and audio files. Fitzgibbons (2008), in her discussion of hypertext theory for reading, presents primary navigation strategies of readers as linear, mixed, and mixed review. Her discussion focused on hyperlinking, but it would seem that this could also apply to readers’ choices in navigating ePortfolios. ePortfolios are distinct from hypertexts, but the nature of ePortfolio navigation may be similar to the choices readers make while reading hypertexts because they use the navigation of ePortfolio as links that lead to text choices. Brown (2015) suggested that general readers in digital spaces expect a blending of videos, images, and sounds, as well as intuitive navigation. Brown (2015) identified some of the rhetorical choices available in an ePortfolio: “placement of content, and the ability to communicate via image, color, movement, and sound are as important to making meaning as the alphabetic” (p. 335). She asserted that as students construct their ePortfolios, they “are not only creating content—they are constructing their ethos using an entirely new set of rhetorical tools, and the boundaries between how they portray their work and how they portray themselves are blurred” (Brown, 2015, p. 337). An ePortfolio—more than other traditional academic genres—blends students’ personae into the representation of their learning.

Where Brown (2015) pointed out the affordances of ePortfolios, Gallagher and Poklop (2014) provided empirical evidence of how effectively students are able to achieve their rhetorical purpose in their

ePortfolios. Their analysis of 18 first-year students’ ePortfolios suggests that students have difficulty making sophisticated choices among the new rhetorical tools available to them to meet the expectations of different audiences in one ePortfolio. Gallagher and Poklop (2014) reported that instructors were conceptualizing audience in new ways as they adopted ePortfolio pedagogy in their first-year writing courses. Instructors reported that students saw the teachers, and possibly fellow students, as the primary audience for their ePortfolios. Some instructors indicated that using ePortfolios allowed them to increase their attention to audiences beyond the classroom and away from just the instructor and peers. Students were able to recognize a more general mass audience for their ePortfolios and tried to meet the needs of both an unfamiliar reader and familiar reader with one ePortfolio. Some students were able to successfully negotiate these two audiences’ needs by designing clear navigation for each type of audience, explaining connections between the artifacts, and using appropriate voice for different audiences. However, more often than not, students experienced what Gallagher and Poklop (2014) termed *audience interference*, where students were not able to meet the differing needs of different audiences within their ePortfolio. In these instances, students did not conceive of the audience as a particular set of readers. Some students had difficulty repurposing work done for a class for a more general audience.

Conrad and Bowie (2006) studied different portfolio readers’/viewers’ perceptions. In this study three staff members, not closely related to coaching portfolios, and three mentors, who worked closely with students creating portfolios, were interviewed concerning their experiences with summative and formative teaching portfolios. The principal focus of the study was on the relationship of reading context and audience on assessment of a portfolio. All participants commented on the conflict of summative and formative constructions appearing in the same portfolio. They suggested that the audiences of these two forms read the portfolios with different expectations for how to deal with showing development or mastery. The analysis of the interviews showed that the staff and mentors interpreted the artifacts of teaching portfolios differently. For example, the staff readers were more interested in evidence that showed mastery of teaching, and the mentor readers were interested in the teaching reflections and looked for a breadth of evidence and an understanding of what quality teaching is. Conrad and Bowie (2006) concluded that these portfolios highlight the tension between demonstrating formative development and presenting summative evidence of mastery since

different readers were guided by the expectations of one purpose or the other.

In another reading experience study by Quinlan (2001), readers participated in a think-aloud interview protocol. Participants all read the same ePortfolio and narrated their experience and judgments as they read. Quinlan (2001) observed that participants read the ePortfolios linearly, looking at each piece of evidence as it was presented by the author. Quinlan (2001) noted, “The readers’ linear progression through the documents does not suggest a search for particular pieces of information to confirm or disconfirm hypotheses” (p. 1047). These readers all expected the evidence to show mastery of skills, and the linear approach appears to be an expectation that the author may have ordered the ePortfolio to fulfill this expectation. In addition to this expectation, additional contextual knowledge, such as the reader’s knowledge of the author and the author’s departmental affiliation, contributed to the readers’ judgments. The ePortfolio was interpreted to be supplemental evidence to support readers’ previous knowledge of the author.

Lievens (2014) contributed to the discussion with a theoretical discussion of how career ePortfolios can contribute to students participating more competitively in an increasingly challenging labor market. He wrote that career ePortfolios can help students demonstrate their mastery of job specific skills, thus highlighting their potential fit for specific employers. Lievens (2014) cited a study in the Netherlands that underscored issues affecting this utility. Most importantly, employers and employees need to share expectations about what skills are required for a job. In addition, many employers already have specific instruments to evaluate applicants, so the ePortfolio would need to be incorporated into existing assessments. Lievens (2014) also mentioned that questions of credibility and validity of information in the career ePortfolios need to be addressed so that they may be accepted as reliable documentation of skills mastery. It is possible that the growth of digital badging (e.g., Peck, Bowan, Rimland, & Oberdick, 2016) may be one way to address this problem of credibility.

In their in-depth analysis of one student’s ePortfolio, Yancey, McElroy, and Powers (2013) noted that the author, Kristina, did not provide readers with directions on how to approach reading her ePortfolio. They suggested that the navigational scheme instead guides readers. Kristina offered readers brief introductions to her artifacts but did not provide an overall reflective document to guide readers in how to approach reading her ePortfolio. Her design caused Yancey et al. (2013) to question “What rhetorical moves—thinking here of addressing specific audiences—count as powerfully addressing audience, and what count as negatively limiting audience,

ignoring the greater digital context in which the work is placed?” It is possible that audience awareness may need to be more foregrounded for students so they can consider audience needs, including what information to provide and in what format. Cambridge (2008b) presented competing ideas for a professional ePortfolio, involving a focused career ePortfolio and a “symphonic self,” a more holistic presentation of digital identity. Cambridge (2008b) did acknowledge that “improving employability while simultaneously critiquing employability seems to put an ePortfolio to work on contradictory purposes” (p. 257). These multiple purposes and multiple audiences create a complex challenge for ePortfolio builders and those who are teaching students to build ePortfolios.

As an example of how ePortfolio authors have negotiated this challenge, in the Minnesota ePortfolio project, Minnesota State Colleges and Universities (MnSCU) opened up an ePortfolio platform for the general public (Cambridge, 2008a). In survey responses, the users of this platform indicated that they more often used the ePortfolio for educational planning, while employer directed ePortfolios were more often presented for second contact experiences rather than as introductions. These respondents seem to have had a clear perception that one ePortfolio is not sufficient for multiple audiences. In fact, each distinct audience may have highly different needs. To best address these different needs, Yancey et al. (2013) suggested that ePortfolio authors must consider the different methods of coherence that might affect the reader. They also suggest that part of what guides choices to create coherence is the “web-sensibility” of the reader. The previous website experiences of the reader may change how the reader perceives the coherence of the ePortfolio reading experience.

The literature on ePortfolio reading strategies and audience interaction suggest that the audience is a key stakeholder in ePortfolio design at all levels. The reader’s previous experience, purpose, genre expectations, and perceptions of the author’s ethos all influence how a reader makes meaning from an ePortfolio. Given this multitude of considerations, it is important to compare and contrast different readers to understand the range of choices readers make. Understanding these choices can help authors make more effective choices in designing ePortfolios for multiple audiences, or multiple ePortfolios for different audiences.

The Study

This study sought to address the question of how different audiences employ strategies to read/view an ePortfolio. Reading an ePortfolio is distinct from reading a traditional text because the individual participating with multi-modal text is making meaning

from not only the alphabetic text, but also the structural arrangements of different kinds of text, such as navigation, and the interaction of text and graphic elements or even text as a graphic element (e.g., Freebody & Luke, 1990; Sarafini, 2012). Recognizing that ePortfolio “reading” is not the same as reading a traditional text, in this study we choose to use *reader* in the sense of a *reader/viewer* using a “mixed set of reading practices” (Yancey et al., 2013, p. 9).

The research question of reader strategies evolved from the growing emphasis at our university concerning ePortfolios for employers as well as for instructors and assessors. In order to understand how each audience might read an ePortfolio, we identified three types of key readers. Professionals would provide insights into how local businesses professionals might read ePortfolios for hiring purposes. Instructors could describe ways in which ePortfolios could be read in educational contexts. Students could describe how they would read ePortfolios of their peers. These multiple audiences might require different rhetorical approaches. We wanted to document the needs of different audiences to understand how ePortfolio instruction might need to vary so that students can best appeal to different audiences.

Case Study Approach

Since we wanted to develop an understanding of how various audiences read/view ePortfolios, we designed a case study project using the think-aloud practice (Bogden & Biklen, 2007; Jaspers, Steen, van den Bos, & Geenen, 2004; Kilsdonk, Peute, Riezebos, Kremer, & Jaspers, 2016). The case study method is best suited to help answer our research question of how readers make meaning from ePortfolios (e.g., Gallagher & Poklop, 2014). Yin (2008) argued that a case study should be used when a “‘how’ or ‘why’ question is being asked about a contemporary set of events, over which a researcher has little or no control” (p. 14). We used a think-aloud practice to learn participants’ perspectives on ePortfolios as they engaged with them.

Boren and Ramey (2000) indicated that this practice of asking the participant to vocalize his or her thoughts while working through a process is a valuable approach for understanding the usability of a procedure or a technology. Jaspers et al. (2004) outlined using the think-aloud practice as a good way to gain insight into the different ways that individuals approach problems. Kilsdonk et al. (2016) further suggested that using the think-aloud approach can help researchers extrapolate a mental model of how information is negotiated by the people interacting with the process or technology in question. Falan and Han (2013) conducted a study using the think-aloud approach in a similar way to the application in this study. They asked participants to view

the same image to compare how each participant interpreted the same information. Another study similar to our use of the think-aloud approach was conducted by Wright and Monk (1991), who used the think-aloud approach with software users to evaluate user-interface design. In this study, we were interested in how ePortfolio readers both interpreted the ePortfolio and reacted to the design of the ePortfolio. Participants’ perceptions help us to theorize about the exigencies for the emerging genre of ePortfolios. Through the analysis of the participants’ reading of the ePortfolios, as communicated in their think-aloud sessions, we construct an explanation of how audience and purpose affect the way readers make meaning through interacting with ePortfolios that can guide instructors in their work with students as they create those ePortfolios.

Context

We conducted our research in a suburb of a large metropolitan area at a regional college of a public U.S. research university. At our college, ePortfolios are beginning to be used more widely. Currently, the English and Communication Department, and the Business and Economics Department are beginning to use ePortfolios for course and program assessment. Instructors teaching natural science first-year experience courses are considering using ePortfolios, as well. As a result, instructors have mixed experience on our campus with the use of ePortfolios. Students often experience their first exposure to ePortfolios in their English composition courses, where ePortfolios are most widely used for course and program assessment. Instructors in the English and Communication department are most familiar with ePortfolios, and instructors in other departments are becoming more aware of how ePortfolios can be used as interest rises. The campus Learning and Teaching Center sponsors ePortfolio development Faculty Learning Communities (FLCs) and workshops on a regular basis. However, in the larger metropolitan area, ePortfolios are uncommon in business hiring processes.

Our research focused on the experiences of faculty, students, and local business professionals in reading/viewing the ePortfolios from this college. We recruited faculty who were both familiar and unfamiliar with ePortfolios, with the final group representing a convenience sample of those willing to volunteer time to be interviewed. Students were recruited from the Student Ambassador Program, which involved highly motivated students who participate in work-study in Student Services. Business professionals were recruited through personal connections and represented professionals from health care, city administration, engineering, and large for profit businesses and corporations.

Interview sites included participants' homes and offices. Student participants were invited to the investigators' offices in order to maintain their privacy. Professionals were asked where they preferred to be interviewed; some chose to be interviewed in their homes and others in their business offices. Instructors were interviewed in their offices. Two ePortfolios were selected from an applied business degree program designed for professionals with an associate's degree so that they can earn a bachelor's as a means of career advancement. The program focuses on business management and business communication. Students produce ePortfolios as a capstone experience.

Data Collection and Analysis

Interviews. To design a meaningful experience for readers, the author of an ePortfolio must meet basic needs of readers. Different types of readers may have specific expectations, and all readers may share certain needs in common. To document these needs and expectations we conducted a comparative study of 11 students, 13 faculty, and 10 business professionals reading the same two ePortfolios. Participants were recorded engaging in a think-aloud practice with screen capture audio and video that documented how they navigated the ePortfolio and what they were thinking about as they read the ePortfolio. Each participant clicked through each ePortfolio in 15 minutes for a total of a half hour interview: the data was comprised of 15 hours of interviews. During the ePortfolio reading sessions, one researcher sat behind or beside the participant while he or she was reading the ePortfolio to help with technical problems, should they arise. In addition, the researcher would pose specific questions, such as "Why did you choose to click on that link?" or "What is your reaction to that navigation bar?" similar to the co-operative evaluation described in Wright and Monk (1991).

The two PIs independently analyzed all interview transcripts. We identified themes in the transcripts using NVivo software and calculated an 85-90% coding consistency. The video recordings were used as a type of observational field notes and the audio recordings were transcribed and coded using NVivo to identify themes in the interviews. Navigation was also documented, click-by-click, using the video to describe how each participant progressed through the ePortfolios. We collaboratively identified and defined thirteen main coding themes. Using NVivo to isolate and sort the thematic coding of the transcripts, we collaboratively refined these coding themes to five principal findings through discussions of the analysis.

ePortfolios. Two students agreed to allow us to use their ePortfolios for this project. In analysis and presentation of this study, student confidentiality is

required, due to the highly personalized nature of the ePortfolios, graphic examples of their work are not possible, but descriptions allow this confidentiality to be maintained. One student used LiveBinders, while the other student used WordPress as the ePortfolio platform. Each student created an ePortfolio to represent the work they had completed in their Bachelor's program. Over the course of their program, they collected assignments from different courses to document their work. Professors in different courses facilitated the addition of work from each course into the ePortfolio. The final collection of work was refined and presented in a capstone course for the program. Students were allowed to choose the platform, design, navigation, and some content, but they were specifically asked to include a section for their resumes, capstone projects, bridging course materials, and applied workplace writing samples. Since these ePortfolios were created over several courses, they were built for multiple audiences. These ePortfolios were neither of very poor quality nor very high quality in terms of depth of reflection, clarity of navigation, quality of artifacts, or aesthetic appeal of design.

"T's" ePortfolio was created in WordPress. On T's homepage, she told readers briefly what types of artifacts they might find. Her ePortfolio contained several artifacts: resume, mid-collegiate course assignments of samples (text, PDF, Word, YouTube, photo), mid-collegiate course resume and goals, senior capstone case study project linked as a Word document, the final senior capstone project, an image of her poster, and a link to her applied workplace writing course ePortfolio that contained the artifacts from that course.

T used the menu to connect her artifacts. She used a hierarchical arrangement for the items on the menu to indicate how the various parts fit together. The platform navigation structure required readers to go back to the pop-up main menu each time they wanted to move to another part of the ePortfolio. When she linked her ePortfolios from her mid-collegiate bridging course and her applied workplace writing, she did not provide a link back to her main ePortfolio.

T's personalization of her ePortfolio consisted of selecting a stock template from WordPress (i.e., the Together Theme), which she did not customize. The Together Theme has a large banner of dancing figures on a purple background that takes up the entire screen and often hides the text below. This banner appears on all the pages of the ePortfolio.

"J's" ePortfolio was created in LiveBinders. His opening page had a photograph of himself and brief introduction to his employment aspirations and personal interests. He provided a five-tab navigation on the left, with each tab opening onto a submenu of documents. J included the same elements as T, but in somewhat greater quantity. The documents ranged from text to

Table 1
Summary of ePortfolio Elements Favored (X) and Disfavored (O) by Students, Instructors, and Employers

ePortfolio element	Students	Instructors	Employers
Graphics	X	X	X
Personal Photos	O	X	O
Multiple lines of menu tabs	O	O	O
Multi-colored menu tabs	O	O	O
Generally named menu tabs	O	O	O
Linear navigation	X	X	X
Downloading documents	O	X	O
Text of more than one screen	O	X	O
Blank pages or filler text	O	O	O
Short reflection introducing a piece	X	X	X
Long over-all reflection	O	X	O
Resume up front	X	O	X

presentation slides to photos. He included his resume, reflective pieces, and specific coursework assignments.

J used embedded menus to connect his work. Under each of the five vertically organized main tabs were further submenus, and in some cases, these subpages also included pages with horizontal menus linking to more documents. This navigational structure required readers to navigate within increasingly embedded pages. These pages were the artifacts that represented his work in different courses.

J's personalization of his ePortfolio consisted of color choices for menu tabs and backgrounds, and he included two photographs, one on his opening page and one on his resume. The LiveBinders template allowed the left vertical menu to be visible at all times, while the horizontal page specific menus were visible only on a given page.

Findings: Themes and Participant Perceptions

Five themes emerged from the analysis of the participant interviews and the observations of participant navigation through the ePortfolios: audience and purpose, motivation to continue reading, navigating the ePortfolio, personalization, and reflection. These themes echo the findings of previous research described in the literature review. These themes are also interconnected with each other. Who the readers are plays a role in the type of motivation they need to continue reading, as well as how they react to the personalization and the reflection offered in the ePortfolio. The one theme that seems to be independent of the reader's background is navigation. Most participants followed the same navigational pattern.

Table 1 summarizes the readers' favorable and unfavorable perceptions of the ePortfolio elements on which they commented.

Finding 1: Audience and Purpose

ePortfolios are designed to achieve a particular rhetorical purpose with an audience. In our study, participants had difficulty identifying the purpose for the ePortfolios they reviewed. Because the purpose for the sample ePortfolios was not clear, participants were unsure of whether they were the intended audience. One student said, "I think that it's important for people to know this is what you're looking at. This is why you're looking at it. It makes the reader feel informed." Without this context, participants had a difficult time imagining how ePortfolios would fit their needs. Participants identified four potential audiences: general readers, students, instructors, and employers. When participants identified students as an audience, they talked about how ePortfolios could be used to track their learning as a repository of their assignments. One instructor pointed out that putting an ePortfolio together could "help prepare the student for interviews" because the process of putting the ePortfolio together would allow the student to reflect "on what he's done and where he wants to go." In this case, the ePortfolio would not need to be shared with employers, since it would be used to help the student consider how to represent what he has learned in his college experience.

When participants thought of the audience as instructors, they describe how the ePortfolio could demonstrate and document student learning in a course or program. In these learning ePortfolios, instructors

wanted more focused reflections that discussed exactly what the student had learned and used the artifacts as evidence of that learning. Instructors had more patience and interest in understanding what the various purposes might be for an ePortfolio. They acknowledged the instrumental purpose of employment, but they also noted that the ePortfolios demonstrated a range of learning through the collection of artifacts. Nevertheless, instructors also indicated that they wanted the ePortfolio authors to be clearer about their intended purpose for the ePortfolio.

Most participants identified potential employers as the most likely audience for the sample ePortfolios. However, they noted that ePortfolios are not common practice in most hiring processes. One business professor said, "It's probably not something experienced professionals use all that much." On the other hand, another younger professional who places college students into co-op positions at his company stated that he would like to use ePortfolios to help him in that process because they provided information about the skills and knowledge students have.

Participants recognized that resumes are the most important artifact for employers. Resumes, as a genre, have been honed to meet employers' needs for fast and efficient review of multiple candidates. Resumes are set up for quick scanning, and the standardized format allows readers to find the information they need quickly. As one professional noted,

I'm not vested in figuring [the applicant] out . . . It's just a fact that people who are viewing these have a lot of things going on, and you need to make it as easy as you can for them to buy into you.

Therefore, he expected the ePortfolio to be streamlined to demonstrate quickly and efficiently the applicant's skills and knowledge, suggesting he preferred to read the whole ePortfolio like an extended resume

Participants identified problems with ePortfolios for potential employers. They suggested that the ePortfolio needs to be tailored for specific jobs, just as resumes are tailored. These readers wanted contextualization of artifacts and intuitive navigation. Participants wanted authors to provide appropriate content. One student suggested that "employers want to know what you did in school. They don't want your homework. You have to kind of summarize." This recommendation was also given by professionals. They suggested providing executive summaries for the artifacts as a way to provide quick, easy to read context.

Professionals struggled with understanding how ePortfolios would be involved in the hiring processes already in place. One information technology professional asked when the applicant would present the ePortfolio. He didn't think he would review it in the

first review of resumes. He said it would be a problem to view it during an interview because his organization was not set up for that. Another professional from city government stated that the city office had a specific procedure for applicants to follow that involved a standard application and a place to upload a resume. There was no place for applicants to add an ePortfolio.

Nevertheless, there were some professionals who thought they could use ePortfolios. One human resources professional said an ePortfolio could be "helpful to try to get a feel for what a person has done, how they think, and how they would fit in the organization." Several business professionals thought that with relevant artifacts and explanations, an ePortfolio might help them narrow a list of final candidates after they had reviewed resumes.

One instructor described how he would teach students to do an ePortfolio for an employer:

I would tell them to make it simple. Make it logical. Just make it easier for the reader to follow. To be able to logically say, "this ties to this" and how it's all supposed to fit together. I would tell them "you have to sell yourself. Why are you doing these things? Why is it important to you? Why is it important to me?"

This instructor's directions reflect what the business professionals in this study wanted. This advice would help students create ePortfolios that would achieve their purpose for an employer as audience and develop coherence throughout the ePortfolio.

Finding 2: Motivation to Continue Reading

Regardless of purpose, the reader must feel motivated to continue reading the ePortfolio past the opening page. The primary motivation of all three groups was to look at the content of the ePortfolio. Easy access and having their interest piqued seemed to be key to increasing or decreasing this motivation. All three groups of readers generally agreed that navigation, design, and purpose were important elements that affected their continued motivation to read further.

Student readers found the navigation structure most important in motivating them to read further. When navigation menus were cluttered or unclearly labeled, they were very clear that this frustrated them and caused them to not want to continue through the ePortfolio. Students' key criteria for continuing reading was that the ePortfolio author create a navigation system that made it easy to find what they wanted, and when they clicked on a link or tab, what they expected to come up would appear. One student summarized the general feeling when she said, "You shouldn't have to

guess your way through someone's ePortfolio because the minute you can't navigate yourself, you're going to lose interest." The second most important element students cited was the length of documents. Short, one-paragraph explanations were read, but longer texts were only scanned, if they were read at all. Finally, blank pages were cited as a clear demotivation; students often commented that hitting a blank page was like hitting a road-block in the ePortfolio, and they all commented that they would quit at that point.

Professionals shared the students' perceptions of motivation to continue reading. They cited clear navigation tabs as an element that made them want to continue through the ePortfolio because it helped them find what they wanted quickly. They also cited clear, concise statements of purpose for what each page should mean. In the same vein, they reported that the principal reason they would not read a page or artifact was length. None of the professionals who reviewed the ePortfolios read the documents of more than one page. They would scan the documents if they felt the document's purpose was clear, but only read selectively. Professionals were most motivated to continue to read when the author easily facilitated their purposes in reading.

Instructors agreed that navigation was an important driver in feeling motivated to continue reading because clear navigation made it easy for them to read what they wanted. They also commented that they were motivated to read further when their expectations were met when what they clicked on gave them what they expected. In addition, instructors reported that graphics and color caught their interest and contributed to their desire to read further. One instructor summarized this view in her comment: "I like the graphics. It's eye catching and it's got me interested so I'm excited to see what the work is just because the graphics have kind of drawn me in here." Even if a page's content did not initially engage the reader, the graphics might motivate them to continue.

All participants agreed that unclear navigation was a strong demotivator because it did not allow the readers to find easily the artifacts they wished to find. This included unclear tab labels as well as inconvenient menu structures, such as embedded menus or menus that required clicking on an icon to bring up the main menu. This difficulty was characterized by all groups as "wasting my time." Both students and professionals cited length as the next strongest demotivation to read. They skimmed long text or just exited the document immediately after scrolling past one page. Participants in the professional group indicated that they wanted three sentence introductions to explain why they should bother reading a document longer than one page. Instructors, in contrast, had more patience with

longer documents, and would generally read or scan them, often looking for specific parts of the document to read carefully, such as conclusions, recommendations, or results.

Finding 3: Navigation Through ePortfolios

All three groups showed strong similarities in navigating through the ePortfolios. Patterns of navigation and perceptions of author meaning in navigational structure were observed in both the click through screen-capture video and the participants' observations as they read the ePortfolios. In general, all readers followed the vertical and horizontal menu orders. Long text was not read by anybody but was often scanned to the bottom. Short text of one screen was more likely to be read. Students and employers spent more time on the resume, and instructors were more likely to read the reflections. Blank pages confused and irritated all readers. A reader would scroll up and down on a blank page to make sure nothing was there and waited to see if something might load. Often all readers will scroll up and down on a page to preview what was there and then scan or move on. Scrolling up and down was a form of pre-reading that helped them decide where to focus their attention and for how long they would attend.

In reading the ePortfolios, all three groups interpreted the reading of the ePortfolio as a collaborative act of co-constructing meaning with the author. While moving through the ePortfolio, the readers would often address the author directly such as, "Don't let me down!" or "What are you doing here?" or "Oh, you went sideways on me!" The navigation menu, the design, the menu labels, and the relationship of artifacts with each other in the ePortfolio were all interpreted to have specific meaning by the readers, such that the ePortfolio seemed to become an avatar of the author. The design was interpreted as the affect of the author and the organization as the intent of the author. Readers actively looked for guidance from the author through the menu and file names. The menu was seen as an overview of the site, and the opening page was expected to set up the reading experience for the reader. Readers felt that dealing with the ePortfolio was work, and they saw the author's job as creating an easy experience for the reader. Being confused by navigation or by a document's significance was felt as a "waste of time." Readers also objected to being forced to go through several clicks to find something since clicking multiple times is perceived as a lot of work that the author should not make a reader endure.

Confusion about where to go or what a document signified was felt as a betrayal by the author. For example, a menu tab called "resume reflection" that did not deliver a resume was a source of irritation, and a

blank page was interpreted as an irresponsible act by the author. The faculty readers were more likely to assume that they had done something wrong or the page may have been slow to load, but student and professional readers often indicated that a blank page or a confusing set of menu tabs would make them stop reading. In fact, a particularly confusing menu elicited dismay, confusion, and shock in all readers. In this case, the author was perceived as no longer providing sufficient guidance to the reader, and the cooperative relationship was no longer reciprocated to by the frustrated readers, almost all of whom quit reading at that point.

The menu was interpreted by all readers as the principal guidance provided by the author to show the reader around the ePortfolio. All readers expressed a preference for vertical menus or horizontal menus of one layer. The majority of readers followed the menu order as a deliberate request from the author to read the ePortfolio in this way. Proximity of items in the menu was interpreted as relationships between documents, and the order of presentation was also interpreted as creating a framework that gave meaning to individual documents. Readers also transferred their general knowledge of how to navigate from other websites. When the menus of the ePortfolio became too confusing, readers would often revert to navigating with the browser commands.

Readers also viewed the choices of platform as deliberate constructions of meaning by the author. Readers recognized that the author's choices were constrained by the templates of the platforms, but they also expected the authors to be able to make choices within those platforms. Good choices were characterized as clean, clear, and slick, while bad choices were characterized as confusing, cluttered, and old fashioned.

Finding 4: Personalization of the ePortfolio and Its Effects on Readers

Participants explicitly noted the personalization of each ePortfolio. One instructor said, "It's interesting how personality comes through just from the very first page." This personalization came in the form of several design choices the authors made. One author chose to use personal photos, while the other chose to use stock images from the WordPress template. J used lots of different colors while T stuck with the template colors. J chose to use a left fixed menu, while T used a hidden menu icon. These design choices influenced the way participants read/viewed the ePortfolios. How participants conceived of their role as readers and their purpose for reading also affected how they responded to these choices. How participants

position themselves as readers appears to influence how they react to and interpret the personal photos and the stock banner image.

Design. Although design may not seem like a primary concern, it is the gateway to content. If readers are put off by the design, be it color or navigation, then they will not even look at the content. Similarly, grammar and punctuation are not the content of the text, but they are perceived by readers as barriers to understanding content, and indicators of the author's ability to communicate. Grammatical errors seemed to create perceptions of a personal lack of ability if the author is perceived to be a native speaker of English. Instructors were willing to work through the design since they perceived the errors as part of the learning process. They viewed the ePortfolios as unfinished process pieces. In contrast, students and business professionals viewed the ePortfolios as final products. Students were highly critical of poor design and language problems since these were issues that they perceived to be key to their own success. Business professionals were least tolerant of poor design and language choices. In their perception, poor design and language choices wasted their time, which irritated them, and were indicators of the author's professional abilities or inabilities.

Banner with personal photos. When participants assumed the role of an employer reviewing the ePortfolio, no participant approved of J's decision to include a photo of himself on his resume. Many participants interpreted this move as an attempt to provide a headshot. One student participant, who actually uses headshots in her applications, describes how she uses them: "I sing opera. If they require headshots, I have them professionally done on photo paper to give them, not like a little clip on the top of the resume." When participants explained why they believed the photo was inappropriate, they said it could lead to bias for or against the author. One student said, "I don't like the photo on the resume. Like, they're judging you based on how you look."

The type of photos J used elicited strong negative reactions. Professionals, faculty, and students all questioned the use of an informal photo instead of a professional headshot. In describing the ePortfolio one instructor said, "His biggest error was that picture." The use of a photo that did not match readers' expectations led to negative interpretations of J.

The negative responses ranged from mild amusement to strong disapproval. Among the mild reactions, participants said that it seems "this person is really into themselves." They recognized that J may not have realized how the large size of the first image and placement of the photo on the resume might be considered narcissistic. They thought it was a novice mistake. The background of a gothic style fence caused

one business professional to “start thinking about religion,” which would be inappropriate in the business environment. Another professional stated his objections more bluntly: “I would not even read it. Just his look and the way he’s dressed. It’s too formal for scientific fields.” These professionals’ expectations as readers were violated. This violation of the reader expectations can undermine an ePortfolio’s appeal to the reader.

Some instructors liked the idea of a photo of the ePortfolio creator because it helped them “put a face with a name.” It also gave them a sense they were “dealing with a real person.” Instructors were less put off by the personal photo. One instructor said, “This is nice because now I have an idea of who J is.” Some instructors saw the photo as inviting.

Banner with stock image. When participants positioned themselves as a generic reader exploring an ePortfolio, participants made positive comments about the image and the colors. They pointed out that the dancing figures were joyous, whimsical, and happy. Three students associated the banner with being artistic. Instructors said it showed T was collaborative and open-minded. They liked the colors and thought the banner “is a good balance of fun and drawing your eye to it all.”

Instructors and professionals also conceived of themselves as needing to be able to review the ePortfolio contents quickly and efficiently. In this reader position, the size of the banner became an issue. The banner appeared on most of the screen, obscuring the text below. Four instructors and three professionals were frustrated by the extra scrolling they had to do because of the banner size.

When participants positioned themselves as potential employers reviewing the ePortfolio for potential employment, they interpreted the stock image negatively. Interestingly, instructors did not take on this role when they read the ePortfolios, so they did not discuss the mismatch between the purpose and the stock image. Both students and professionals did comment on this mismatch and reacted strongly to it. One professional said, “This dancing stuff. It looks like it might be good for some art or some other musical or some entertainment something, but not for what I’m looking for.” A student commented that

I don’t have a sense of the person who created it. I feel like the picture stands out because I don’t know why they chose that and they have their reasons. I think they were studying business administration and they talked about working in hotel work, so that dancing in a circle kind of confuses me.

The negative reactions of these two participants arises out of mismatch between the ePortfolio creator’s

conception of the purpose and audience for this ePortfolio. The professional could not conceive of himself as a general audience. He expected the image to target his needs as a reader, and when those expectations were not met, he stopped reading. The student recognized this disconnect between the image and the ePortfolio’s employment purpose as well. The student did not see how this image of dancers connected to T’s stated career goal of event planning. T did not explain why she has made this design choice, so readers were left to work out the relationship of the image to the purpose of the ePortfolio independently. Readers perceived this extra rhetorical work as the responsibility of the author, and they expressed annoyance at having to guess the connections.

Finding 5: Reflection

Instructor readers were strongly focused on the reflective pieces as demonstrations of personal growth and development. They interpreted the reflective pieces as showing maturity and diligence on the part of the author. In some cases, instructors commented that the reflections should guide the reader to understanding the overall purpose of the ePortfolio and give the reader a general frame of reference. Nonetheless, instructors still asserted that the reflection should be a rigorous piece of writing and not so informal as to be more like a diary entry. Students and professionals were less interested in the reflective pieces, often criticizing them for being too informal, too long, or insufficiently relevant to the practical purpose of the ePortfolio. Reflective pieces were clearly more interesting, familiar, and informative for instructors than for either students or professionals. The reflections in these two ePortfolios were not able to meet the expectations of any of the readers. Each reader came to the reflections with greatly varying expectations about the function the reflections served in the ePortfolio.

Discussion

These findings lead us back to Yancey et al.’s (2013) question, “What rhetorical moves—thinking here of addressing specific audiences—count as powerfully addressing audience, and what count as negatively limiting audience, ignoring the greater digital context in which the work is placed?” (p. 22). The participants in our study clearly identified specific elements of the ePortfolios that affected them powerfully, such as navigation and design, and those that negatively limited them, such as unclear purpose of an artifact or lengthy text. Gallagher and Poklop (2014) addressed this idea of rhetorical moves, identifying intentional design, adequate contextualization, and

flexible voice as key moves to accommodate different audiences. The participants in this study support the assertion that these three moves were important for making meaning of the ePortfolios. In Fitzgibbons's (2008) characterization of reading practice in hypertexts as linear, mixed, and mixed review was also supported by the experience of the participants in this study. They occasionally used mixed review but most often, all opted for a linear progression through the navigation structure offered by the author, which is also similar to the findings in Quinlan's (2001) study. These participants' perceptions also supported Brown's (2015) assertion that ePortfolio authors are constructing their ethos through the organization of their ePortfolios. Participants in this study voiced personal judgments concerning the authors based on navigation choices, text choices, and graphics choices. Finally, Conrad and Bowie (2006) document how instructors and professionals (mentors and staff in their study) read for different purposes. The instructors in our study were more interested in the learning demonstrated by the ePortfolios, and the professionals were more interested in demonstrations of mastery. Thus, the findings from this study support and corroborate the findings of previous research.

Role of Audience and Purpose

Ramirez (2011) suggested, "The 'audience' for any given ePortfolio may not be readily located or defined" (p. 1). This was true for the sample ePortfolios used in our study, which led to participant frustration. These ePortfolios do not seem to address a particular exigency that Swales (2009) described as the work of a genre. Miller (1984) claimed that exigence was "a form of social knowledge. . . [that] provides the rhetor with a socially recognizable way to make his or her intentions known" (pp. 157-158). This social knowledge must be shared by the audience. In our study, participants did not share this social knowledge with the ePortfolio authors. The competing purposes of documenting learning for an instructor and demonstrating skills and knowledge for an employer prevented the ePortfolio authors from meeting the expectations of either group. Although some researchers (Cambridge 2008a; Lievens, 2014) have argued that ePortfolios can be useful for employment, the professionals in our study had several reservations about including a new step in the candidate review process, especially when the ePortfolio would add more time and effort.

Our work with three different audiences suggests that students do need to create audience and purpose-specific ePortfolios to address the highly contextualized needs of their readers. For instance, time and again the business professionals expressed the need for conciseness. They wanted executive

summaries, bullet points, and a clear rationale for why they should read the ePortfolio. One professional said that the sample ePortfolios were "too academic." Professionals might be motivated to read longer pieces if there was a strong enough rationale for doing so. In creating ePortfolios for potential employers, students would do well to remember that employers will be reading many resumes and possibly ePortfolios, so they need to capture their reader's interest quickly. Most of the professionals we interviewed were least accepting of editing errors. They viewed such errors as an indication of the student's work ethic. In fact, one professional said he would not even call T for an interview because of the number of editing errors (two) on her home page. However, one of the medical professionals expressly said that editing issues were not a concern if the content was accurate. For an effective ePortfolio, the author must have a clear vision of the audience and purpose of the ePortfolio to be able to effectively make choices that will meet the needs and expectations of that specific audience. It is unclear that multi-audience ePortfolios are as effective for readers as ePortfolios tailored for a specific audience.

Role of Coherence/Navigational Meaning

In the emerging genre of ePortfolios, we are still learning how writers achieve coherence across the entire ePortfolio. In examining how one student achieved coherence in her ePortfolio, Yancey et al. (2003) raised these questions:

What methods of coherence does an ePortfolio composer design and to what effect? And how successfully do these methods enact the composer's intent? How much (and what kind) of context should be provided for a web audience? How can this context be balanced against the context to be provided for an assessor, which is presumably different from the context of a vernacular reader? (p. 26)

The participants in this study suggest that they found coherence created for them through easy navigation, sub-menus that grouped related artifacts together, explicit explanations that specified the author's intent in presenting a particular artifact, and clear tab and file names that met readers' expectations. Violating expectations for coherence was perceived by the audience as damaging to their relationship with the author in making meaning of the ePortfolio, and often resulted in the readers expressing disappointment in the author or irritation from feeling that their time was being wasted. Clear navigation appears to be a critical element for creating coherence for readers.

Role of Personalization

By the role of personalization, we are considering aesthetic appeals such as banners, colors, and layout. Yancey et al. (2003) further raised the questions, “What does such an aesthetic contribute to our reading experience? Does such personalization ‘ground’ the ePortfolio in a way, even as different readers create their experience of the ePortfolio, with the result that we experience a concurrent doubled reading?” (p. 25). One of the affordances often mentioned with ePortfolios is their ability to be personalized by the student. But how do students learn how to make effective design choices that will support the purpose of their ePortfolios? In our samples, students chose their platforms and templates. They decided the backgrounds and navigational structure, but it did not seem like they gave much consideration to how these elements might support the argument their ePortfolio was making.

Audiences interpreted the personalization in the design of the ePortfolio as a representation of the author. They often expressed strong emotions when encountering specific design elements, such as graphics and colors. The design choices did not always support the meaning the readers were making as they read the ePortfolio. For instance, readers did not interpret one of the photos as representing a person seeking a management position. Therefore, they judged the author as not being serious about the search. Design choices could also inhibit a reader’s predisposition to collaborate with the author to make meaning when those choices were unappealing. For example, dense, multi-colored menus caused all readers to abandon reading. Therefore, personalization of design becomes an important element in collaborating with the reader to make meaning as well as motivating the reader to continue in that collaboration.

Role of Reflection

Reflection is often viewed as an essential element of ePortfolios. Reflection is what differentiates a collection of assignments from an ePortfolio that shows how students have integrated their learning. Yancey et al. (2003) questioned what form reflection should take in ePortfolios. The professionals responded that they were not so interested in extended reflection. They seemed to want a quick overview and then a three-sentence interpretive guide for each artifact. It seems that reflection should be more condensed and concise in professional ePortfolios, and in learning ePortfolios it might be fuller and more comprehensive. The purpose and audience should determine the type of reflective writing used in the ePortfolio as evidenced by the professionals who wanted a quick explanation of the ePortfolio’s purpose, and some even said they would

prefer if it were in bullet points. One of the professionals commented that the sample ePortfolios were too academic because there was too much text and the writing wasn’t focused.

The instructors were the most interested in reading reflection as a way to understand what students thought they were learning or getting out of the program. An introductory reflection/piece describing the purpose of the ePortfolio was mentioned as necessary by all participants. Many participants asked why they would read the ePortfolio. Without any introduction as to why the student put the ePortfolio together, they just followed a simple navigational pattern through the ePortfolios. They tried to understand why artifacts were included, but when they encountered blank screens or links with no explanation, they were stymied. They liked having introductory pieces that helped to explain the artifacts, but they especially expressed a need for an overall introduction to the purpose of the ePortfolio. Most participants were unfamiliar with this genre and needed guidance from the writers in how to approach reading it. A reflective introductory piece gives readers the context they need to interpret the artifacts presented in the ePortfolio and a reason for reading the ePortfolio. This supports their motivation to continue reading. Readers may conceive of reflection differently; as a result, recognizing the specific expectations of what reflection achieves for the intended audience is a key element.

Limitations

We had a limited sample size for each type of audience in order to delve more deeply into how each participant approached reading ePortfolios. In further research, more participants would provide a broader representation of members of each group. It might be fruitful to focus on a specific type of employer or student in understanding how ePortfolios are read within specific discourse communities. Additionally, a wider range of ePortfolio quality would provide clearer indications of which rhetorical choices work most effectively with different audiences. Finally, more varied audiences and a wider range of ePortfolios would provide a broader perspective on specific reader expectations. Further research should focus on authentic readers as they engage in reading ePortfolios in professional and community contexts external to the academy.

Conclusion

The findings above suggest key elements that students need to consider in creating effective ePortfolios. Instructors need to theorize audience with students so that they can make effective choices when representing themselves to different audiences. We believe this study demonstrates that an ePortfolio

author's choices about how to realize elements of their ePortfolios need to be explicit in order to create a coherent digital identity. These choices are how readers make meaning from an ePortfolio, whether the author means it to happen or not. Readers seem to be making meaning from where the author chooses to locate evidence and how the author designs the representation of artifacts. Navigation is an element that allows the reader to interpret the meaning of how artifacts are connected. Due the fact that different audiences read ePortfolios for their own specific purposes, it seems that an author may need multiple ePortfolios to target specific audiences. Each audience will require tailored navigation, design, reflection, and content. We hope this investigation will support those who help students create ePortfolios as part of their courses or programs as they make choices about audience and purpose in this emerging genre.

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- RUTH BENANDER is a Professor of English in the Department of English and Communication at the University of Cincinnati Blue Ash College. She also serves as the chair of the University eLearning Committee's ePortfolio Task Force to support and promote the use of ePortfolios across disciplines. She has been teaching with ePortfolios in faculty learning communities and English department courses for eight years.
- BRENDA REFAEI is an Associate Professor of English in the Department of English and Communication at the University of Cincinnati Blue Ash College. She serves as the Composition Coordinator and works to support faculty development within basic writing, first-year, and second-year composition courses. She has been teaching with ePortfolios in her composition and basic writing courses for five years.