INTRODUCTION

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Institutions of higher learning have dedicated much energy and many resources to assessment measurements and standards through individual tools, through high-stakes testing, and through ePortfolio management systems. An ePortfolio is a selected collection of work presented electronically. An electronic performance support system, specifically, is an integrated electronic environment designed to reduce complexity in order to make sense of things, to provide employee performance information in order to foster improvement, and to provide workers with a decision support system in order to maximize productivity. As higher education continues to learn from efficiencies and new technologies in the workplace that refine performance measurement, study knowledge transfer and Web 2.0 tools (Gerben, 2009), and develop viable and sustainable products through interaction theory and website design principles, this collection of essays from knowledgeable scholars and practitioners of ePortfolios helps foster increased understanding of intersections between ePortfolio composing, presentation, and assessment in the academy and workplace, including ideas for embracing electronic performance support systems. Ideas and the discussion related in this collection published by the WAC Clearinghouse are extended online through Creative Commons licensing, as well. Please consider purchasing the print version, but also freely link to and share materials in the online version.

Essays in this collection ask readers to consider ways in which ePortfolios, as distinguished from non-electronic portfolios, facilitate sustainable and measureable writing-related student development, assessment and accountability, learning and knowledge transfer, principles related to universal design for learning, just-in-time support, interaction design, and usability testing. The collection contributes to recent scholarship on ePortfolios and provides new dimensions to the field of portfolio development in the academic and in workplaces. Traditionally, portfolios have been considered valuable tools because in addition to embracing principles of validity and reliability as assessment measurements, they enable students to continue to learn as they construct their portfolios. Portfolios have specific audiences—most traditionally a program or a teacher in an institution. But institutions work to prepare students for the workplace (including academic workplaces), and the workplace demands much different forms of performance and support measurements. ePortfolios should be designed with scalability and potential workplace applications in mind.

The collection is categorized into four sections each with three essays (chapters) that conduct an intertexual discussion and point to possibilities and gaps for ePortfolios future discussion.

1. SYSTEMATIC PERFORMANCE SUPPORT SYSTEMS

We open the discussion with Kathy Yancey's seminal article, "Postmodernism, Palimpsest, and Portfolios: Theoretical Issues in the Representation of Student Work," which is reprinted with permission from the National Council of Teachers of English. Originally published in *College Composition and Communication* in 2004, Yancey's piece situates portfolios as reflective "exercises in remediation" in a public space. Classrooms, too, are public spaces.

Throughout the collection, contributors Rice, Ramsay Johnson and Kahn, Cambridge, Corbett et al., and others expand on Yancey's concept of how ePortfolios can iteratively resituate and reconstitute ePortfolio artifacts into new interpretive understanding. This ability of ePortfolios to not only reproduce, but also to reformulate meanings across time and space lends ePortfolios their additive possibilities. Adding one plus one artifact does not equal two, but more than two because of the variety of possible interpretations. The intentional gathering and remixing of artifacts lends to the viability of ePortfolios across workplaces and lives, as Yancey alluded to in her 2004 *CCC* article. We felt we would be remiss if we did not launch this collection with Yancey's piece because we knew her work would be foundational to the ePortfolio conversations of this collection. And, as Yancey predicted in her article and as this collection shows, digital portfolios are evolving nationally and internationally and attention should be paid to the intentionality of the development.

Yancey is Kellogg W. Hunt Professor of English and Distinguished Research Professor at Florida State University, where she directs the Graduate Program in Rhetoric and Composition (http://ncte2008.ning.com/profile/kathleenyancey). She has served in several national leadership roles, including President of the National Council of Teachers of English; Chair of the Conference on College Composition and Communication; and President of the Council of Writing Program Administrators. In January 2013, she assumed the Presidency of the South Atlantic Modern Language Association. She also co-founded and co-directs the Inter/National Coalition for Electronic Portfolio Research, which has brought together over 60 institutions from around the world to document the learning represented in electronic portfolios. Editor of the flagship journal of writing studies *College Composition and Communication*, Yancey has authored or co-authored over 70 articles and book chapters and authored, edited, or co-edited eleven scholarly books, including *Portfolios in the Writing Classroom* (1992), *Reflection in the Writing Classroom* (1998), *Situating Portfolios* (1997b), *Delivering College Composition: The Fifth Canon* (2006), *Electronic Portfolios 2.0: Emergent Research on Implementation and Impact* (2009), and the forthcoming co-authored *Contexts of Writing: Transfer, Composition, and Sites of Writing*, which is a study of the transfer of writing knowledge and practice in college.

Rich Rice follows Yancey's principles and core values of representation in "The Hypermediated Teaching Philosophy ePortfolio Performance Support System." Rice directs the Multiliteracy Lab in the Texas Tech University Department of English, and he teaches using ePortfolios both online and face-toface in the TTU Technical Communication and Rhetoric program. See http:// richrice.com. He is a member of the Conference on College Composition and Communication's Committee on Best Practices for Online Writing Instruction. His recent articles are in the areas of new media knowledge creation, mobile medicine, basic writing and photo essays, remediated film, nontraditional graduate support systems, ePortfolios, and media labs. With Nedra Reynolds (2006a, 2006b) he has co-written the second editions of Portfolio Keeping and Portfolio Teaching. Reynolds is soon to release third editions. In this essay, Rice draws on research in electronic performance support systems in order to point out ways in which the traditional teaching philosophy essays fall short as a genre of invoking its intended audience and multiple purposes because of hypertextual and reflective exegeses similar to those in ePortfolios. He suggests that in order to become an effective ePortfolio support system, the teaching philosophy should be taught and received as a networked performance space. In this second essay, Rice opens by expanding on Yancey's belief that ePortfolios, like a palimpsest, can be "retooled." Rice then hints at upcoming ideas in Lauren Klein's essay that discusses how blurring the boundaries of social media and ePortfolios can enhance classroom and workplace experiences. Furthermore, Rice elaborates on Carl Whithaus' discussion later in the collection of teaching philosophies as a "thirdspace" from Grego and Thompson (2008). ePortfolios multiply opportunities for presenting the self in diverse kairotic performances such as hypermediated teaching philosophies.

Next, Lauren F. Klein details another systematic approach to academic portfolios using social media. Klein directs the portfolio program in the City University of New York's Macaulay Honors College (http://macaulay.cuny.edu/eportfolios/lklein). She is an Assistant Professor in the School of Literature, Me-

dia, and Communication at the Georgia Institute of Technology, where she also directs the Digital Humanities Lab. Her essay, "The Social ePortfolio: Integrating Social Media and Models of Learning in Academic ePortfolios," examines recent research in social networking. She points out how many users can apply ePortfolio systems and social network sites in order to bridge the academy and other workplaces. What can an ePortfolio be? An ePortfolio can shapeshift into almost anything, according to Klein. Her essay closes Section 1 by moving readers among Yancey's foundations, Rice's teaching philosophy constructions, and then Klein's worlds of social networking: practical and creative, personal and social, textual and digital. This builds a foundation for the essays in Section 2, Constructing the Bridge, which explores ePortfolio transitioning into nonacademic workplaces as sustainable academy-to-workplace programs, capstone courses, and feedback loops that improve the ePortfolio experience and product.

2. CONSTRUCTING THE BRIDGE

The first essay in this section is by Barbara D'Angelo and Barry Maid. "ePorts: Making the Passage from Academics to Workplace" builds on the idea that ePortfolios can be useful for both individuals and systems by talking about ePortfolios as passageway from demonstrating proficiencies and meeting programmatic outcomes to demonstrating entry-level skills in various workplaces. The essay situates perceived dichotomies of academic versus practical, and theoretical versus applied. A key finding in D'Angelo and Maid's ePortfolio evaluation is that "direct instruction in tools or software" is a common shortcoming. How can teaching institutions serve many stakeholders? Ultimately, the authors conclude teachers using ePortfolios must serve in their role as technical communication educators. Any institution rebuilding its use of ePortfolios would benefit from this analysis of Arizona State University's program. It serves as a technical communication bridge between the academy and the workplace. D'Angelo's publications include several book chapters and articles on the use of outcomes for curriculum development and assessment and on information literacy. Maid founded the Technical Communication program at Arizona State University in 2000 and headed it for more than 10 years. His recent publications are in the area of information literacy, writing assessment, online education, and independent writing programs. Most recently, with Duane Roen and Greg Glau, he is co-author of The McGraw-Hill Guide: Writing for College, Writing for Life, currently in its 3rd edition (2012). Learn more about these researchers' ongoing work at http://www.public.asu.edu/~bdangelo and http:// www.public.asu.edu/~bmmaid.

Next, Karen Ramsay Johnson and Susan Kahn at Indiana University Purdue University at Indianapolis (IUPUI) highlight their perspectives on challenges embedded in capstone projects. The essay connects the dots with English majors and professional programs transitioning to careers or further study. Similar to the previous essay regarding ASU, the authors relate work being done at IUPUI, including integration of ePortfolios with other adopters across campus. Johnson and Kahn show the evolution of their work in relation to work from Barrett (2004), to matrices and webfolio work of Hamilton and Kahn (2009), to Zubizarreta (2009), and to Cambridge, Cambridge, and Yancey in Electronic Portfolios 2.0 (2009). This chapter continues a thread on reflective process in ePortfolios that runs through the work of Darren Cambridge. Whether in the classroom or community, reflective process weaves through the collection. More than a case study of ePortfolios within the collection, Johnson and Kahn's piece shares the reflective experiences of four English Capstone students using ePortfolios. The feedback loop between students and authors/researchers shows that the technology of ePortfolios may not resolve inherent pedagogical and social problems. Readers are reminded that ePortfolios are always already "works-in-progress." Johnson has given numerous presentations on ePortfolios and their use in both Liberal Arts programs and in assessment. Kahn has published, presented, and consulted widely on faculty development, assessment, and electronic portfolios, including co-editing *Electronic Portfolios: Emerging* Practices in Student, Faculty, and Institutional Learning (2001). She currently chairs the Board of Directors of the Association for Authentic, Experiential, and Evidence-Based Learning (AAEEBL), the international association for ePortfolio practitioners.See http://academicaffairs.iupui.edu/plans/ePort for more discussion on IUPUI's approachs.

Karen Bonsignore in "Career ePortfolios: Recognizing and Promoting Employable Skills," writes about "City Tech," an organization that helps students prepare career ePortfolios. Bonsignore is Director of the New York City College of Technology ePortfolio Project (http://eportfolio.citytech.cuny.edu). She has offered numerous presentations on various ePortfolio, assessment, and technology related topics including, most recently, "Comprehensive Support for a Successful ePortfolio Project," "Designing an Effective Online eTutor Writing Assistance Program to Support Career ePortfolios at City Tech," and "Career ePortfolios: A Showcase of Student Work." This essay relies on student perspectives, but with the career ePortfolio and its multiple and diverse audiences in mind. Bonsignore's text brings into sharp relief the public life of the ePortfolio as an artifact for the marketplace. These portfolios offer significant advantages over traditional dossiers, including offering numerous versions. The program prepares students with competitive job market and graduate school admissions advice. Thus, the three discussions in Section 2 about constructing bridges examine the nuanced interplay of outcomes, reflection, and audience in variety of ePortfolio capstone courses and community projects.

3. PRESENTING INTERACTIVE DESIGNS

Geoffrey Middlebrook from the University of Southern California and Jerry Chih-Yuan Sun from National Chiao Tung University begin "Showcase Hybridity: A Role for Blogfolios" with a powerful volley to the ePortfolio field about the limitations of static approaches to ePortfolios. They encourage database-driven and more dynamic approaches to the ePortfolio imagination. Specifically, this chapter discusses a project at USC to implement a portfolio-based system. Hybrid "blogfolios" can result in flexible research processes for personal, intellectual, and vocational benefits. Middlebrook and Chih-Yuan Sun evoke Ali Jafari's (2004) positioning of students as stakeholders at the "cyber-table." Students and web bloggers do not only reproduce digital identity through content; their identity is developed through aesthetic, software, and media choices (Farmer, 2006). Chih-Yuan Sun has published journal and conference papers in the areas of online teaching and learning, student motivation, electronic feedback devices, OpenCourseWare, and ePortfolios. Middlebrook is the recipient of numerous grants and awards, among them the University of Southern California Provost's Prize for Teaching with Technology. For more information about current work, see Middlebrook at http://dornsife.usc.edu/cf/faculty-andstaff/faculty.cfm?pid=1003534, and Chih-Yuan Sun through http://blog.jerrysun.net and http://elearning-lab.nctu.edu.tw.

Similarly, in "Accessible ePortfolios for Visually-Impaired Users: Interfaces Designs, and Infrastructures," author Sushil K. Oswal focuses on questions of interface and content design in ePortfolios for blind users. The chapter is relevant for those with other disabilities as well. Oswal's research is anchored in digital technology and the questions of accessibility for the disabled. Oswal established the First-Year Writing Portfolio Project at Middle Tennessee State University and the university's newly-minted Ph.D. program has to date resulted in three doctorate degrees on the topic of portfolios. Oswal received the C. R. Anderson Award for the work on his doctoral study of an Environmental Taskforce in a Japanese-owned corporation. He is currently a Technical Communication faculty of an Interdisciplinary Program at the University of Washington, Tacoma, with additional appointments in the Environmental Studies unit of his department and the Disability Studies unit of the University of Washington, Seattle. His discussion guides readers to Zaldivar, Summers,

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and Watson's chapter regarding what constitutes effective ePortfolio production and accessibility. For more information on Sushil K. Oswal's current work, see http://depts.washington.edu/disstud/faculty/sushil_oswal.

And the third chapter in this section comes from Darren Cambridge: "From Metaphor to Analogy: How the National Museum of the American Indian can inform the Augusta Community Portfolio." Cambridge's latest books on ePortfolios are well-cited throughout this collection. Cambridge works for the American Institutes for Research, and spends much time analyzing ePortfolio work being done around the world. Cambridge explores the use of a specific metaphor to suggest that the individual and the system must be better integrated. The metaphor he uses is that of a museum. Here, Cambridge studies the Augusta Community Portfolio project and uses details from the National Museum of the American Indian to suggest ePortfolio design must be highly interactive in order maximize effectiveness. Cambridge asks for a "balanced relationship between community ePortfolio authors and readers, developing design and content that both provides audiences with immediate value." The demands of public, academic, professional, and personal spaces should not override authentic literacy. This third section at once heralds, praises, and critically questions the value of interactivity of digital literacies. He co-leads the Inter/National Coalition for Electronic Portfolio Research; is third country coordinator for the Europortfolio project funded by the European Union's Lifelong Learning program; and serves on the board of the Association for Authentic, Experiential, and Evidence-Based Learning. He has developed technical specifications for IMS Global Learning Consortium and open source ePortfolio software through the Sakai Foundation. For more of Cambridge's recent work, see *Electronic Port*folios 2.0: Emergent Research on Implementation and Impact (2009), and Eportfolios for Lifelong Learning and Assessment (2010). Links can be found at http:// ncepr.org/darren.

4. AUTHENTIC ASSESSMENT TOOLS AND KNOWLEDGE TRANSFER

In the first essay of the last section, co-written by Steven J. Corbett, Michelle LaFrance, Cara Giacomini, and Janice Fournier, "Mapping, Re-Mediating, and Reflecting on Writing Process Realities: Transitioning from Print to Electronic Portfolios in First-Year Composition," the authors describe conditions critical to understanding how best practices are implemented. Specifically, they look at ePortfolios in first-year composition at the University of Washington through shifting attitudes, practices, and technological affordances. Academia, too, is

a workplace. What results are enhanced by critical reflection, better understanding of learning processes, and a more specific understanding of audience? Corbett et al.s' student data models authentic and evidence-based learning in much the same way as Johnson and Kahn's. All authors draw attention to incremental changes in instructional practices, cultures of assessment, and institutional support that will have to go hand in hand with ePortfolio application at the programmatic level. Corbett is Southern Connecticut State University Co-Director of Composition (http://writing.colostate.edu/portfolios/portfolio. cfm?portfolioid=2870), LaFrance is at the University of Massachusetts, Dartmouth (http://michellelafrancephd.com), Giacomini is University of Washington Research Manager of Academic and Collaborative Applications (http:// sites.google.com/a/uw.edu/cara-giacomini), and Fournier is University of Washington Research Scientist of the Program for Educational Transformation Through Technology (http://depts.washington.edu/pettt/team). See their Web pages to learn more about their current work.

Next, Carl Whithaus' chapter, "ePortfolios as Tools for Facilitating and Assessing Knowledge Transfer from Lower Division, General Education Courses to Upper Division, Discipline-specific Courses," investigates relationships between ePortfolios and knowledge transfer at a divisional level general education program. Whithaus' work is of particular used to administrators, program directors, and internal and external assessment bodies. Whithaus uses Grego and Thompson's (2008) notion of "thirdspace" (previously discussed) to suggest ePortfolios can be used as valuable tools for outcome-based assessments of lower-divisions. How can knowledge transfer be tracked from lower-level courses though upper division, graduate, and beyond? Whithaus shares convincing cases for the use of ePortfolios from around the world. He has published two books that focus on writing instruction and information technologies: Writing Across Distances and Disciplines: Research and Pedagogy in Distributed Learning (2008) and Teaching and Evaluating Writing in the Age of Computers and High-Stakes Testing (Erlbaum, 2005). The three chapters of this last section, in some part, deal with measuring and improving writing skills through ePortfolios. The data gathering, reflecting and, and archiving functions of ePortfolios lend greater depth and validity than the traditional culminating student surveys. The archiving function (through use of databases) mentioned in Whithaus' text paves the way to Zaldivar, Summer, and Watson's final discussion that seeks to capture useful assessment data, student voices, and authentic learning. For more information on Whithaus' current work, see http://writing.ucdavis.edu/ faculty-staff/directory/whithaus.

Finally, Marc Zaldivar, Teggin Summers, and C. Edward Watson of Virginia Tech University ask us to consider once again strategies to use authentic and evidence-based portfolios to both teach and assess in "Balancing Learning and Assessment: A Study of Virginia Tech's Use of ePortfolios." Specifically, the essay which closes our collection opens new questions for us, such as how do we encourage administrators and faculty and staff to see value in ePortfolio learning? What are the greatest challenges confronting us with ePortfolio performance support systems? Zaldivar is Virginia Tech University Director of the ePortfolio Initiatives and works with EDUCAUSE (see http://www.educause.edu/members/virginia-tech), Summers is Assistant Director of Virginia Tech's ePortfolio Initiatives (see http://eportfolio.vt.edu), and Watson is Virginia Tech University Director of Professional Development and Strategic Initiatives (see http://www. uopd.vt.edu/IT_Leadership/Scholar_Bios/Edward_Watson.html). This final chapter in the collection asks readers to reflect on useful assessment data with attention to student voices and authentic learning.

Ultimately, this gathering of thought-provoking essays asks how ePortfolios can be used not only to document past experience, but also to change the climate of learning and assessment on college campuses while preparing college graduates for successful job applications and careers. How do ePortfolios evolve into and out of workplace environments, public spaces, and across academic curricula? What are the benefits and drawbacks of authentic, evidence-based ePortfolios that link students' voices and their learning to ePortfolios and databases? ePorfolios are mediation of performance, participation, and (re)invention. Contributors present findings and recommendations based on their experiences and research using ePortfolios in a variety of institutional and workplace settings for a variety of purposes. Through additive uses of interactive media, databases, feedback loops, and global networking, ePortfolios are positioned to make continued and significant contributions to learning and knowledge creation. Please review additional examples and the on-going programs discussed in this collection online through The WAC Clearinghouse's Open-Access Books page (http://wac.colostate.edu/books).

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