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FROM PIXELS TO PRAXIS: ENGAGING TEACHERS IN TECHNOLOGY LEARNING THROUGH THE PEDAGOGY OF MULTILITERACIES

By

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ABSTRACT

FROM PIXELS TO PRAXIS: ENGAGING TEACHERS IN TECHNOLOGY LEARNING THROUGH THE PEDAGOGY OF MULTILITERACIES

By

Troy Hicks

Digital portfolios have become a primary method for assessing pre- and in-service teachers, often implemented as a systematic and scalable way for candidates to demonstrate that they have met particular programmatic standards. Despite the call for teachers to develop significant technological skills and the possibility that digital portfolios might serve as a vehicle for that type of learning, emerging research suggests that teachers do not transfer technology learning from building their digital portfolios into teaching practice.

During the 2004-05 school year, seven Red Cedar Writing Project (RCWP) teachers and I explored the possibilities of representing teacher research through web-based digital portfolios. Rather than taking a standards- or template-based approach to collecting particular artifacts, the teacher participants involved developed their own classroom inquiry questions that led to the initial design and continuous development of their portfolios. This project took a participatory action research stance, one in which I worked directly with the teachers to develop their inquiry questions and design their portfolios. I framed our project around the New London Group's "Pedagogy of Multiliteracies" (2000) and we moved through the stages of "Situated Practice," "Overt Instruction," "Critical Framing," and "Transformed Practice" while discussing issues of design, visual rhetoric and teaching practices related to technology. For two years, I

documented each participants' process through surveys, interviews, and periodic snapshots of their digital portfolios.

This dissertation explores three interwoven research questions about portfolio construction and maintenance, teacher engagement with technology, and transfer of technology skills into teaching practice. Through a combination of group meetings, one-to-one support, co-authoring two journal articles, presenting at a national conference, and offering online responses through a blog, participants developed digital portfolios, conducted classroom research, explored issues of online identity, and began to integrate technology more fully into their teaching. Based on these experiences, I posit that teacher educators need to explore newer literacies related to technology for their own teaching and learning as well as help teachers create and manage their own online personas through digital media.

DEDICATION

To Heather,

For all the you have endured and for all that you have given.

Love,
Troy

ACKNOWLEDGMENTS

Like an actor fumbling a statuette while looking for his list of "thank yous," I struggle to briefly summarize a list of anyone and everyone who has had something to do with helping me conceptualize, write, and revise this dissertation. The list, as could be expected, would be entirely too long. So, I will name family, committee members, colleagues, and friends in as succinct, yet personal, a manner as I can in this short space.

My family has inspired and reassured me, read and offered feedback on my writing, and supported me in my day-to-day life in graduate school all while working my full time job. For that, honestly, there are no words to fully thank them. Heather, my wife, who has been struggling with her own journey through breast cancer over the past year-and-a-half, all the while supported me in my goal to finish my doctorate. We celebrate each day, and graduation day was one that we had been looking forward to for a long time. Thank you, Heather. I also thank my parents, Ron and Carol Hicks, my in-laws, Gary and Diana Catlin, by brother, Barry Hicks, and my sister-in-law, Kristen LeBaron, for the many times that they asked about my work, volunteered to watch the kids, brought us food, and generally made our lives that much easier over the past few years. Also in the category of family, I count my best friend, Steve Tuckey, who was the one who originally "encouraged" me to apply for grad school and has never left my side.

Dissertations don't write themselves, and the guidance that my committee members have offered has made the writing (at least a little bit) easier. Danielle DeVoss has been a mentor since our work as students a decade ago in the MSU Writing Center, and her keen eye has helped me narrow years of writing into this volume. Lynn Fendler, in the two classes that I took with her, taught me more about academic writing than I

have learned in the rest of my graduate career. Ellen Cushman and Patrick Dickson have both treated me as a colleague from the time that I met each of them, and I appreciate their suggestions about methodology for this research and the field of digital portfolios, respectively. My final committee member, Janet Swenson, invited me back to the Writing Center in the fall of 2002 as a graduate student, and I have never looked back. I thank her for every opportunity that working with her has provided, and especially for the chance to be a part of the Red Cedar Writing Project.

This paragraph will, inevitably, leave a number of friends and colleagues that I have met over the past five years at MSU out of the list, but I hope that it works as a way to thank everyone who has had a part in my graduate career. Without the seven teachers who chose to work on this project with me—Tara Autrey, Cathy Edington, Aram Kabodian, Nicole Lerg, Rebecca Luft-Gardner, Anne Russo, and Rebecca Stephens—the pages that follow here would not be. My writing group—Rob Petrtone, Jim Fredrickson, and Ramona Fruja—have provided timely support, insightful comments, and more than a few laughs as we muddle through the process of becoming academics. Finally, for the many graduate student colleagues with whom I have worked in all my roles at the Writing Center, thanks for showing me how to be a better writer and teacher.

Lastly, it may have seemed that I have forgotten one special group of people: my children. Instead, I saved them for my closing thoughts. For Tyler, Lexi, and Cooper, I appreciate you each as individuals who help me better understand what it means to teach and learn. Watching each of you become literate is one of the greatest gifts of parenthood. I hope that the conclusions of this study—as well as my continuing work with teachers—may make your educations, and those of other students, that much better.

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Digital portfolios occupy a contested space in teacher education. Originally developed in art, architecture, and other design-oriented fields, portfolios allow learners to demonstrate competence in many forms rather than through a test. Composition theory picked up on this trend and, in the late 1980s and 1990s, connected process-oriented writing pedagogy with portfolio assessment. Adapted from composition theory and pedagogy as a way to authentically assess students' work, we as teacher educators now invite teachers to represent a range of experiences by presenting evidence of meeting professional standards as well as one's and ability to use technology effectively. Current trends in K-12 education are moving towards more unified curricula (as evidenced in grade level content expectations and increased standardized testing), a proliferation of new standards related to "21st century" or "digital" literacy (or literacies), and teacher education programs' ever-increasing needs to be accountable to state and national accreditation agencies. Thus, the contested space in which portfolios, and teachers, find themselves—whether part of initial pre-service coursework or continuing into in-service licensure—is a confluence of overlapping, and often competing, trends.

In particular, three intertwined elements of this context—authenticity, assessment and accreditation—struggle for ground and have become increasingly problematic for teachers and teacher educators as they implement portfolios, particularly digital ones, in their teaching and learning. If the portfolio is to act as a space for critical reflection and thinking about effective technology use, then these three elements must be systematically addressed as a part of the conceptualization of digital portfolios in teacher education,

from planning to implementation, not mused upon as afterthoughts. So, it is within this milieu that I began my dissertation research in 2004 and engaged a group of teachers in inquiry-based technology learning with their own digital portfolios as a focal point.

In order to further contextualize this project, the remainder of this introduction will first elaborate on the history of portfolios and the role of technology in teacher education. Second, it will examine the contradictions inherent in using digital portfolios as components of a teacher education programs—namely how authenticity, assessment, and accreditation sometimes overlap, and sometimes collide. Through the work of this dissertation, I hope to extend the conversation about using digital portfolios in teacher education to include discussions about pedagogy, technology integration, and the ways in which individuals use digital rhetoric to represent themselves.

Finally, in the closing part of this chapter, I will outline the questions that these issues raise for me as a teacher educator and educational researcher through a fictitious teacher educator, Zoë. From there, the second chapter will outline the theoretical framework and methodology I have employed in my study; the next four chapters will describe and analyze the data from my longitudinal case studies of this teacher research group. In synthesizing these case studies, I will conclude in the final chapter with implications that this project suggests for technology learning and the use of digital portfolios in teacher education and professional development.

From Composition to Teacher Education: The Appropriation of (Digital) Portfolio Pedagogy

Like the composition theorists who began exploring portfolios in the 1980s and 1990s as a means of evaluation that included both process and product (e.g., Belanoff & Dickson,

1991; Graves & Sunstein, 1992; Yancey, 1992), themes of holistic assessment resonated later with teachers and teacher educators. Just as writing portfolios could show growth and variety in composition, teaching portfolios could represent the collected, and wide-ranging, work of pre- and in-service teachers. For instance, in 1996's *Portfolios in Teacher Education*, McLaughlin and Vogt describe portfolio assessment in compositional terms as both a "process" where "students and teachers [are] working collaboratively to create a portfolio that will be both multidimensional and dynamic" and a product "where the assessments are collected" (M. McLaughlin & Vogt, 1996, p. 10). From the beginning, portfolios served multiple purposes for the teachers who authored them and the teacher educators who assessed them.

Thus, built on notions of authenticity and reflection, portfolios in teacher education came into fashion quickly. From the mid-1990s to the early 2000s, a number of texts that articulated a portfolio development process, as well as assessment procedures, sprang up (e.g., D.M. Campbell, Cignetti, Melenyzer, Nettles, & Wyman, 1997; Dorothy M. Campbell, Melenyzer, Nettles, & Wyman, 2000; M. McLaughlin & Vogt, 1996; Maureen McLaughlin et al., 1998; Tucker, Stronge, & Gareis, 2002). As these texts suggest, and hindsight articulates, teacher education had begun to mold their portfolios in response to two driving forces. Kilbane and Milman summarize them as:

- "A push from professional groups who produce teacher education standards seeking to find a way to assess these standards; and
- "An effort by teachers themselves who want to develop new knowledge and skills from the portfolio construction process" (2003, p. 7).

Authenticity and assessment for individuals were wed from the beginning. Yet, assessment had implications beyond the individual level and extended into the accreditation of programs by institutions such as National Council for Accreditation of Teacher Education (NCATE). This overlapping trio of relationships has followed portfolio pedagogy through to its current, digital format, and warrants further attention in a later section.

For now, I continue to look at the history of portfolios in teacher education, noting the other developing trend in portfolio assessment through the 1990s and 2000s, namely issues related to composing with computers. In *Situating Portfolios: Four Perspectives*, Yancey and Weiser (1997) insightfully suggested that portfolios composed on computers had much to say about the changing nature of literacy, "partially as a function of how reflection in the portfolio asks students to describe and narrate and analyze their own learning, and partially as a function of the electronic media" (p. 16). Similar in most respects to the earlier ones, portfolio guides that appeared in the late 1990s and early 2000s suddenly had sections on "digital," "electronic," or "web-based" portfolios (e.g., Adams-Bullock & Hawk, 2001; Costantino & De Lorenzo, 2002; Wyatt & Looper, 1999) or were dedicated entirely to them (e.g., Kilbane & Milman, 2003). In a similar fashion, journal articles outlining the use of electronic portfolios in teacher education began to appear, too (e.g., Barrett, 2000; Bartlett, 2002; Gathercoal, Love, Bryde, & McKean, 2002; Gatlin & Jacob, 2002; Goldsby & Fazal, 2000; Norton-Meier, 2003; Wiedmer, 1998; Willis & Davies, 2002; Wright, Stallworth, & Ray, 2002). Most these articles offered a definition for an electronic portfolio, and documented how the authors, as

teacher educators, used these tools with his, her, or their students, and the challenges they all encountered along the way.

For instance, Gatlin and Jacob define the features and advantages of using a digital portfolio in preservice education:

> The digital portfolio provides a richer snapshot of the capabilities of preservice teachers by enhancing the overall picture of student achievement and expertise. Portfolio assessment allows for the specific talents and abilities of individuals to be highlighted as preservice teachers evaluate their own work and products. Since new teachers are now required to have expertise in technological skills, the digital portfolio demonstrates what the new teacher knows and can do regarding technological skills. (Gatlin & Jacob, 2002, p. 35)

Definitions similar to this hold common across other books and articles in the field. Barrett simply sums this notion up with the title of her article, "Electronic Teaching Portfolios: Multimedia Skills + Portfolio Development = Powerful Professional Development" (Barrett, 2000). As might be expected, positive results resonate as a common theme across all the studies. Willis and Davies offer a conclusion similar to the others when they claim that their pre-service teachers experienced "increased reflective practice, improved communication skills, emphasis on life-long learning and growth, and greater self-confidence in making the transition from school to work" (Willis & Davies, 2002, p. 25). While these articles also share a common conclusion that the process of creating a digital portfolio was useful, Wright, Stallworth, and Ray point out, "[i]mplementing electronic portfolios required time, commitment, extensive planning, and ongoing evaluation" (2002, p. 60). In short, the emerging literature on digital portfolios resonated with themes of technological progress, meaningful reflection, and challenges putting them into action. Almost overnight, the idea that teachers, especially pre-service ones, could compose a digital portfolio became synonymous with both an

authentic learning experience and learning something more about technology; by extension, these skills and processes would, ideally, translate into their future classrooms and spark educational reforms.

As the history of school reform and technology integration shows, however, change related to learning and integrating technology comes slowly, if at all (Cuban, 2001). A series of overlapping problems contribute to this lack of change:

> Although substantial progress has been made in installing computers in schools and in convincing the public that facility in using them is vital to students' success in schooling and jobs, there are serious social inequalities in the use of computers in schools... Simply having access to computers and learning to use them as tools is only part of the story of educational use of computers. To what degree are they actually employed as sophisticated teachers' aides and integrated into instruction? (Tyack & Cuban, 1995, p. 125)

Clearly, this process will not happen overnight, yet the ways in which teacher education and professional development has responded seems to be slow at best, and atrocious at worst. A decade later, these inequities and insecurities are still present. A recent *Educause Quarterly* article suggests that "educators must step out of the comfort of the traditional classroom and step into the sometimes intimidating technology-enhanced classroom" (Efaw, 2005). Given the concerns about integrating technology into teaching and the complications that teachers face in learning how to use technology (see, for instance, Russell, Bebell, O'Dwyer, & O'Connor, 2003; Zhao & Frank, 2003; Zhao, Pugh, Sheldon, & Byers, 2002), this type of portfolio assessment appeared to be a natural way to meet the need for professional growth and technical skills. But, it has not lived up to the hype. Most teachers and schools have struggled and are likely to continue to struggle to effectively integrate technology.

Still, new media composing tools (e.g., hypermedia, presentation software, website design) and the ability to publish items on the World Wide Web had suddenly offered teachers' portfolios new audiences; rather than being submitted to a single teacher educator, the portfolio could be shared with the world via the Internet. Barrett describes the confluence of multimedia composing and portfolio pedagogy as "complimentary and essential for effective electronic portfolio development." She goes on to argue that "[u]nderstanding how these two processes fit together, along with understanding the role of standards in electronic portfolio development, will provide teachers and students with a powerful tool for demonstrating growth over time" (Barrett, 2000, para. 2). To summarize her argument, as well as the stance that many other teacher educators took at the turn of the 21st century, portfolio development combines process and product in a manner that should allow teachers to better learn technology, to demonstrate their pedagogical capabilities through pertinent digitized artifacts, and to reflect upon those artifacts.

Yet, the current context of digital portfolios in teacher education continues to become more and more complex. Indeed, the issues of authenticity that defined the movement—personal multimedia integration and thoughtful portfolio pedagogy—are at risk as digital portfolios become more a part of institutional goals for program assessment and accreditation than for individual learning. Moreover, as I will discuss below, research in the field has shown teachers creating these portfolios do not see the value in the process, or the product. Instead, they tend to view digital portfolio authoring as yet another in a series of hoops that they must clear in order to reach the ultimate goal of certification and a job, not as a means to understand teaching with technology.

A Working Definition of Digital Portfolios

It is worth digressing for a moment to articulate how I am defining "digital portfolios" from this point in the dissertation forward, given the varied contexts and names that are affiliated with these documents. Despite Wikipedia's generic definition for "Electronic portfolio" that states

> [a]n **electronic portfolio**, also known as an **e-portfolio** or **digital portfolio**, is a cohesive, powerful, and well-designed collection of electronic documents that demonstrate your skills, education, professional development, and the benefits you offer to a target reader." ("Electronic Portfolio", 2006, emphasis in original)

I want to differentiate that more. Given recent criticisms of content management systems (CMSs) that are increasingly being used as "e-portfolio solutions" (Acker, 2004; Barrett, 2003; Batson, 2003), I think that it is important that teachers and teacher educators reclaim the term "digital portfolio."

Take, for instance, the idea of a portfolio being online, 24/7 (a "web-based" portfolio), as compared to a portfolio saved on a CD, DVD, flash drive, or other portable media device. This initial decision on where and how to save the portfolio inherently sets up permissions for who can see it and what equipment they need to do so, in turn defining (or limiting) the purposes and audiences for which it is composed. Who has access to what parts of a portfolio at any particular time makes for a useful way to categorize how it is defined, especially given the CMSs that many colleges and universities are now investing in heavily for student assessment and, in turn, overall program accreditation. Many of these solutions do not permit public access to the portfolio space that students use, allowing only instructors and administrators to see what is posted there. More important, or as I see it, discouraging, is the fact that these CMSs allow students little if any opportunity to design their portfolios both in terms of content and presentation, one

of the original goals of portfolio, and especially web-based portfolio, pedagogy. As I will argue below, these portfolios are not designed with a larger rhetorical purpose in mind. They are, in effect, created to fulfill the institution's requirements for assessment and accreditation, not as a means for students to learn and demonstrate reflection and technical prowess.

This is not to discredit CMSs, per se, nor to admit that there are not some that could be used to build engaging, interactive, and largely user-designed digital portfolios. The Open Source Portfolio Project (http://www.osportfolio.org/) and ELGG (http://www.elgg.net/) are two powerful—and free—CMSs that could compete with many of the commercial products now available. Also, open source blogging tools such as Word Press (http://www.wordpress.org) hold potential, too, although it is not quite as functional for keeping multiple users connected through a social network. The important point to make about all of these tools is that users—the teachers who are authoring their portfolios—have more control over the presentation and delivery of their work in these spaces than they do in many of the popular CMSs that colleges of education are adopting such as Blackboard, LiveText, and FolioTek.

Thus, for purposes of this dissertation I want to stay clear of the CMS discussion entirely. I define a "digital portfolio" as a web-based collection of artifacts that teachers design from the ground up, including navigation, color scheme, typography, images, audio, video, and additional documents in non-HTML format (such as PDFs, PPTs, or DOCs). They are author and editor, uploading their own HTML documents into their own password-protected website with a publicly viewable URL. This definition works for two reasons. First, these are the type of web-based portfolios that the teachers with whom

I worked created over the course of two years and, for clarity's sake, I want to define them in this manner for the reader's ease in understanding the term throughout this dissertation. Even though Barrett and other digital portfolio advocates and researchers are now examining CMSs, blogs, and wikis, at the time I began this research in 2004 the discourse surrounding digital portfolios was mainly about creating documents with HTML utilizing a portfolio-style format, and that is how participants in the project chose to create them, at my suggestion, (although that changed for them over time, as I will note in Chapter 6).

Second, despite the advances in the CMSs listed above, I want to keep this terminology of user-created digital portfolios consistent with what I generally understand the definition of a digital portfolio in teacher education to currently be, and I look to Kilbane and Milman's text, *The Digital Teaching Portfolio Handbook: A How-to Guide for Educators* (2003), as the primary source on this term right now. They argue that digital portfolios present professional materials "using a combination of multimedia technologies, including, but not limited to, audio recordings; hypermedia programs; and database, spreadsheet, video, and word processing software" (Kilbane & Milman, 2003, p. 7) and suggest a web-based format for creating and storing such documents.

As the purposes and processes for designing digital portfolios continue to shift, however, this definition will keep changing. Because teacher educators contest the term, it is worth examining why and how that debate had unfolded. My reading of the literature suggests that teacher education views digital portfolios in terms of the three broad themes of authenticity, assessment, and accreditation. Although these themes are meant to align

with one another, often they do not, thus positioning the purpose and process for designing a digital portfolio in the middle of contested space.

Embracing Contraries: Authenticity, Assessment, and Accreditation

Teacher education programs—and those who teach and learn in them—find themselves in a quandary regarding their curricula, evaluation of individual teachers and programs, and the ways in which they utilize technology. Critics lambaste the programs for focusing too much on how to teach while not preparing teachers with subject matter knowledge that students will need to learn (for a summary of these criticisms, see Cochran-Smith, 2003; Inside Higher Ed, 2006). Alternatives, like Teach for America, invite intelligent and interested young people into teaching by explicitly rejecting the notion of an undergraduate teacher preparation program. All of this makes sense to discuss here—in the midst of my argument about having teachers create portfolios—because the convergence of these three concerns in teacher education now shape state and national certification policies, educational research agendas, and, ultimately, instruction in teacher education programs that use digital portfolios. My discussion will focus on the over-arching concerns of accrediting entire teacher education programs, the outcomes of teacher education as it relates to assessment of individual teachers, and the idea that a candidate going through such a process is evaluated in as authentic a way as possible. I will briefly examine each here, noting the tensions between them and discussing relevant literature as a means to highlight the problems teachers and teacher educators face in dealing with them.

Accreditation of Teacher Education Programs

As mentioned above, I understand the pressures that teacher education programs find

themselves under from state and federal government, business, accredidation agencies, the public, and themselves. There is, and will probably continue to be, a demand for producing "better prepared" teachers who can meet the growing challenges of K-12 education. For a number of political reasons, teacher educators are being faced with more and more layers of accreditation standards that define their work. In order to receive accreditation that comes from outside agencies, such as NCATE, these accreditation standards translate into particular requirements for teacher candidates:

> To achieve accreditation under NCATE's standards, universities and colleges must offer intellectually rigorous programs which are relevant to the needs of today's classrooms. NCATE wants to know "what do candidates know and what are they able to do?" (National Council for Accreditation of Teacher Education, 2006b)

These standards act as guides for programs as they develop course content. And, while they are aimed at the program, they contain implications for teacher candidates. For instance, NCATE's first standard focuses on "Candidate Knowledge, Skills, and Dispositions" and suggests that candidates "know and demonstrate the content, pedagogical, and professional knowledge, skills, and dispositions necessary to help all students learn" (National Council for Accreditation of Teacher Education, 2006a). In addition, NCATE suggests that institutions include technological components as a part of their accreditation, including the use of digital portfolios (National Council for Accreditation of Teacher Education Task Force on Technology and Teacher Education, 1997). The problem, of course, comes when we try to measure something this abstract at the individual student level and then, in turn, report it an institutional level.

Too often, the accreditation standards that are translated into program standards for teachers lead to regimented rubrics of "artifacts" that teachers must produce; all the

portfolio guide books cited in the section above include some kind of checklist that outlines artifacts teachers may include in their portfolio and what these artifacts might be evidence of in terms of evaluating their performance in relation to standards. Typical artifacts include: an educational philosophy statement, a professional goals statement, sample lesson plans and assignments, as well as reflections on those plans, a resume, notes from observations, a video clip of one's teaching, samples of student work, and other forms of communication, especially with parents (Kilbane & Milman, 2003, p. 56). Portfolios offer a unique situation in which a teacher is supposed to design a document that reflects on his or her understanding of learning how to teach yet is intricately bound to the success, or failure, of the institution that is training him or her. This presents a institution with a dilemma: how do we balance individual design decisions and accreditation demands, often enforced through program requirements and course-level assessments?

Strudler and Wetzel offer a further illustration of this point. They asked administrators of teacher education programs to discuss the reasons for integrating digital portfolios into their curricula (Strudler & Wetzel, 2005; Wetzel & Strudler, 2005). To be blunt, most administrators admitted that digital portfolios are used primarily for NCATE accreditation and not so much as a tool for individual learning and reflection. One participant put it this way:

> 'The impetus, to some extent, maybe more of an extent than I'd want to admit, is continuing NCATE accreditation, and the need to have very extensive, clearly archived records of how well students... are achieving the goals of the program.' (Strudler & Wetzel, 2005, p. 419)

In short, accreditation could be considered the driving force for development of teachers' digital portfolios.

Strudler and Wetzel further argue that choosing artifacts for the portfolio—whether a pre-service teacher gets to put in something based on his or her own interests or whether a teacher educator designs a specific assignment for the portfolio with standards in mind—is a constant balancing act for these programs that use digital portfolios (p. 427). If the student includes something that doesn't align well with any of the standards, assessing the portfolio along a matrix of NCATE criteria can become a problem. And, while Strudler and Wetzel (2005) believe that "the distinction between the commercial systems and tool approaches to be somewhat blurred" (p. 425). I disagree and would argue along the lines that other portfolio scholars have pursued that these distinctions *define* the crucial difference between using a digital portfolio for assessment and engaging in intentional technology learning by designing a portfolio (Barrett, 2006; Kimball, 2006; Yancey, 2004).

Given these circumstances, institutional demands appear to be winning out over individual design decisions. In our efforts to boost the quality of teacher education by demanding "higher" accreditation standards—and the surveillance we need to enforce them—teacher educators instead seem to be reducing the effects of developing a portfolio. Portfolios started off as pedagogical devices, but now in many cases teacher educatiors seem to be using them as programmatic assessments and, in turn, accreditation tools. On the one hand, if we mechanize portfolios, they can become a consistent, rich data source. The more mechanized they become, however, the further portfolios move from being a pedagogical tool. As mentioned above, there is already evidence to suggest that teachers are not using what little they do learn about digital literacy from creating a portfolio. Based on these results, if the quality of the portfolio building experience is low,

then the experiences may interfere with the ways in which teachers may integrate technology, and digital portfolios, later in their classrooms. A focus on accreditation, to the detriment of the process of creating a digital portfolio, will not make this any better.

Assessment of Individual Teacher Candidates

Assessment provides means for teachers to monitor their own teaching as well as students' learning. Assessment, when formative, gives the teacher feedback on student learning while still in the process of learning. Its intention is to inform; its method is meant to engage learners and teachers alike in thinking about where they are at and what they still need to learn as part of a larger lesson or unit. Summative assessment attempts to determine what each learner knows and records an evaluative mark for that student. In the best case, summative assessment would point at what is still left to be learned, too; however, final tests, papers, or projects are usually an end point. Combined, formative and summative assessment, used over time, provide teachers with a snapshot of what a learner can do and then help him or her scaffold that student to improved learning.

Since, as noted above, teacher education accreditation requirements inform and guide assessment, programmatic standards are translated into assessment criteria for teacher education courses. Through the use of assessments, teacher educators use these standards to evaluate teachers' performance. These performances, in turn, translate into course grades and, ultimately, teacher certification. The relationship between accreditation and assessment is not just top down, but reciprocal. Accreditation leads to assessment practices, but established assessment practices such as portfolios also inform accreditation processes.

To explore this connection more, it is worth nothing that as portfolios have come

to be considered a valid means of assessment, they have informed the ways in which accreditation standards require teacher education programs to have candidates demonstrate their knowledge and skills. For instance, NCATE standards for program accreditation hint at the ways in which assessment practices might be developed. For example, "Standard 1: Candidate Knowledge, Skills, and Dispositions," reads:

> Candidates preparing to work in schools as teachers or other professional school personnel know and demonstrate the content, pedagogical, and professional knowledge, skills, and dispositions necessary to help all students learn. Assessments indicate that candidates meet professional, state, and institutional standards. (National Council for Accreditation of Teacher Education, 2002)

While teacher certification tests can measure a teachers' knowledge about content and, to some degree, understanding of pedagogy, it cannot, by its very nature, measure a teacher's skills and dispositions. Program-level assessments must include more robust artifacts that can show skills and dispositions, in context.

How do you assess skills and dispositions, then? Part of it comes from reflections from and observations of the teacher. Yet, it also requires preparing, displaying, and reflecting on some form of authentic performance that a teacher has created—e.g., a lesson plan, a teaching philosophy, or some other representation of professional practice—in a way that the learner finds reflective and valuable, possibly culminating in a portfolio. I will return to the concept of authenticity in the next section, yet it is important to note here how it fits into the overall scheme for assessing teachers and how accreditation now pushes for these types of authentic assessments.

Assessment—in our current state of affairs—is driven by standards and benchmarks, tangible measures of what a learner should know and be able to do. This, in and of itself, seems innocent enough; students should have goals and teachers need

something fair to measure them against. Yet, as I have shown, there are many layers to the use of standards and benchmarks in assessment that are tied intimately to accreditation, at the programmatic level, and I want to suggest that the need for governance can outweigh any individual need for learning. As Strudler and Wetzel have shown, assessment becomes a primary focus for using the portfolio rather than the pedagogical process by which teacher educators invite teachers build it. Although the language suggesting more collaborative relationships with students and opportunities for engaging, personally-meaningful learning experiences may suggest this, it is difficult for portfolios to be an authentic way for teachers to represent their work to those that will be assessing them, an idea I will explore next.

Authenticity in Teacher's Portfolios

While one could argue that "authenticity" is largely a measure of how "individual" or "unique" a required task or artifact, teacher education defines it in a manner that connects that task or artifact to a real teaching situation. Bound up with assessment and accreditation, I separate authenticity in this discussion so that I might discuss the ways in which creating a digital portfolio could be authentic both for the purposes of showing a teacher's knowledge, skills, and dispositions as well as a means to improve one's technological know-how.

First, a view of authenticity from teacher education literature. Darling-Hammond and Snyder define authentic assessment as

> ... opportunities for developing and examining teachers' thinking and actions in situations that are experience based and problem oriented and that include or simulate actual acts of teaching. Such acts of teaching include plans for and reflections on teaching and learning, as well as activities featuring direct interaction with students. (Darling-Hammond & Snyder, 2000, p. 524)

Positioning authentic assessment in this manner opens the doors to a number of ways to be assessed and show what one has learned in a teacher education program. In terms of portfolio assessment, Kilbane and Milman go on to suggest that "progress on real-world tasks (e.g., writing, solving problems, developing projects) can enable the tracking of growth over time and help individuals learn to assess their own progress against standards of quality" (Kilbane & Milman, 2003, p. 16). Thus, it is both the task/artifact *and* the reflection upon it that makes the process of designing a portfolio valuable and, in teacher education terms, authentic.

On the surface, this appears to be a laudable goal and one consistent with the idea that authenticity allows for individualism while meeting the institution's need for accreditation and teacher educators' need to assess teachers. Milman argues that this process promotes student reflection through an examination of their beliefs, philosophies, objectives, and purposes for teaching, as well as collaboration with one another (Milman, 2005a, p. 384). Wetzel and Strudler name benefits that students building digital portfolios describe including: support for reflection and learning, efficient access, storage and organization of artifacts, improved technology skills, thoughtful inclusion of standards for teacher education, and the potential to enhance employment opportunities (Wetzel & Strudler, 2006). In another study, by returning to their digital portfolios in a recursive manner over a series of courses, students found "value in participating in the portfolio project and many believed that their experiences enabled them to develop insights into their own life worlds and those of their fellow pupils" (Pelliccione, Dixon, & Giddings, 2006, p. 6 in PDF).

Yet, there remains an important part of the process of building a portfolio that

teacher education literature has failed to develop solutions for in any systemic manner. Many pre-service teachers feel some frustration when first starting with digital portfolios and they fail to see digital portfolio development in the rich, contextual ways that teacher educators would hope that they would (Bartlett, 2002; Williams, Wetzel, & Wilhelm, 2004; Willis & Davies, 2002). Besides the technical issues of creating it, further complications arise when one looks at what happens to this apparently authentic document, one that the teacher should want to attend to after the course is over. Milman describes a follow-up study in which she surveyed her former pre-service teachers, all who had teaching jobs, and found that none of them continued to update or maintain the digital portfolio they had created in her class only a few years prior (Milman, 2005b). This finding is disheartening, given the original intent of the digital portfolio process as one that could provide a sense of ownership for teachers as they become more technologically proficient and reflective about their teaching. Why is this occurring?

First, there is the dilemma that assessment brings to the situation. On the one hand, a teacher educator would want his or her students to create the most innovative and useful lesson plans, resources, and digital portfolio that they could. On the other, as invested as a learner can get in it, it is still an academic exercise (for a grade or, ultimately, for a job). Neither of these goals—getting good grades or earning certification for a job—are ones we can disagree with, but they must be considered as external motivation and, in that sense, inhibiting a type of individual authenticity. Purely authentic experiences rarely exist in academic settings; however, purely inauthentic experiences rarely exist either because everything that a learner creates will have some stamp of him or herself on it. Again, how to solve this dilemma of authenticity?

Perhaps the answer is to embrace it. To do so, I turn back to composition theory and Yancey's extensive work with portfolios. In her 2004 essay, "Postmodernism, Palimpsest, and Portfolios: Theoretical Issues in the Representation of Student Work," she argues that

> what we ask students to do is who we ask them to be. As important, these representations constitute a rhetorical situation, precisely (1) because they are immediate, direct, and substantive—composing, as they do, the material of our teaching lives and those of our students'—and (2) because they perform a double function—providing grist for the twin mills of identity and assessment. (Yancey, 2004, p. 739)

In positioning portfolios this way, digital portfolios become more than just a class assignment; because of their public nature and the thinking that much go into creating such a document, they represent students as learners and, more importantly, as people. She goes on to describe how creating traditional portfolios and digital portfolios comprise different writing tasks. The digital portfolio, like a gallery,

> provides for the invention of a different particular kind of student: one who can make multiple connections and who creates depth through multiplicity and elaboration, who can work in visual and verbal and aural modalities, who can offer a reader multiple narratives extending ever outward... Indeed, the digital portfolio, located in multiple and multiple kinds of relationships, is a digital composition: a single, unified text through which various fragments rational and intuitive are related to each other, directly, associatively. (Yancey, 2004, p. 751)

These tasks, decidedly different from ones where a teacher organizes a collection of materials in a three-ring binder, create a unique rhetorical space for composing a digital portfolio. This type of digital writing allows portfolio creators to create hyper-linked representations of their work, solicit feedback from others (sometimes instantaneously), and they "can easily integrate the work of others into new meanings via new media and rescripting of old media—text, image, sound, and video—with a power and speed impossible before computer technologies" (Writing in Digital Environments (WIDE)

Research Center Collective, 2005a, "Changed Context for Writing").

For a teacher, then, this digital portfolio can be a site of creative and critical learning. Because digital and visual literacies are becoming more and more a part of what teachers to know and students to learn (Jones-Kavalier & Flannigan, 2006), it stands to reason we as teacher educators have to ask what we really value and what we want learners to know about themselves and about technology as a result of the process. Digital writing, in that it engages writers in "carefully and critically analyzing and selecting among multiple media elements," also requires them to "rely on words, motion, interactivity, and visuals to make meaning" (DigiRhet.org, 2006, p. 240). Based on my initial reading and writing with the concepts of digital portfolios as well as with digital and visual rhetoric (Hicks, 2005), our entire teacher research group wrestled with these questions (Autrey, O'Berry Edington et al., 2005), and I will continue to do so in this dissertation.

This ability to critically view the portfolio becomes even more applicable if we want to have teachers develop technology skills and competencies that they will carry beyond the process of initially building the portfolio. Digital portfolios allow teachers to make design decisions that lead to long-term professional development (Barrett, 2000). Yet, as Yancey shows, this process of translating a collection of teaching and learning artifacts from paper to pixels demands new skills of both teachers and teacher educators because digital portfolios require individuals to rethink who they are and what represents their persona best through digital media. This can be a challenging proposition for anyone, let alone teachers who perceive self concepts differently than what even a traditional standards-based portfolio might demand of them (Michelson & Mandell,

2004); in other words, creating one's persona through a teaching portfolio is often problematic. Doing so online only complicates the matter.

Finding authenticity in the task of creating a portfolio becomes rather difficult at best and nearly impossible at worst. Depending on how template-driven the portfolio requirements are (see, for example, the Consortium for Outstanding Achievement in Teaching with Technology (COATT) templates at http://www.coatt.org/resources/template/index.html), the portfolio can be an almost inauthentic experience, designed from conception to conclusion as one that is only concerned with standards and assessment, and not engaging the portfolio creator in any Critical Framing or reflection.

For my purposes though, it is enough to think of digital portfolios being used in the assessment process as something that a teacher feels will show significant progress and that a teacher educator had helped scaffold the process. It is not a one-and-done show of something interesting; instead, it is meant to represent growth, change, and critical, reflective thought. Form and content are inextricably intertwined. As I will discuss in my theoretical framework, a multilitercies approach contends that we must start "[u]nderstanding pedagogy and technology as coextensive and mutually constitutive" (Selber, 2004, p. 206). I argue that a digital portfolio needs to be rhetorically authentic in the sense that it serves individual and institutional purposes as well as having it be a document that the author, a teacher, finds useful in his or her own professional life beyond the scope of one course.

For a teacher educator to create a situation in which he or she can balance the needs of accreditation, assessment, and accountability, as the discussion above shows, is

no easy task. To provide an illustration of this point, I offer a brief example before concluding this introduction.

Digital Portfolios in Practice: An Illustration

To show the complicated relationship that accreditation, assessment, and authenticity create for a teacher educator instructing a course, I offer the hypothetical example of Zoë. As a newly-hired assistant professor, Zoë teaches a methods course with thirty pre-service teachers in it. She has little formal training in technology, short of a using a course management software package as a graduate student, which she found mostly useful, but sometimes cumbersome with its login system and clumsy navigation. For the course she will teach this semester, Zoë finds out from the department chair that she is responsible for a covering a number of accreditation standards, and one in particular that states: "The teacher will create engaging, student-centered lesson plans that adequately address state learning standards." Moreover, the department has used portfolios for some time and has folded that into the accreditation process, part of the primary way in which they track data to meet their goals. She has been given a choice: a content management system is available, and she knows that other colleagues are having students make websites, and that she may be able to learn from them, if she—and they—have them time. She wants the digital portfolio to be an authentic experience in which her students learn how to more effectively use technology, but she is unsure where to begin.

Noting the situation she finds herself in, she has to first think about the types of artifacts that she wants to gather from students; is a digital copy of their lesson plans enough? Does she need other handouts or samples of student work? Second, she needs to decide on the technology she will use to have students create the portfolio; Zoë at least

has a choice in her department whereas colleagues she knows at other institutions are required to use the CMS exclusively. After the lessons are posted, how does she then go back to find all the students' postings and assess them on this standard? She looks at this series of choices and needs to decide what to do, thinking that her primary focus needs to be on teaching her students how to plan lessons, not build a website, although she knows that her department has technology requirements, too, that suggest students create one.

If Zoë chooses the CMS option, management of the documents would be easier because it is all in one place that she could log in to, track students' progress, and send comments and grades online. In short, it is efficient, the institution and student would have a digital record, and she could focus class time on the process of making lessons, not creating web pages. However, she also realizes that uploading a document, while a functional computer literacy skill, does not begin to address the department's technology requirements. She is also disappointed that only she will be able to see the lesson plans and that there is no easy way to share the files with the entire class so they can have an ever-growing set of resources from their peers.

If she chooses to have them build a website, she knows that the students will be able to put more of a personal touch on their portfolios and that they will be accessible to anyone online. They may be more motivated to work on the portfolio as a long-term goal if they have some control over it, although that is tough to determine. Peers could then read and respond to each other's lesson plans, and this would allow them to cover a wider range of content by collaborating. Unfortunately, Zoë doesn't have a background in web design, and she knows that getting tech support from the department is tough. This will also open up some interesting, but difficult, conversations about how teachers present

themselves to external audiences through online spaces, something that she is not sure she has enough experience with to talk about with her teachers. Finally, she is just not sure how she will be able to quickly find all these lesson plans if each portfolio is constructed in a different manner, and reporting results to her department would take one more step beyond what she would have to do with the CMS.

Zoë's situation, although intentionally fictitious and brief, frames the dilemmas that face teacher educators who are trying to maintain a balance between their department's needs for accreditation data, their own need to assess teachers, and keeping some measure of authenticity in the process of building a digital portfolio. If Wetzel and Strudler's examination of exemplary digital portfolio programs indicates national trends, then teacher educators—or, administrators of teacher education programs—are leaning in favor of CMS. That gives me pause. In the next chapter and throughout the project that I will describe in the rest of my dissertation, I want to suggest an alternative approach for developing digital portfolios, one that foregrounds and examines the many issues that creating an online persona and composing digital text engenders.

Conclusion

In this initial chapter, I have situated myself within the larger discussions of digital portfolios in teacher education, defined what a digital portfolio is, described the dilemma in the field related to accreditation, assessment, and authenticity, and set a context for the dissertation project. Combined, these three forces in the portfolio creation process create a confluence of pressures on teachers and teacher educators. If digital portfolios are to serve as technology-rich, learner-driven assessments that can both inspire personal reflection and count for programmatic accreditation, then I suggest that we, as teacher

educators, develop a new vision for how to integrate them into our teaching and the work that teachers do on a regular basis. In Chapter 2, I will describe the theory and method for one such vision that I pursued as a part of my dissertation research.

Chapter 2 – Participatory Action Research through the Pedagogy of Multiliteracies: Methodology and Theoretical Framework

Given the contested space that digital portfolios occupy in teacher education as well as the overlapping goals of accreditation, assessment, and authenticity that teacher educators must balance, it comes as no surprise that the students composing these documents feel alienated from the process. Based on a review of 300 articles, all published since 2000 and all related to electronic portfolios, Ayala argues that

> The over-emphasis on assessment and accountability issues in relation to electronic portfolios also indicates that student issues and concerns remain at the margins, not at the center of the discussion. Student issues and concerns involve promoting student learning. To date, no discussions mentioning student-centered pedagogy or student development theory have infiltrated the discussion on electronic portfolio development and design. (Ayala, 2006)

Portfolios—originally conceived as student-centered, authentic assessments—have become a tool for programmatic assessment. Whether or not the portfolio designer learned anything in the process of building the portfolio, especially about technology, seems secondary to whether or not institutions and programs get the data that they need.

As noted in Chapter 1, Wetzel and Strudler's recent work confirms students' dissatisfaction with digital portfolio pedagogy in teacher education, noting three main reasons for concern: issues of program implementation, access to and reliability of the technology, and the amount of time and effort expended building a portfolio (Wetzel & Strudler, 2006). The last of these three points causes great concern; if students perceive that it takes too much time and effort to build a portfolio for too little reward, personally or professionally, then we as teacher educators are focusing our energies in the wrong direction. Ayala concludes his article with a question, and one possible answer:

"Electronic portfolios for whom? At the moment, not for students [or, as I argue, teachers in teacher education courses or other professional development, either]—but they could be" (Ayala, 2006). I agree, and propose that teacher educators change their purposes and processes for using digital portfolios.

From my experience in this dissertation project with seven teacher participants, I have come to understand that this change requires two steps. First, there are the mainly technical and logistical reasons that Wetzel and Strudler articulate. Milman, too, suggests that these problems persist after students graduate from their teacher certification and, in turn, lead to stagnant portfolios (Milman, 2005b). These findings suggest that if we could teach teachers how to overcome the technical hurdles in presenting their work, they may then be better able to create and maintain portfolios. The second component, as suggested by Yancey (2004), consists of the rhetorical ideas of audience awareness and purposeful ownership that a teacher takes in creating a digital portfolio. From my initial reading of the literature, I argued that teacher educators should reconsider the focus of their attention from the final product to the process of constructing a digital portfolio (Hicks, 2005) and this dissertation study further explores this idea.

This chapter frames the dissertation project in both a methodological and theoretical context. First, I introduce and argue for the "Pedagogy of Multiliteracies" framework (New London Group, 2000) that guided our group's work. Second, I describe the participatory action research method (Kemmis & McTaggart, 2000) that I employed to study the process that Michigan State University's Red Cedar Writing Project (RCWP) teacher participants underwent in creating and maintaining their digital portfolios over the course of the 2004-05 school year. Combined, this framework and method offer a

unique opportunity to explore the tensions that surround digital portfolios, as evidenced in the literature, and to promote personally meaningful technology learning for all the participants.

By choosing this methodology and theoretical framework, my goal for this study is to describe and analyze our group's learning process. As a participatory action researcher who guided the group using the Pedagogy of Multiliteracies framework, I discuss this method so that teacher educators can reconceptualize and enact digital portfolio pedagogy in a different way than the current literature conceives of it. So as to set a context for this study, I will briefly describe how I began exploring these issues through my work and then outline the Pedagogy of Multiliteracies framework and participatory action research method.

Context for the Research

As the literature reviewed in the first chapter demonstrates, teachers often have difficulty adapting new technologies into their classrooms. Digital portfolios have been pursued as one way to integrate technology learning and assessment in teacher education, yet have not lived up to the utopian vision in which they were originally conceived. Given the pace of technological change, the increasing impetus to create digitally literate students—as evidenced in standards such as the "enGauge 21st Century Skills: Literacy in the Digital Age" (North Central Regional Educational Laboratory & Metiri Group, 2003) and Michigan's Technology Standards and Expectations for K-12 students (Michigan Department of Education, 2006)—and the institutional and political climates that are less than conducive to innovation, teachers may find themselves looking at technology and shrugging their shoulders about what to do next.

Since the fall of 2003, my work at RCWP has been focused on teacher professional development and technology integration. As a site of the National Writing Project (NWP), RCWP focuses its work on professional development through a "teachers teaching teachers" model. The core work of our site consists of an Invitational Summer Institute that accepts K-12 teachers into a sustained, four-week experience where they create a teaching demonstration, work in writing groups, and read and discuss professional texts. This institute (as well as many of the subsequent meetings with the group of teachers in this study) was held at the MSU Writing Center, where RCWP is housed. The second component of RCWP, for those who choose to complete it, is an independent study in ENG 896, "Practicum in the Language and Literature," a course that must be completed within two years of finishing the summer institute.

RCWP draws teachers from local urban, suburban, and rural contexts, and from a variety of age groups and teaching backgrounds. Like all teachers, the participants in RCWP, in general, and in this study, in particular, do face challenges in their teaching—with students, administrators, colleagues, parents, school infrastructure, and curriculum. In the context of this project, however, it is important to note that none of them teach in conditions that supports a majority of students who are completely impoverished or faced with the utter despair in facilities and resources that many children face as evidenced in the work of many educational scholars such as Jonathan Kozol (1992, 1996, 2005) and Mike Rose (2005). On the one hand, this homogeneity could be viewed as a limitation of this dissertation. Instead, I suggest that it is a strength in that even in working within a group of well-educated, highly motivated teachers working in districts often seen as "thriving" from the outside, the data that they offer ~~me~~ in this study suggest that they,

too, are presented with a number of challenges when it comes to integrating technology into their teaching. These challenges will be discussed throughout this dissertation, especially in Chapters 6 and 7.

Thus, with my work in RCWP, I studied how and why teachers learned—or did not learn—to use technology. Over time, I wanted to fuse my own interests in digital portfolios, technology in general, and professional development into a community of teachers who would share similar interests. Thus, in the spring of 2004 I applied for an NWP Teacher Inquiry Communities mini-grant that would fund a project to engage teachers in purposeful and self-guided technology learning, all the time thinking about implications for their teaching and students' learning. Moreover, teacher research makes demands on teachers that such a group could facilitate. Mohr et al. suggest "[t]eacher research starts with a commitment to examine an aspect of teaching and learning and is carried out through the intentional and systematic collection and analysis of classroom data" (2004, p. 23), a process that requires certain dispositions and motivations that working in a group, rather than on one's own, can support.

The mini-grant I was awarded provided supplies and stipends for the "Digital Portfolios as a Space for Inquiry" project that began in the summer of 2004. In the grant proposal that I submitted to NWP, I outlined the project in the following manner:

> The movements toward authentic assessment and technology integration have forced teachers to examine and expand their classroom practice in multiple ways. Through the use of digital portfolios, teachers can foster their own sense of technological competence and connect it to student learning. Participants in the mini-grant group will develop their own digital portfolios, share ideas related to authentic assessment and how it can be represented through new media and collaborate online in threaded discussions about these merging issues. These teacher researchers will provide leadership and modeling for continuity programs and invitational training related to technology in the classroom, authentic assessment and classroom inquiry. (See Appendix A for the full proposal text)

The participants from the group would self-select this project as a means to complete part of their RCWP work after the Summer Institute. In discussing the impetus of this project with RCWP's Director, Janet Swenson, part of the goal for this teacher research mini-grant was to offering teachers support as they went through the research process. In the summer of 2004, three options for completing ENG 896 were offered: working on one of two specific projects (one with me focusing on digital portfolios or another one focusing on photojournalism and visual literacy) or completing the independent study.

For the "Digital Portfolios as a Space for Inquiry" project, participants would pursue three goals:

- Learn the basics about the construction of digital portfolios;
- Engage in professional conversations about how to best represent their thinking, writing, artifacts and analysis through a digital portfolio and the nature of their inquiry; and
- Determine ways in which digital portfolios may or may not contribute to the best practice of teaching writing and how these practices can influence other teachers and their own students.

These goals were meant to contribute to RCWP's overall goal of creating teacher leadership in technology projects. Also teachers would earn small stipends and get two professional texts from the mini-grant.

Seven teachers chose to be part of the project, five of whom I specifically document in the chapters that follow. First, having done the RCWP summer institute in 2003, Aram Kabodian and Cathy Edington had not finished ENG 896 yet, and had until the summer of 2005 to finish their teacher research project. Since they both had

experience designing a digital portfolio in the 2003 institute, I invited them to be mentors to the teachers who would join from the summer 2004 cohort. When offered the choice of ENG 896 projects or independent study, five participants from the summer of 2004—Anne Russo, Becky Luft-Gardner, Becky Stephens, Nicole Lerg, and Tara Autrey—chose to be part of the digital portfolio group. Since Aram and Cathy had already begun digital portfolios, but were struggling with their own teacher research projects, I asked them to act as mentors in the group. In terms of data, I chose to survey, interview, and collect snapshots of these participants, so as to watch them develop their portfolios from scratch. These are the five teachers that I will focus on throughout this dissertation.

Over the course of this project, I wanted to create a space where teachers could position themselves as writers, design a portfolio based on an inquiry question of their own choosing, and then get the kind of one-to-one support that a group of like-minded colleagues could provide. The participants would be asked to create a research question and document their classroom inquiry by reading and responding to professional texts and creating at least four pieces of writing including blog posts and a final synthesis paper. I began the project with the idea that we would meet only three times during the school year, briefly on a weeknight, and that Aram, Cathy, and I would offer technical support both online and, if needed, face-to-face, as the project progressed. Beyond this, the goals and processes of their teacher research projects—and the digital portfolios that would represent those projects—were wide open.

While I told them that this would be a process driven by their own inquiry, timelines, and desire to learn technology, the fact that this experience was, at its core, a class that they were completing for credit (and, in some cases, as a component for

renewal of their teaching certification), never escaped them, or me. As I prepared the UCRIHS review, I was conscious of how my position within the group could influence the participants' experience in the class. Even though I was not the instructor of record, the UCRIHS reviewer sought significant revision in the language of my consent form to note that participation in the study—or their choice to drop out of it—would not affect their grade for the course, standing with RCWP, or their degree progress. As the defacto teacher for ENG 896 and a research, I had to craft the consent form (See Appendix B) and all the activities in which the group would be involved to preserve participants' rights as students in the class. As a result of my interactions with UCRIHS and interactions with my committee members, I aimed to have a theoretical framework and research methodology that would contribute to a collaborative environment throughout the project, one way in which we could keep the focus on the task at hand, and not solely on the grade. [1]

Theoretical Framework: The Pedagogy of Multiliteracies

Noting that most technology learning was ineffective because it was done in isolation, and that digital portfolios were not considered a site of transformation in teaching practice, I wanted to choose a framework for the project that would scaffold interested teachers from novice technology users into experts. In so doing, I wanted to take traditional notions of teacher professional development related to technology and

[1] Also of note is the fact that I was not the instructor of record for the course and I am sure that this assuaged some of the UCRIHS reviewers' concerns. For teacher educators who might pursue a project such as this with their own students during a regular course, I would suggest that they clearly articulate the benefits of the project for the students and how they outweigh the risks, especially in light of constantly changing technologies and teaching. In this manner, one can position him or herself as both a participatory researcher in his or her own course, all the while arguing for a role as a teacher that supports the learning outcomes of his or her course. In short, I would suggest that teacher educators show how being involved as a researcher actively benefits students and that the benefit of this position offers everyone involved opportunity for growth in the rapidly evolving field of technology in education.

participate in a process that could embody change. This approach seems reasonable, given that many teacher education scholars have been asking questions similar to Leu's: "[i]f educators fail to continually become literate with rapidly changing technologies, how will they help their students become literate?" (Leu, 2000, p. 763). Thus, I chose the multiliteracies framework to foreground the process of building the digital portfolio—as a literacy act—and to incorporate technology as a part of that process.

At the suggestion of RCWP's director, Janet Swenson, I began with the theoretical framework from the New London Group's "Pedagogy of Multiliteracies" (New London Group, 2000). In response to increasingly restrictive visions of literacy learning, a group of scholars gathered in New London, New Hampshire, in the mid-90s and created a manifesto originally published in the *Harvard Education Review* (New London Group, 1996) and republished in their 2000 book, *Multiliteracies: Literacy Learning and the Design of Social Futures*. Critical of traditional models of literacy learning, they argue that "[w]e cannot remake the world through schooling but we can instantiate a vision through pedagogy that creates in microcosm a transformed set of relationships and possibilities for social futures" (p. 19). Suggesting that discursive and dialectal differences, as well as multimodality, must be taken into consideration, they outline a literacy pedagogy that suggests both a "'what'" and a "'how'" of learning: "what it is that students need to learn," and "the range of appropriate learning relationships" (p. 19).

The "what" focuses on what the New London Group calls "Designs of meaning"—that is, forms of communication such as linguistic, visual and auditory. In comparison to the ways that literacy has traditionally been framed in school settings,

reading and writing have been valued at the expense of other multimodal forms. As these Designs become increasingly complex and overlapping, they demand more than basic literacy; individuals must be able to be multiliterate across a variety of social contexts and with different technologies. For RCWP, understanding the designs of meaning centers on integrating technology as well as digital and visual rhetoric into K-12 teaching. As it relates to digital portfolios, examining designs of meaning offers teachers options for how they might compose their work and represent the work of their students; hypertext, scanned images and documents, audio and video texts can all be examined and utilized to meet a rhetorical purpose.

In terms of the "how," the New London Group suggests that pedagogy should recognize that "the human mind is embodied, situated, and social" (p. 30). While this belief could predispose them to a purely socio-cultural perspective, they argue that the "how" of a Pedagogy of Multiliteracies consists of four related components: Situated Practice, over instruction, Critical Framing, and Transformed Practice. These components "do not constitute a linear hierarchy, nor do they represent stages. Rather, they are components that are related in complex ways" (p. 32). In order to understand and communicate with new designs of meaning, a learner will have to go through all four components of this pedagogy, although the components do not necessarily equate to one quarter of that learner's time. Moreover, each learner may require more of one component and less of the others. Thus, the "how" of building a digital portfolio becomes more than just technical skills; instead, the entire process can work as a critical and reflective opportunity for teachers examining their own practice.

Stages of the Digital Portfolio Project

In relation to the digital portfolio project, then, the Pedagogy of Multiliteracies allowed the group to look at our work in light of these four components as we moved through them over the course of the 2004-05 school year. The New London Group specifically claims that

> The four components of pedagogy we propose here do not constitute a linear hierarchy, nor do they represent stages. Rather, they are components that are related in complex ways. Elements of each may occur simultaneously, while at different times one or the other will predominate, and all of them are repeatedly revisited at different levels. (p. 32)

In Figure 2.1, then, I illustrate the recursive nature of the process with the recycling-like arrows that show a continuous cycle of learning.

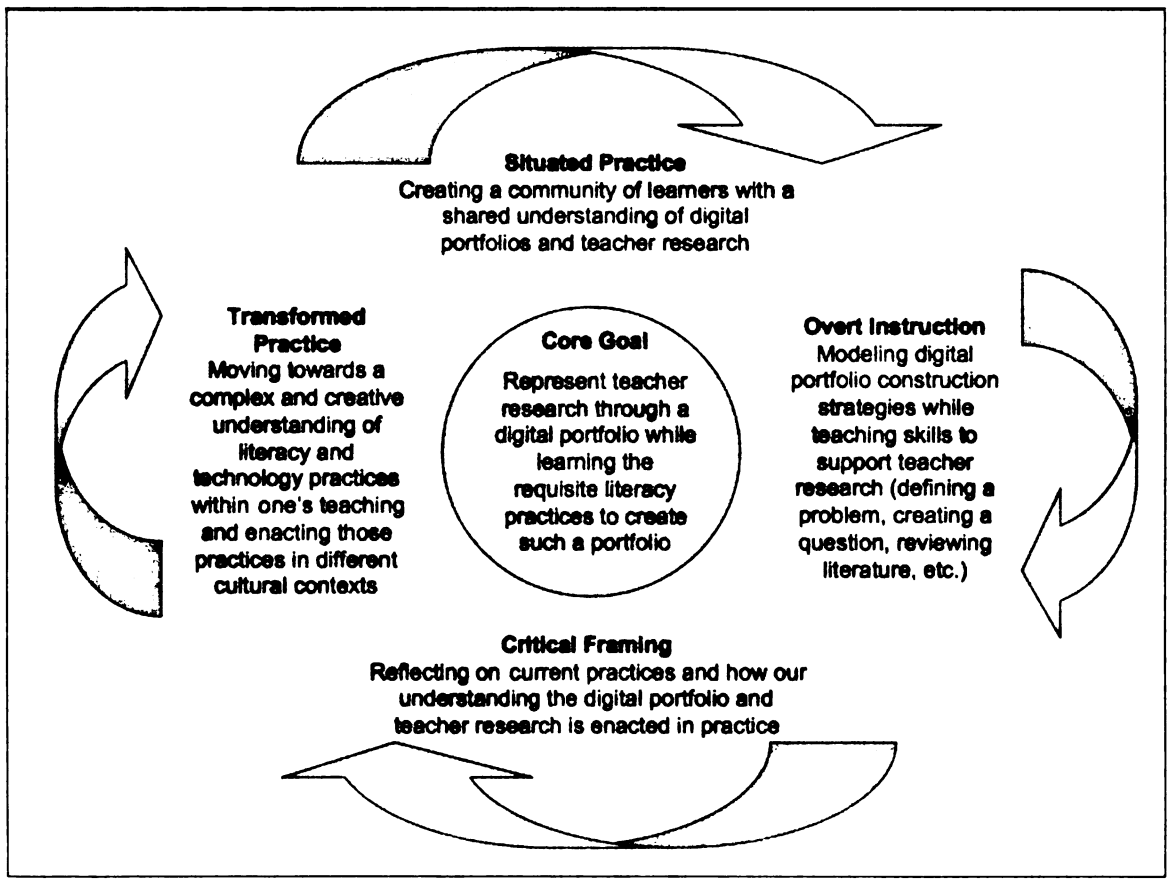

Figure 2.1: The Pedagogy of Multiliteracies Framework as Enacted in the Digital Portfolios as a Space for Inquiry Project

However, real life—and especially teaching—never presents itself in a completely recursive format and, for better or for worse, there are goals associated with learning and, in the case of these participants, finishing ENG 896. In order to bring at least a little structure to our work over the course of the school year and think about how to encourage participants to complete their teacher research and digital portfolio, we roughly followed the schedule shown later in this chapter.

I suggest dates here only to show the relative stages of the group's work in the project, not to put hard and fast boundaries on any stage. We began with "Situated Practice," in which individuals are immersed "in experience and the utilisation of available Designs" (p. 35) In this stage, we explored digital portfolios, web design, and the practices of teacher research. This happened in the first few months of the project, August and September of 2004. My goal for this stage of the project was to give participants, most of whom had no experience with web design, an overview of the process that would carry their work forward throughout the year as they developed their portfolios.

Next, we participated in "Overt Instruction," where individuals are exposed to the "systematic, analytic, and conscious understanding" of Designs of meaning and the processes which produce them (p. 35). Together, we read texts that helped us develop basic portfolios (Kimball, 2002) and begin their teacher research projects (Mohr, 2004) in October and November 2004. By this point, all the teachers had developed at least an initial draft of their digital portfolio and an idea of what they would do for their teacher research project. We discussed the ways in which their research interests could be best

represented through their portfolios—the site architecture, the contents of the initial pages, and colors, fonts, and images they might use to represent their work.

After this, we engaged in "Critical Framing," where individuals "[stand] back from what they are studying and [begin] viewing it critically in relation to its context" (p. 35). We did this by reading a text on visual literacy (Burmark, 2002), collaboratively writing an article about our experience (Autrey, Cathy O'Berry Edington et al., 2005), and by responding to each others' digital portfolios through the winter and spring of 2004-05. In addition, the teachers also read other professional texts related to their own inquiry questions. This stage was marked by discussions about how and why the teachers were representing their work as well as what they were learning about the technology of building digital portfolios. Moreover, they began to think about implications for their pedagogy and professional development.

By the end of the 2004-05 school year, and into the 2005-06 one as well, the participants were in the stage of "Transformed Practice," where individuals are able to take their new understandings "to work in other contexts or cultural sites" (p. 35). They accomplished this namely by incorporating their digital portfolios into their classrooms and also by sharing it with others outside of their classrooms in a variety of contexts, including journal articles and presentations at a national conference. A year after they completed their ENG 896 teacher research projects, the participants discussed in their fifth interviews the variety of ways in which they were using technology in their classrooms, most a direct result of their participation in this project.

In Table 2.1 on page 41, and subsequent chapters of this dissertation, I have overlapped the "stage" of our project by anywhere from one to six months, thus

emphasizing the recursive and overlapping nature of the work that the New London Group suggests will happen with such a pedagogy.

Advantages of the Pedagogy of Multiliteracies Framework

What might the multiliteracies perspective offer teacher educators as we consider the purposes and processes for using digital portfolios in our classrooms, programs, and institutions? Technology learning has, for too long, been about learning hardware and software without a focus on literacy and pedagogy. If we begin to situate technology in the background and literacy in the foreground, I believe the small shift significantly changes the way in which we envision the task. Like Yancey (2004) sees the process of for students, I see the construction of digital portfolios for teachers as contested and situational. This type of literacy needs to be explored in a manner that befits the complexity. Moreover, literacy technologies are not neutral. In his essay, "From Pencils to Pixels: The Stages of Literacy Development," Baron argues that

> Each new literacy technology begins with a restricted communication function and is available only to a small number of initiates. Because of the high cost of the technology and the general ignorance about it, practitioners keep it to themselves at first—either on purpose or because nobody else has any use for it—and then, gradually, they begin to mediate the technology for the general public. (Baron, 2001, p. 71)

I want to extend his argument, via the Pedagogy of Multiliteracies, to suggest that teachers who create digital portfolios from an inquiry-based perspective are these type of practitioners, mediating this particular "literacy technology" in ways that contrast with the typical standards-based, template-driven forms that digital portfolios take in teacher education programs. The multiliteracies framework creates a space to do this kind of work.

Stage	Actions Taken by Researcher and Participants	Topics Explored by Researcher and Participants	Outcomes Achieved by Participants
Situated Practice August 2004 – October 2004	• Began initial discussions, face-to-face and online, about teacher research and digital portfolio development • Read The Web Portfolio Guide • Examined examples of digital portfolios	• Access and equity for students and parents to see the portfolios • Symbolic capital for participants as it relates to technology know-how • Ethics for teacher research projects	• Created initial digital portfolios • Framed teacher research questions and outlined processes for collecting data over the school year
Overt Instruction September 2004 – March 2005	• Offered responses to portfolio design and research questions through online and face-to-face meetings • Collaborated to learn more and the technical aspects of designing digital portfolios • Read and discussed Visual Literacy	• Specific skills for website design such as using Mozilla, creating graphics, and loading sites with FTP • Refining and clarifying the agenda for teacher research	• Increased interest in learning new technologies for classroom use • Increased sense of validation for the research process and the digital portfolio • Increased sense of being willing to ask for help with technology
Critical Framing October 2004 – June 2005	• Continued meeting face-to-face and having discussions online • Wrote article for English Journal • Prepared for wrap-up of teacher research	• Digital (hypertext, multimedia, and site management) and visual rhetoric (color, typography, images) of portfolios	• Developed perspectives on different audiences and purposes for the portfolio • Discussed ethical concerns about students' privacy and how to represent student work
Transformed Practice January 2005 – November 2006	• Prepared a twenty-minute presentation and synthesis paper to summarize teacher research • Began to integrate new technologies (blogs, podcasts, digital video) into teaching practice	• Ethical concerns about students' privacy and representing student work • Rising self-esteem and changing values related to using the digital portfolio and teaching with technology	• Seven of us presented at 2006 NWP Annual Meeting • Six of us wrote a second article for JAAL • Three teachers facilitated technology workshops for RCWP in summer 2006

Table 2.1: Overview of the Stages of the Pedagogy of Multiliteracies in the Digital Portfolio Project

In his work on multiliteracies, Selber describes the types of knowledge that a learner gains as "functional," "critical," and "rhetorical" literacies (Selber, 2004). He contends that "teachers should emphasize different kinds of computer literacies and help students become skilled at moving among them in strategic ways" (p. 24). Functional literacy concerns the logistics of operating hardware and software, as well as finding information. In addition to these basic understandings, critical literacy "strives to both expose biases and provide an assemblage of cultural practices that, in a democratic spirit, might lead to the production of positive social change" (p. 81). Finally, rhetorical literacy examines the genres—such as persuasive or reflective—available to frame texts. These perspectives extend the New London Group's designs of meaning to look at the ways technology can be used. Selber imagines a model of multiliteracy learning that understands "pedagogy and technology as coextensive and mutually constitutive," (p. 206), positioning teachers as learners of technology so that they can make sense of these literacies in their own practice (p. 201).

In contrast to the ways that Selber describes multiliteracy learning, most of the literature on digital portfolios and teacher technology learning focus on the functional side of the process, and fail to look at how critical and rhetorical aspects matter to teachers trying to integrate technology into their practice. Keeping the focus on the functional level keeps the focus on the technology, not the literacy learning of teacher using it. Examining the critical and rhetorical purposes for developing a digital portfolio invites teachers to view the process as a literacy act, not just a set of technology competencies. The Pedagogy of Multiliteracies framework allows for a scaffolded introduction to a specific genre and set of technologies related to digital portfolios, thus

encouraging the teacher researchers who participated in the project to think about praxical implications for teaching with technology.

Methodology: Participatory Action Research

As I suggested in Chapter 1, the literature on teachers using technology in general and digital portfolios in particular usually describe the work in the following manner. In relation to using technology, empirical studies describe teachers doing work with technology, discuss the teachers' feelings of isolation and frustration, and report on it from an objective standpoint, making suggestions for how to change this in the future. Most digital portfolio research involves teacher educators sharing subjective reflections on the ways in which they integrated, or attempted to integrate, digital portfolios into their pre-service education courses; the result is that even though students may feel some buy-in, learning technology and integrating it into teaching are results that don't come from their work. This summation generalizes, of course, but the larger themes in the literature are evident: teachers, as constructed by those who report empirical data, have trouble integrating technology and digital portfolios, which are, from most perspectives, not useful beyond their initial development in their coursework.

As a teacher educator who has deep convictions about collaborating with teachers as well as a good sense of how to use technology in teaching, I felt compelled to choose a different methodology for my dissertation research. I agree with Blakeslee, Cole, and Conefrey, who suggest that

> The increased involvement of subjects in our inquiry, we believe, will result in our adopting new roles as researchers. Rather than being arbiters who, in forming interpretations, cast judgments on and exercise authority over the sites and subjects we study, we will become collaborators and mediators engaging with and involving our subjects more fully in our research and in our writing. These new roles, we believe, will facilitate researcher-subject cooperation, along with the

> selective processes we engage in to construct our accounts. (Blakeslee, Cole, & Conefrey, 1996, pp. 142-3)

For me, teaching teachers how to initially use and then integrate technology into their instruction is, quite simply, a moral imperative. Knowing what I know about the empirical evidence on teachers learning technology as well as the limited results of digital portfolio projects, I feel compelled to act, not just observe. As a researcher, then, if I collaborate with teachers as they learn technology, and try to better understand how and why they do so, then I will not feel as if I am subjecting them to an experimental research design in which I watch them try and fail or succeed with technology. Instead, I work with teachers towards changed practice.

How might I create a collaborative relationship—as facilitator and researcher—that would help them best reach the goal of creating "technological pedagogical content knowledge" (TPCK)? As Mishra and Koehler describe it, TPCK is "the basis of good teaching with technology" and includes the attitudes and dispositions that a teacher must have to integrate technology into one's teaching habits, content knowledge, and expectations for student learning (Mishra & Koehler, 2004, p. 14 in PDF). The literature on digital portfolios suggested that teachers view constructing the portfolio as a one-time product, disconnected from deep and lasting learning about how and why to use technology. In order for the participants to develop TPCK, our work would have to engage them in discussions that move beyond functional literacy and into critical and rhetorical aspects as well.

Also, since the participants were using teacher research as a model for their own inquiry (MacLean, Mohr, & National Writing Project, 1999; Mohr, 2004), I wanted to adopt a congruent method as an educational researcher engaged in a collaborative project.

In particular, Mohr et al. outline six aspects of teacher research that make it unique. Teacher research, by their definition, is intentional, systematic, public, voluntary, ethical, and contextual (Mohr, 2004, pp. 23-6). This stance has implications for immediate classroom application as well as for the broader field of educational research. In order to collaborate in a technology-rich project, I would adopt the role of a consultant and coach. Having constructed my own digital portfolio in the past, understanding the basics of web design, and thinking through the issues related to failed digital portfolio initiatives, I felt compelled to be the type of researcher that would be work with the teacher participants in the project rather than set things in motion and simply observe. Moreover, RCWP and NWP at large have a goal of creating teacher leaders who share their knowledge at their own site and through other means such as conference presentations and I centered my efforts on building each teacher's capacity to do such work.

This vision of teacher and researcher collaborating is not always valued in educational research. Ray notes the typical distinction between teacher research and the more empirical forms of research that the field of education values: "Teachers conduct research because of its transformative potential for themselves and their classrooms; researchers conduct research because of its transformative potential for their fields. These differences between participant and observer are significant" (Ray, 1996, p. 291). This is a model of research that contrasts with current demands for "scientifically based" studies that the federal government and many professional organizations and agencies are suggesting for educational research (What Works Clearinghouse, 2002). This type of research focuses on objective measures of change, requiring experimental or quasi-experiment designs. Inherent in this vision of good research is the teacher as one who is

observed and conditioned, not as an individual with his or her own personal and professional goals. In opposition to this vision, Ray goes on to argue that

> It is my contention that far more literacy research, including that initiated by university researchers, should be action research. Within the domain of action research, certain ethical issues are resolved. For example, if good research is change oriented, researchers should feel comfortable, in fact morally compelled, to intervene in the learning environment. In order to do this ethically, however, literacy researchers need to make their political agendas clear (to themselves and others) before they begin a research project. They also need to collaborate with as many teacher-researchers and student-researchers as possible, not just to assure that written representations of the study are polyvocal, but also to increase the likelihood that changes will actually occur in the environment as a result of the study and that these changes will be responsive to the needs of the people involved. (Ray, 1996, p. 297)

Understanding this set of conditions, I felt very strongly that my sensitivities to the technological and pedagogical context of the teachers' work—as well as the collaborative practice that teacher research allows—would require me to be more than just an observer of the project and, indeed, to become an active part of it. In order to have the results of the project be "polyvocal," I adopted a participatory role and encouraged participants to share their teacher research widely through a variety of means, as I will discuss later.

While there are some variations on how participatory action research (PAR) is enacted, Kemmis and McTaggart outline some of the dispositions that a researcher must have in order to engage in an action research project. They suggest that a researcher adopt a paradigm that recognizes the benefits of both an objective and subjective approach, a "dialectal stance" where the researcher "treats the others involved in the setting as coparticipants" (p. 365). By constantly sharing our questions, drafts of portfolios, reflections on building them, and interpretations of professional readings, we would "constitute and reconstitute the setting" of our work. They explain PAR further:

> [Researchers] understand that, to a greater or lesser extent, participants enter practices that are partly preformed by discourses, social relationships, and the histories of the settings they inhabit. In this view, the purpose of research into practice is to chance practice, practitioner, and practice setting (or, we might say, the work, the worker, and the workplace)—because changing practices requires changing not only behavior or intentional action (including the way the practitioner understands the practice and the practice setting) but also the situation in which the practice is conducted. (Kemmis & McTaggart, 2000, p. 365)

This stance, one that acknowledges collaboration and aligns with my understandings of how and why teachers adopt technologies in particular ways, allowed me to work with the teacher participants as they learned how to create their digital portfolios. For instance, Zhao et al. suggest that a teacher, the technology innovation he or she uses, the school itself, and the teacher's classroom context must all be examined in order to understand what works for individuals as they integrate technology (Zhao, Pugh, Sheldon, & Byers, 2002). PAR acknowledges these parts of the context and, more importantly, includes the researcher as a part of the process of change.

And, while PAR suggests that this experience be change-oriented for participants, PAR does not set out, as its goal, to prove that a transformation took place. Unlike an empirical design that demands methods for measuring objective results, choosing PAR as a method sets my work apart from an epistemological standpoint that seeks generalizable knowledge. Instead of discovering findings, the results of action research, are, as Kemmiss and McTaggart describe them,

> the real and material changes in (a) what people do, (b) how they interact with the world and with others, (c) what they mean and what they value, and (d) the discourses in which they understand and interpret the world. (Kemmis & McTaggart, 2000, p. 383)

To that end, I set out to participate in a journey with a group of teachers and designed research questions that could, and would, change over time to reflect the shared experience of working on the project itself.

Research Questions

In structuring the questions around the broad themes that I saw in the literature as they related to accreditation, assessment, and authenticity as well as the dilemmas many teacher educators found in implementing digital portfolios, I framed the research questions as pragmatically as I could. Knowing that this would be a participatory research project which would, invariably, change over time, I focused on the themes as the questions continued to change; the process of that change will be described in later chapters. For now, I offer the questions in two forms. First, the questions I originally wrote in the project proposal are italicized; these questions were based on my initial literature review and understanding of how the project might unfold. As the group worked, I rethought and revised the questions. I have labeled these the "reframed" questions and these are the ones I intend to answer in the following chapters. In short, while I framed the questions, my interactions with the participants allowed me to reformulate them in ways that were more robust for teachers and teacher educators.

- Theme 1: Portfolio construction and maintenance
    - Original question: *In what ways might an online community of teachers who actively construct, analyze and reflect upon their own and one another's digital portfolios view the role that portfolios play in fostering and representing growth in literacy skills—both their own and their students?*

- Reframed question: Given that digital portfolios created in teacher education courses tend to stagnate or dissipate over time, what does a model of sustained, on-going support look like for teachers to help them think of portfolios as meaningful, living documents?

- Theme 2: Teacher engagement with technology learning
  - Original question: *How might teacher engagement in active inquiry and digital portfolio construction lead to changes in their approach to teaching writing and/or their uses of digital portfolios in their classrooms?*
  - Reframed question: Since teachers often struggle to integrate technology learning into their pedagogy and access to many technologies is limited in certain school settings, how could we develop a disposition towards technology, a habit of mind framed through the Pedagogy of Multiliteracies, that would allow the participants to critically and skillfully merge technology with their teaching lives?
- Theme 3: Transfer into teaching practice
  - Original question: *What methods of creating and reflecting upon digital portfolios for teachers could be easily transferable to students, thus increasing their overall competence in writing for multiple purposes to varied audiences?*
  - Reframed question: In thinking about the unique demands that teachers face as they try to represent their work to different audiences and for

different purposes, what are the rhetorical, institutional, and political implications of teachers putting their work online in a digital portfolio?

With these questions in mind, the group began its work in August of 2004. Throughout the process, we engaged in blog-based and face-to-face discussions, the collaborative writing process to create an article, and preparation of their digital portfolios. Examining the responses that participants in this project have provided allows for a longitudinal and comparative look at the journey that each teacher took from knowing little or nothing about creating a digital portfolio into their current understandings and uses of technology. And, as a part of that journey, I will discuss how I have changed my thinking as well.

Data Collection and Analysis

The texts from which I draw my data includes the following:

- A pre- and post-survey about technology skills and attitudes;
- Entries from our private, password-protected blog;
- A beginning, middle, and end-of-school-year interview ranging from 10 minutes to just over an hour for 2004-05[2];
- A beginning-of-school year interview in fall 2005 and one from the end of the school year in summer 2006;
- Recordings of individual tutorials and group sessions related to digital portfolio development;
- Recordings of our sessions where we collaboratively wrote an article for *English Journal*;

[2] As a part of her initial work as a mentor and to offer participants a chance to talk first to someone other than me (as the de facto teacher of the course), Cathy volunteered to conduct the first round of interviews, as well as second interviews with Anne, Becky S., and Tara. I thank her for these efforts and I conducted subsequent interviews. In his role as a mentor, Aram had given a presentation about creating digital portfolios during the summer institute for the entire 2004 RCWP cohort.

- Drafts of their digital portfolios at different junctures in the project;
- A video of their final presentations for the teacher research from June 2005;
- All writings that they submitted as part of their ENG 896 coursework; and
- Recordings of planning sessions for presentations we did at the National Writing Project annual meeting in November 2005.

These texts, when taken in whole, represent a variety of mediums and modes in which these teachers have worked and discussed their work, thus giving me different insights into the process by which they composed their digital portfolios. From the discussions we had, online and face-to-face, as well as the work that the group did, we developed took action, explored topics, and created outcomes from the work (As shown in Table 2.1, p. 41).

As a participatory action research project, the best way to understand what happened throughout this research is to study these actions, topics, and outcomes by examining particular moments across the entire project. Looking closely at these moments will allow me to describe how participants perceived the Pedagogy of Multiliteracies model for learning how to effectively use technology. By examining these, I will respond to the research questions, comparing our experiences with the reasons how and why digital portfolios as typically composed, as represented by the current literature reviewed in Chapter 1.

One recurrent theme important to note here was the degree to which the participants in this project felt their portfolios—and the results if their teacher research—were more or less public. To get another view of this phenomenon, I have placed it in a descriptive framework, showing the private to public nature of the work, as I feel that

will play a part in the analysis of how and why they constructed their digital portfolios in the ways that they did. Figure 2.2 offers a descriptive framework of the project, participants, and sites of data collection so as to situate each part of the work on a type of continuum from more private to more public.

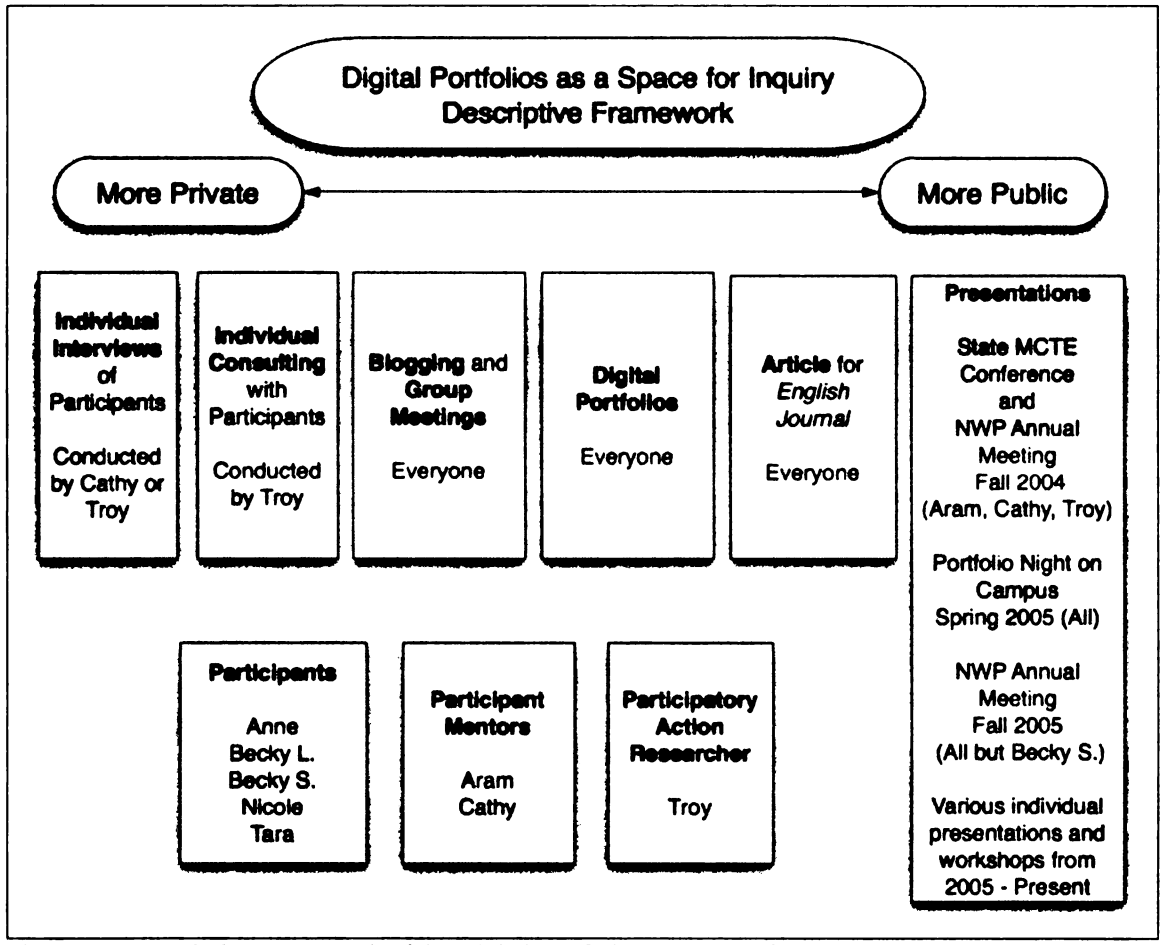

Figure 2.2: Descriptive Framework of the Digital Portfolios as a Space for Inquiry Project

In choosing how to organize and analyze the data, I have decided to chronologically examine the development that each teacher underwent over the two years, roughly equating the stage of the Pedagogy of Multiliteracies to a time period in the project and describing events in the that exemplify the way in which participatory action research and the Pedagogy of Multiliteracies created a unique learning opportunity. That said, I also recognize that the four components of the Pedagogy of

Multiliteracies "do not constitute a linear hierarchy, nor do they represent stages" (New London Group, 2000, p. 32). This project then, by its very nature, was recursive; yet, I still must organize and analyze the data generated in a systematic manner. Therfore, I will discuss these events in chronological order and in relation to the Pedagogy of Multiliteracies so as to identify implications this project had for my research questions and to draw conclusions about the project that have implications for teacher educators.

Limitations, Implications, and Conclusions for Theory and Method Chosen

Of course, theories and methods have limitations. The Pedagogy of Multiliteracies framework and the participatory action research method both support and temper the claims that I want to make as a teacher educator and researcher. While I will address these constraints, by providing thick descriptions of the project, I will argue that the benefits of this theory and method outweigh the costs.

In terms of the Pedagogy of Multiliteracies, there are two constraints that I must acknowledge. The first constraint is that although Pedagogy of Multiliteracies model is flexible and dynamic, it is also more of a heuristic and not necessarily "replicable" in the sense that it is an intervention "scientifically-based" in its design. Second, the Pedagogy of Multiliteracies could be viewed as a kind of a catch-all approach—running the range of pedagogical approaches from direct teaching to situational problem solving. In a sense it tries to be everything to everyone, pleasing literacy educators from all theoretical paradigms, and could end up being not much of anything to anyone, if interpreted too broadly. It is an open-ended pedagogy, relying on teachers and students to identify goals, and as a framework for teaching does not necessarily align with the types of instruction

and accountability methods that are prescribed through traditional standards and assessments.

In terms of method, I knew that I had to acknowledge my role in the process and still collect meaningful data, despite the fact that my presence would shape the work. Given the knowledge and motivation of the participants, the method chosen also had to adapt over time as I responded to their technical needs and concerns about researching their classrooms. These were, and continue to be, motivated teachers who chose to be part of this project and who needed to learn how to do teacher research in their own classrooms. Some did so admitting that they specifically wanted to work with me. This could be viewed as a constraint, perhaps even a conflict of interest, in an empirical paradigm. While I can see how a reader could make the counterargument that the reason these teachers "learned technology" and "did teacher research" is because I, as the leader of the project and the de facto instructor of the class, asked them to do so, either through friendly prodding or by hanging the threat of a grade over their heads, I hope that a more nuanced version of the story in later chapters demonstrates that this is not the case.

These limitations, while concerning, did not compel me to choose another method because my ethical concerns are as a teacher educator first, researcher second. I return to Kemmis and McTaggart, who argue:

> In most action research, including participatory action research, the researchers make sacrifices in methodological and technical rigor in exchange for more immediate gains in face validity: whether the evidence they collect makes sense *to them, in their contexts*. For this reason, we sometime characterize participatory action research as "low-tech" research: It sacrifices methodological sophistication in order to generate timely evidence that can be used and further developed in a real-time process of transformation (of practices, practitioners, and practice settings). (Kemmis & McTaggart, 2000, p. 375, emphasis in original)

Thus, in choosing PAR as my methodology for this dissertation, I wanted to act

strategically in collaboration with teachers learning about technology rather that observe a particular phenomenon over time or measure any changes.

As I close this chapter, I want to reiterate the main argument I will expand upon throughout the dissertation. Although the Pedagogy of Multiliteracies suggests "Transformed Practice" as an outcome—and my personal opinion is that many transformations occurred, for both the teachers and me—my intent in this dissertation is not *prove* that any transformation happened. Instead, my aim for synthesizing the data and sharing it in this manner is to describe how composing in digital environments, especially with digital portfolios, creates a number of technical, pedagogical, and ethical demands on teachers that we, as teacher educators, need to take into consideration when asking them to compose such texts. I feel that providing a rich description of this process will be most useful to other teacher educators. The purpose is not to judge what kind of transformations took place for each of the participants; instead I intend to provide a model for thinking about teaching teachers about literacy and technology.

The following chapters then provide a look into the project from my vantage point as a teacher educator, a participant researcher, and someone who has used technology in his teaching and wanted other teachers to share similar experiences. I describe the project through a series of significant moments at each stage of the Pedagogy of Multiliteracies process: Situated Practice, Overt Instruction, Critical Framing, and Transformed Practice. Employing the data described above, I will discuss how functional, critical, and rhetorical literacies can contribute to technology learning and pedagogical change. To extend Baron's analogy, I will show how the practitioners in this project came to understand writing, and teaching writing, with technology, thus moving from pixels to praxis.

Chapter 3 – "But what do you want us to *do*?":

Situated Practice in a Teacher Research Community

Situated Practice August 2004 – October 2004	Overt Instruction September 2004 – March 2005	Critical Framing October 2004 – June 2005	Transformed Practice January 2005 – November 2006

Once the five participants from the summer 2004 cohort chose to do their teacher research with us in the "Digital Portfolios as a Space for Inquiry" project, Aram, Cathy, and I set our work into motion. In this initial stage, participants began to highlight concerns that they had about constraints they might face—both technical and institutional—as they began to represent their work online. Despite these concerns, all felt that creating a digital portfolio could help them expand their understandings of literacy, especially expanding visions of literacy that include technology and multimodality. Before the 2004 school year began, the group began the phase of "Situated Practice," the "immersion in meaningful practices within a community of learners who are capable of playing multiple and different roles based on their backgrounds and experiences" (New London Group, 2000, p. 33). While all phases of this project, as well as the multiliteracies pedagogy itself, are recursive and overlapping, this initial phase essentially took place over the first three months of the school year, from August to October of 2004. Throughout the project, we would work together in this community, all playing different roles as web designers, teachers, teacher researchers, collaborators, and coaches.

The New London Group suggests that groups engaged in the multiliteracies pedagogy be comprised of the learners themselves, as well as expert novices and an

expert all who can "guide learners, serving as mentors and designers of their learning processes" (p. 33). Aram and Cathy acted as expert novices, both having created a digital portfolio in the summer of 2003, but still, as Cathy put it, "[I am] right there in your shoes too, as I am completing my 896 work also" (Cathy, Blog Post 76, 9/28/04)[3]. Because both Aram and Cathy were in the process of completing their own teacher research project, they positioned themselves as collaborators and more knowledgeable peers, a position that teachers using a writing workshop approach often take as well. My role, as the expert in the group and as a participatory researcher, became that of a facilitator, actively prompting conversation on the blog and in our face-to-face meetings as well as encouraging participants to move forward with their research. For all three of us, we used this time to better understand our five colleagues' needs, to help them become acquainted with the technology behind digital portfolios, and to create a safe and comfortable place for learning about technology. Table 3.1 on page 58 outlines each participants' name, portfolio URL, school context, career point, and focus in their teacher research project.

The Situated Practice phase of the work occurred over roughly twelve weeks from August to October. In early August, I met with Anne, Becky L., Becky S., Nicole, and Tara to outline the ENG 896 course work, conduct a brief survey, and orient them to the blog. Later in September, Cathy began doing individual interviews and met after school once as a group to discuss *The Web Portfolio Guide*. Over time, we decided that we needed more regular meetings, and scheduled a session for a Saturday in late October.

[3] Participant data was gathered through personal interviews, blog entries, email, group discussions, papers they submitted for class, and presentations of their work. I will cite each participant's comments with their name, the date, and the medium from which it came. Blog posts are automatically numbered sequentially by the blogging software, so I refer to posts by author, overall post number for the history of the entire blog, and date. For a complete list of data collected, please see Chapter 2.

Participant Name	Digital Portfolio URL	Type of School	Point in Teaching Career	Teacher Research Interest
Tara Autrey	http://www.msu.edu/user/autreyta/	Suburban Elementary	Early-Career	Creating a Community of Writers
Cathy Edington	http://www.msu.edu/user/edingto2/	Rural Elementary	Mid-Career	Representing a Kindergarten Classroom
Aram Kabodian	http://www.msu.edu/user/kabodian/	Suburban Middle School	Mid-Career	Incorporating Reading Strategies
Rebecca Luft-Gardner (Becky L.)	http://www.msu.edu/user/luftrebe/	Suburban High School	Early-Career	Creating and Incorporating Webquests
Nicole Lerg	http://www.msu.edu/user/lergnico/	Suburban Middle School	Early-Career	The Effect of "Teacher as Writer"
Anne Russo	http://www.msu.edu/user/jacobyan/	Suburban High School	Early-Career	Student Created Multimodal Texts
Rebecca Stephens (Becky S.)	http://www.msu.edu/user/stephe80/	Urban Elementary	Mid-Career	Metacognition and Word Study

Table 3.1: Project Participants' Descriptive Data

During this time, Aram, Cathy, and I were preparing conference sessions for the Michigan Council of Teachers of English Conference in October and the National Writing Project's Annual Meeting in November, 2005. Throughout the Situated Practice phase, we continued discussions on the blog about participants research projects and the initial drafts of their portfolios. They also clarified their teacher research questions and examined examples of digital portfolios.

To begin our work, I started a thread in the blog, inviting everyone—including Aram and Cathy—to explain why they wanted to participate in the project and what their

inquiry question might be (Troy, Blog Post 11, 8/4/04). All but Cathy responded to this message, each noting that one of the main reasons for joining was to improve his or her technology skills. For instance, Tara stated that she joined "because I wanted to challenge myself in the area of technology (there is SO MUCH to learn!)" (Tara, Blog Post 17, 8/4/04) and Becky S. because she knew "absolutely nothing about digital portfolios , and I know the information will be invaluable to myself and my school" (Becky S., Blog Post 13, 8/4/04). Anne, Tara, Nicole, and Becky L. all mentioned the idea integrating portfolios or digital portfolios into their teaching. In retrospect, I look back at their interest in integrating the portfolio into their research in two ways. On the one hand, all of the participants could have been exploring a genuine interest in creating a digital portfolio for their students.

On the other, they could have had some misunderstanding about the project itself, thinking that I would demand they use the portfolio in the research process. Although I stressed over and over that they should design a teacher research project that they could *represent* through a digital portfolio, data from the group will demonstrate how the participants saw the creation of the portfolio and the research itself as synonymous. This was a critical moment for me in thinking about how the teachers understood and approached the project. As noted in Chapter 1, the overriding function of portfolios in teacher education is to create a collection of artifacts for assessment. These portfolios, built on the participants' own interests and questions, would be designed from the ground up in an inherently different way. There were no templates to begin with, no pre-set list of artifacts to include. Perhaps this is part of the reason that they felt they were supposed to be investigating the process of creating the portfolio: because we were creating them

from scratch, that in and of itself could be considered an act of inquiry. Or, I just was not clear in my directions. All the same, I found it interesting that they all shared some confusion over the purpose for the research project and the portfolio, and can only speculate as to why they felt that way at the beginning of our work.

Another element that these initial posts shared, connected with the idea that they wanted to learn technology, was discussing how they wanted to learn it and with whom. Anne felt as if she "was lagging behind in my tech skills, and when I found out I would have a coach (Troy, no less) I thought it better to sign up for an organized research project than try to do one on my own" (Anne, Blog Post 14, 8/4/04). Aram expressed similar thoughts, but took it one step further by saying

> I want my students to be digitally literate (so I need to know what's going on in the digital world); I feel challenged (in a good way) by computers; Troy is cool (meaning knowledgeable, fun, and good at posing thought-provoking questions); and I want to learn from other teachers (even though that sounds corny). (Aram, Blog Post 18, 8/5/05)

I note this post in particular because it was the first post to acknowledge the ways in which we might learn from one another. Also, while there was a consensus that none of them felt they knew that much about technology, they all had a desire to learn more and valued my input as a coach and mentor.

Situated practice allowed us to focus on functional, critical, and rhetorical literacies. We developed functional literacy by exploring the technical aspects of developing digital portfolios from beginning an HTML document to uploading it to a server. In so doing, we discussed critical and rhetorical aspects of constructing a digital portfolio, including student and parent access to these documents as well as the symbolic capital participants were gaining as technology-using teachers. Moreover, participants

shared their concerns about how and why they should be doing teacher research and presenting it in such a public manner. In this chapter, I describe how participants began to understand the task of representing their teacher research through a digital portfolio, and how we examined the functional, critical, and rhetorical literacies embedded in that practice.

Rethinking Literacy in a Cultural Context

The functional literacies required to successfully design a web-based digital portfolio and post it to the internet involve operating a web design program, such as Mozilla Composer or Dreamweaver, learning some HTML, understanding website architecture, creating and embedding images, using FTP to transfer files, and verifying URLs. While Selber focuses on functional literacy as the ability to operate a computer and complete these types of actions, I want to broaden that definition to include the teachers' views on computer literacy and literacy as it is constructed more broadly. Since I set out with this project to engage teachers in discussions of digital and visual rhetoric, I felt that we needed to talk about literacy as a larger concept, one that encompassed the participants' views towards teaching reading and writing and connected it to other theories about literacy. Just as Selber expands our notions of what functional literacy can be, and I will elaborate on this below, the teachers in this project also needed to consider just how it is that literacy *functions*.

To frame literacy in a broader sense, I turn briefly to Street's work on "new literacy studies," in which he reconceptualizes literacy practices from an "autonomous" view of literacy to a more situated one that he calls an "ideological" model (Street, 1984). Reading and writing, as taught in the autonomous model, replicate and reinforce existing

hierarchies and marginalize those considered to be illiterate. In the ideological model, social and political contexts are understood to be part of literacy practices. Moreover, literacy cannot be separated from the technologies that enable it. Street argues that literacy

> ...is more than just the 'technology' in which it is manifest. No one material feature serves to define literacy itself. It is a social process, in which particular socially constructed technologies are used within particular institutional frameworks for specific social purposes. (Street, 1984, p. 97)

The technologies involved in composing a digital portfolio, then, must be considered within the social context of our group as well as the institutional framework present in the participants' goal to complete ENG 896 and earn the graduate credits associated with that task. Moreover, this project is situated in an educational context, a context that has typically made integrating technology and pedagogy a difficult task for teachers and that relies heavily on traditional notions of literacy (usually as measured by standardized tests). Given these contexts, I felt that the ways in which participants understood the literacy processes involved in creating and maintaining a digital portfolio would influence their own thinking about and use of technology in their classrooms.

In his more recent work, Street suggests a model focusing less on isolated events and instead on larger patterns of literate behavior, or "literacy practices"

> Literacy practices, then, refer to the broader cultural conception of particular ways of thinking about and doing reading and writing in cultural contexts. A key issue, at both a methodological and an empirical level, then, is how we can characterize the shift from observing literacy events to conceptualizing literacy practices. (Street, 2003, p. 2 in PDF)

Therefore, rather than looking at the building the portfolio as a singular event (one in which a final performance portfolio is displayed at the end of a class, for instance), I wanted to better understand the literacy practices participants brought to the task of

composing a digital portfolio and, at a deeper level, to the process integrating technology into their teaching. Teachers have to have these functional skills, but that is only the starting point. If we reconsider literacy in an ideological model, then we pay attention to literacy practices in light of cultural, social, and historical contexts. How might their beliefs about literacy affect the ways in which participants framed their teacher research project and constructed their portfolios? Street's conceptions of literacy offer an entry point for examining these questions.

Thus, in thinking about the kinds of literacy in which one needs to be fluent in order to effectively use technology, Selber offers three overlapping forms of literacy that a multiliterate student (or, in this case, teacher) needs to have in order to be multiliterate: functional, critical, and rhetorical literacies. I will explore components of each of these types of literacy throughout this chapter in an effort to frame participants' experience in designing and maintaining their digital portfolios. In so doing, I extend Selber's understanding of Street's work (Selber, 2004, p. 32); none of these literacies can simply be autonomous because technology is socially, culturally, and historically situated. Moreover, teachers working with technology, as described in Chapters 1 and 2, have extra problems to deal with in terms of how their institutions and administrators construct them as users of technology, not as active designers in technology-rich environments such as a digital portfolio. By using Selber's frameworks to analyze the work that participants engaged in during this project, my intent is to show how composing in digital environments create unique rhetorical and pedagogical situations.

Situated Practice and Functional Literacy

Rather than seeing functional literacy in the traditional view of a skills-based paradigm, Selber argues that "functional computer literacy includes the skills associated with writing amd communication processes as teachers have come to understand them in a digital age" (2004, p. 44). While I will explore this definition more in the next chapter, here it offers a useful framework for extending Street's ideological model of literacy and understanding of literacy practices into a broader vision for what students, or in this case teachers, should know and be able to do with technology.

In order to capture participants' initial thinking about this, I created a survey in which they self-reported their comfort levels with particular technologies and then wrote short answers to define literacy and tell me more about how they used portfolios in their teaching. The survey was designed for two main purposes. First, I did need to have some idea about what participants in the project knew about constructing a web page so I could know how best to support them. Second, and more important, I wanted them to begin to see the wide variety of tasks that they would have to engage in to create a basic portfolio and, should they choose to do so, to create a richer portfolio with more and different kinds of artifacts such as images, sounds, and movies. An autonomous view of literacy, in which skills are simply mastered and checked off, may have only focused on the first goal. Instaed I wanted to take a more ideological stance towards the work, thinking about how participants might represent their work through the digital portfolio and, in turn, what skills they would need in order to do so, should they chose that route.

For the survey, I asked participants to mark their level of confidence with the following technology skills on a Likert scale, with four being the highest (See the survey in Appendix B and the results in Table 3.2). The categories of confidence:

- Very Confident (4) – I could teach this to others.
- Confident (3) – I can use this efficiently on my own.
- Somewhat Confident (2) – I have used this to some extent.
- Not Confident (1) – I have not used this at all/unsure how to use it.

All the participants felt confident about their abilities to do basic tasks with the computer, that is, navigate around it, create word processor documents and presentations, and use email. Selber (2004) argues that these computing basics comprise functional literacy, and are the foundations on which larger conceptions of literacy can be built. Thus, understanding the participants' confidence in their own technical abilities helped me better understand how to situate the project and prepare them for exploring critical and rhetorical literacies as well. In terms of building a website, none of them expressed a great deal of confidence in their ability to create of manage a site, although Becky L. and Nicole had some experience with this before our project began.

Through the survey, I also noted that three of the participants had not participated in blogs before. While we were using our blog mainly as a discussion forum and not as an open blog that was subscribable and available for general comment—as most blogs are—it was a new technology that the teachers explored. Instead of using a course discussion forum, we were able to think about how we could use the blog to support our work of understanding hypertextual writing. With its built in WYSIWYG toolbar, participants were able to use different fonts, colors, and emphases (such as bold and italics) as well as embed hyperlinks to their own and other websites. As Nicole noted later on, using the blog kept us "just one click" away from being connected to each others' most recent work in a way that a discussion forum, with it's limited controls, may not have allowed.

Skill/Application	Pre-Project Average
General Computer Use (e.g., creating documents, saving files)	4
Word Processing (e.g., Word)	4
Email, including attachments	4
Presentations (e.g., PowerPoint)	3.8
Basic Internet Browsing	3.8
Taking Digital Pictures	3.2
Spreadsheets (e.g., Excel)	2.6
Using a Scanner	2.4
Desktop Publishing (e.g., Publisher)	2.2
Basic Web Site Design (1-10 pages)	2.2
Adv. Int. Brows. (e.g., databases)	2
Brainstorming (e.g., Inspiration)	2
Photo Editing (e.g., Photoshop)	1.8
Course Sites (e.g., Blackboard)	1.8
Participating in Blogs	1.6
Managing Websites	1.4
Adv. Web Site Design (10+ pages)	1.2
Using FTP Software	1.2
Creating Audio Files	1.2
Creating Video Files	1.2

Table 3.2. Pre-Project Skill and Application Confidence Survey on a Four Point Likert Scale

In terms of functional computer literacy, again, these results demonstrate that participants were generally comfortable with many of the basics like general computer operation, word processing, and email. It also hinted at places where they could strengthen their skills, most notably the ones related to managing their websites with FTP and embedded audio and video files. In their initial interviews, they all expressed interest in strengthening their skills and they all wanted their portfolios to be an active space. For instance, in her first interview, Becky L. said "It [the digital portfolio] will be my website for myself, my class, and my parents... I feel if I make it a resource for my classroom and the practice in the classroom, then I'll be forced to update and maintain it on a regular basis" (Becky L., Interview 1, September 2004). The idea that she would be "forced to

update and maintain" her digital portfolio speaks to Becky's interest in developing web-based resources for her students, but also hints at the types of external monitoring she felt she might be subjected to during the process. Knowing that students and parents would be watching the site positioned her as both a teacher and content provider, a balance that could be difficult to maintain.

Also, the technical hurdles presented themselves in all the interviews, but participants did not feel as if these issues were insurmountable. Becky S. may have captured the sense of enthusiasm best when she said in her interview

> I have a big interest in technology, but, like more teachers, I struggle to be able to integrate it into the curriculum effectively. Obviously, all the technical issues are a huge roadblock. But, I was really interested in the digital portfolio just because I like integrating anything with the internet into the classroom and writing seems like a kind of, I don't want to say easy, but, interesting way to really get kids motivated to do something that is going to utilize the internet and also have them practice their skills. (Becky S., Interview 1, September 2004)

Thus, the idea of motivating one's students outweighed the perceived costs that learning how to use technology might present. In contrast to many of the digital portfolio projects described in the literature (e.g., Bartlett, 2002; Williams, Wetzel, & Wilhelm, 2004; Willis & Davies, 2002)—portfolios that were created in a class as a performance piece rather than an active part of a teacher's online persona—participants in the project immediately connected their work to a sense of audience and purpose and, in turn, felt that the functional literacies that they would have to learn in order to do so would not be insurmountable.

Part of the reason they may have felt positive about learning the functional literacies to produce a portfolio stemmed from they way in which Aram initially introduced portfolios in the summer institute. In that presentation, he framed the creation

of a portfolio as a generative activity and the portfolio itself—as he says on his website—as "a space I can use to present who I am, who I have been, and who I could be" (Kabodian, 2003). The experience constructing an initial portfolio in the summer institute centered on discussions of how and why the teachers would want to represent their work online, and this approach framed the way that we would proceed throughout the year. Rather that having a pre-set list of artifacts or pages, participants all understood that they were in charge of the design and content of their portfolios. They also understood that this would be a year-long project, and that was reassuring to them as they looked at the scope of the task.

This is not to say that the prospect of creating a portfolio was not, to some degree, daunting. Nicole expressed it succinctly in saying:

> At first, I'll be honest, when I first think of it I know that I feel like it's overwhelming because I know last time [when I created a digital portfolio in my undergraduate program] I had such a difficult time. But, taking it in smaller increments like how we're doing is much more manageable for me. (Nicole, Interview 1, September 2004)

If the literature in teacher education and technology tells us anything, it is that this incremental learning works best when it comes to having teachers learn new technologies and integrate them into the classroom. Critics are quick to note that this is not what has typically happened with technology in schools (Cuban, 2001; Oppenheimer, 2003). Nicole's thoughts about "smaller increments" became even more important as the project progressed towards Overt Instruction because more complicated technical tasks required the ability and tenacity to complete multiple steps, sometimes through multiple failures. Yet, in terms of situating ourselves in the technical practice of developing the portfolio, Becky L. may have summed up this feeling best by stating, "I am fairly confident in my

skills to create it and upgrade it and do all of the necessary things to make it professional" (Becky L., Interview 1, September 2004). Hearkening back to the general sense of enthusiasm that the participants demonstrated, this feeling of confidence allowed us to move forward as we began creating the portfolios.

From Functional to Critical: Understanding Participants' Perspectives on Literacy Teaching and Learning

In terms of the literacy practices with which they were familiar, the second part of the initial survey queried participants about their thoughts towards portfolio assessment and a definition of literacy. While Chapter 5 will turn to a fuller explanation of critical literacy in light of our entire project, it is worth noting here that viewing critical literacy as it relates to using technology demands a certain set of understandings about technology as well as the disposition to then reimagine visions of what that technology should do. For instance, in the case of portfolios, how do we encourage teachers to adopt an inquiry stance, rather than a performative stance? Selber synthesizes the work of a number of critical theorists, and suggests that critical literacy could provide "an educational system that prepares students to be social critics rather than indoctrinated consumers of material culture, with critique generally defined as the cultural study of power in situated uses of computers" (Selber, 2004, p. 95). Thus, as participants in the project created a portfolio, I wanted them to adopt a critical stance that would allow them to discuss the affordances and constraints of both the technologies used to create their portfolios, and the entire idea of a portfolio pedagogy in the writing classroom.

First, I asked "Do you use portfolio assessment in your classroom? If so, please describe how you use portfolios. If not, please describe why you do not use them and what other assessments you use instead." Of the five participants, two did not use

portfolios at all, two used informal writing folders and one, Tara, said that she used portfolios more extensively. She described how she uses them by stating that, "The portfolios are in the form of pizza boxes! Students and I use these to reflect before conferences, and then I pull them out again during P-T [parent-teacher] conferences as evidence of growth" (Tara, Survey, 8/2/04). I wondered how the fact that most participants did not use portfolios might have an effect on their willingness to participate in our project. Also, I wondered if this would feed into their definitions of literacy and pedagogy as the project went on. If portfolios were not a part of their own pedagogy, would they easily adapt to the process of creating a digital portfolio?

In the survey, I also asked the participants to respond to the following prompts about literacy with a short narrative.

- As a teacher, how do you define literacy for yourself?
- How do you define literacy for your students?
- In what ways do you see concepts of what it means to be literate changing?
- In particular, how do you feel computer technology fits into these changing conceptions of literacy?

In their replies, and in light of their recent experiences in the RCWP Summer Invitational Institute, participants agreed that conceptions of literacy are expanding beyond the traditional views of reading and writing into ones that include speaking and listening, as well as some form of critical, cultural, political, or technical literacy, too. For instance, Becky S. felt very optimistic about the opportunity to do teacher research because of the perspective it could afford her in thinking about teaching writing:

> I think it [the classroom inquiry] is going to open my eyes. I think it's going to make me see things in a different way that I'm not seeing them right now. And,

> it's going to give me an opportunity, I think, to learn a lot more about the teaching of writing and open up doors for how writing can be utilized in the classroom. (Becky S., Interview 1, September 2004)

Again, some of this enthusiasm may have been connected to the experience that the participants had just completed in the RCWP summer institute, yet I also contend that they were beginning to consider the implications that a broader perspective on literacy learning could allow them. As we worked to situate our practice—as individuals, as a group, and as teachers of writing in a broader sense—understanding these new trends in literacy learning helped them connect theory and practice in new ways.

For instance, Nicole summarized her thoughts about literacy by stating "as we develop new schemas and life experiences, we will read and write things differently. This connects with the dramatic increase in technology" (Nicole, Email, 8/2/04). These "dramatic increases" were typically characterized by participants as the use of information and communication technologies such as email and instant messaging, as well as students' abilities to compose multimodal texts with programs such as Power Point and iMovie. Becky S. furthers this notion of new literacy skills by arguing that "[b]eing literate now also requires a great deal of questioning and research skills in order to constantly validate all information for accuracy" (Becky S. Email, 8/2/04). Using the technology to find data and create new materials is one thing, yet being critical in assessing and reformulating that information is even more important as well. From the beginning, understanding technology's effects on literacy became an important element of our groups discussions and work habits.

Moreover, Anne also adds a note about visual literacy, a concept that she knew we would be exploring throughout the project:

> Visual literacy is huge now. As much as I will continue to appreciate the importance of reading great literature and writing great pieces, it's important for me to value and accept the increasing amount of visual media out there and try to cater to my students' needs in this arena. What was once viewed as "computer geek-dom" being able to create a strong PowerPoint presentation or WebQuest or brainstorm on Inspiration nowadays is quite valuable. (Anne, Email, 8/2/04)

Since discussion of literacy (and our conceptions thereof) comprised much of our work in the summer institute, these responses seemed to synthesize what participants knew at the time. Anne's recognition of visual literacy as "huge" came directly from discussions of that issue in the summer institute and readings of such texts as *Writing New Media* (Wysocki, Johnson-Eilola, Selfe, & Sirc, 2004) and "Visualizing English" (Stroupe, 2004). They were still trying, by their own admission, to make sense of the many and sometimes competing definitions of literacy, their experiences with technology, and how these intersect in the nexus of constructing a digital portfolio. Tara may have summed it up best as she said, "If I sound vague, it is because I am still trying to understand all of this myself!" (Tara, Email, 8/2/04).

Moving towards a broader definition of literacy was intentional on my part. In relation to other digital portfolio projects reported in the literature, as outlined in Chapter 1, a focus first on literacies and then the technologies that enable them appear to be missing. Except for Yancey (2004) and Kimball (2002) both who have composition backgrounds, none of the teacher education literature frames the creation of a digital portfolio as, in the sense of Street's definition, a literacy practice. At best, the teacher education literature mentions the idea of infusing or integrating technology into teacher education, a model that I find limiting when trying to approach the functional tasks related to using technology in ways that support pedagogy.

This is why the literacy practice approach that Street and the New London Group's Pedagogy of Multiliteracies framework can help broaden the discussion on technology in teacher education. Moreover, adopting a critical stance can help avoid the typical problems associated with teacher education and technology—namely that teachers learn disconnected skills in a decontextualized manner that they do not integrate into their teaching practice. From the start of the project, I wanted to suggest to participants that creating a digital portfolio was, at a minimum, both a technical act and one that reflected their beliefs about how and why to teach reading and writing. It was with this initial survey and understanding of participants' perceptions about literacy that we began reading *The Web Portfolio Guide*, and continued to move our thinking from a functional view of literacy to critical and then rhetorical visions as well.

From Functional to Rhetorical: Web Design and Framing the Digital Portfolios' Audience and Purpose

As I have argued above, functional literacy alone will not capture the nuance involved in creating a digital portfolio from a critical perspective. Nor, based reports in the literature, will it offer a rhetorical perspective either. Pre-service teachers often feel as if their experience designing and maintaining a digital portfolio are weak and, in turn, have negative reactions to creating such texts (Wetzel & Strudler, 2006). Selber defines rhetorical literacy as a combination and extension of the functional and critical literacies notes above. He contends that "rhetorical literacy insists upon praxis—the thoughtful integration of functional and critical abilities in the design and evaluation of computer interfaces" (Selber, 2004, p. 145). While I will explore the ramifications of rhetorical literacy more fully in Chapters 5 and 6, I mention it here as a framework for understanding how and why we ask teacher to compose digital portfolios.

Like Yancey (2004), I argue that creating a portfolio "constitute[s] a rhetorical situation," (p. 739) and requires skill with multiple literacies in order to do so. In order for participants to gain some knowledge about these literacies, I started a discussion thread on chapter one of the *Web Portfolio Guide* (Kimball, 2002). I asked three sets of questions on our blog:

1. In the first chapter, Kimball describes the kinds of portfolios as academic or professional, working or presentation (pp. 7-8). What do you see your portfolio being? That is, where would your digital portfolio—being based on an inquiry question and research—fit into this model of portfolio types? Or, do we need new categories?
2. Noting the advantages that web portfolios give you a "real audience" and are that the "web is a practical way to make portfolios" (pp. 15-6) what are some of the constraints inherent in these claims? For instance, what audiences are going to be looking at your digital portfolio? Moreover, why?
3. Kimball describes three types of rhetoric in the construction of digital portfolios: textual, visual and structural. What particular points stand out for you as you consider these three types of rhetoric in light of constructing your own portfolio? (Troy, Blog Post 40, 8/18/04)

With these questions, I wanted to frame the process of creating the digital portfolio as a literacy practice, one imbued with rhetorical considerations. Given these considerations, I wanted participants to articulate their purposes and audiences for creating their portfolios and begin to think about implications that held for them as designers of meaning and teachers of writing.

To begin the conversation, Aram replied within a day, focusing his comments particularly on audience.

> I've given some thought to the audience for my portfolio. Since I've put a link to it from my school website, I'm inviting parents, students, and even colleagues to view it. However, it doesn't look as polished as I'd like it to look...so I guess I'll introduce it to those groups as an "evolving" portfolio. I struggle with it because I care what these groups of people think about me. I'm asking the students for their best work and the parents expect me to be this example of English greatness or something and I'm throwing something unfinished out there for their examination. So as far as constraints or concerns with the audience, I feel a little

> unconfortable [*sic*] with the "evolving" framework I've established. I know I can put out professional-looking versions of it, while keeping drafts unseen, but I also just want to get some "example" out there for viewing. (Aram, Blog Post 41, 8/19/04)

Aram articulated many of the tensions evident in writing pedagogy as they connect to the process of developing a digital portfolio as well as a personal response about how these audiences may perceive him. He is justified in saying that he cares what these groups think of him, as teachers are often criticized unduly by many of these constituencies. He identifies the need to share drafts and model revision for students (and, in this case, parents), all the while conscious of how those drafts could be interpreted in negative ways. Also, he understands how he has situated the portfolio (as a link off his school website) and made it, perhaps, more public than had he just posted it online and let viewers run across it themselves, were they to search for it.

This is an added concern for a digital portfolio. The notion that he was positioning his portfolio in this manner points to Yancey's concern "that these portfolios—the familiar model of print and the Web-sensible digital—are different in kind rather than degree and that their differences speak to the possibilities for student invention and representation" (Yancey, 2004, p. 747). Multimedia, since it is not print, has affordances such as non-linearity, multimodality, and public accessibility that can, unfortunately, be seen as constraints as well. When positioned as assessments, portfolios can be viewed simply as a series of artifacts to share and tasks to complete. When positioned as compositions, however, portfolios carry a much more nuanced set of expectations about authorship, authority, and what can and cannot be said by the teacher creating it.

A few weeks later, this discussion picked up in earnest, when Becky S. posted a follow-up to Aram's post. In it, she built on Kimball's categories of portfolios said

> I am envisioning my portfolio to be professional and presentational, so I think we need some new catagories [*sic*] for sure. We all utilize the web in different ways, and websites provide multiple layers of information for us, and open windows that their creators probably didn't even consider. In that same light, I think our portfolios are going to mean different things to different viewers, even though we may envision a specific audience. (Becky S., Blog Post 46, 9/7/04)

In recognizing the complexities of audience that such a public document presents, Becky understands that readers will interpret the portfolio in various way, "windows that their creators probably didn't even consider." While this is true for print texts as well, it becomes especially problematic when presented on the internet where dissemination becomes the work of Google and Yahoo searches open to everyone rather than a teacher sharing a hard copy of a portfolio to someone who asked for it. The public nature of producing a web-based digital portfolio became a front-and-center concern for participants in the project.

In extending this conversation, Tara discussed the ways in which she wanted to have her portfolio represent her personally and professionally.

> Professionally, I would like to create a portfolio to help my students reflect on their writing. We're coming together as a community of writers and using the digital portfolio hopefully as a place for us to look at where we've been and where we're going and that sort of thing and really bring us together. And, personally, I think that this is a great way for me to self-reflect on my teaching. (Tara, Interview 1, September 2004)

This task of representation is easier said than done, however. When asked about the skills she was most concerned about developing, Tara continued by saying "Probably the visual aspects of the website, putting together some of the 'bells and whistles.' I think I'm pretty good with the laying things out, but actually bringing in other components—the video, music, sound clips—that's on my mind" (Tara, Interview 1, September 2004). Although all the participants spoke like Tara did in wanting to make their portfolio fit a vision of an

online persona, perhaps Becky L. summed it up best by saying "I can put it [a web page] on the website and I can make the portfolio, but maybe making it to what I want it to be would be a challenge. To make it fit my vision" (Becky L., Interview 1, September 2004). In other words, representing the work of teaching through a digital portfolio presented challenges that the participants were not quite sure how they would deal with, functionally, critically, or rhetorically. Questions arose quickly: Should I edit student work before posting it? Can I use names? Images of students? These are functional questions that also speak to deeper concerns about the complexities and ethics of teacher research.

In conjunction with audience awareness, discussions of purpose surfaced as well. Recognizing the portfolio as a site for students, parents, colleagues, administrators, and the general public to view, all the participants recognized the tension in purposes that this could create. Anne was keenly aware of this point as show noted the ways in which her students' work might be framed in her portfolio:

> Because, ultimately, the focus of the work (student and teacher) will be the writing on this DP [digital portfolio], I appreciate the textual rhetoric standpoint more than the visual and structural. And the reflective statements lend themselves so easily to the writing process, allowing students to really delve into the reasons why they chose this piece to "show off" all the while giving the audience a little insight into the author. I like that. Certainly, the framework for my DP will be considered, especially when it will be used for so many purposes, and no doubt I want it to be visually appealing. (Anne, Blog Post 74, 9/26/04)

Recognizing the need to make the portfolio appealing, Anne also suggests that the hypertextual nature of the portfolio—have the students' work linked to reflective statements—could offer a deeper reading experience. All the same, her concern that students be able to share work, as well as the teacher, contributed to a sense of purpose: why and how should I be doing teacher research? What effect will it have on my

students? On another level, she also asks more fundamental questions: Who will look at this? Why are they looking at it?

Concerns about representing one's own research as well as one's students' work became a focal point in our group's discussions. As the participants began expanding and sharing their portfolios with their colleagues, administrators, parents, and students, the full implications of representing their work online began to take hold. Since these items were available to anyone with an internet connection, they began to think carefully about what they would put up there, be it their own work or that of their students. They also began to question whether or not the work they were putting up was accurately portraying their students, for better or worse. Case in point: most of them dealt with the question of whether or not to edit students' work so as to make it grammatically correct, fearing (and perhaps rightfully so) retribution from an angry colleague of parent who saw an uncorrected mistake in a student's work that made its way onto a digital portfolio. In particular, Becky S. struggled with thinking about how to represent the students in her urban magnet elementary school, students who were brought to that school because they had already failed a grade and were at risk for retention again. At one point, Becky called creating a portfolio the "reality show of education," and pushed all of us to think about the rhetorical implications of sharing student work online.

Beginning Teacher Research: Narrowing the Question

Along with the discussions about technology that emerged during this initial phase of Situated Practice, a concurrent thread emerged about narrowing the research questions that each participant was developing. Just as Selber's approach to understanding why and how to use technology offers a critical stance, so to Mohr et al. as they think carefully

about how to frame, conduct, and represent teacher research. Since Mohr et al. (Mohr, 2004) argue that teacher research should be intentional and systematic, narrowing the question was more than just a procedural act. Indeed, it reflected a question of balance: what can I research, and research well, so that I can represent it with the portfolio and find value in my work with students?

As an example of this narrowing process, Becky L.'s concern about the scope of her research question highlights many tensions. At first she suggested a question that was broad and notes the limitations of doing so: "'How can I incorporate technology into my daily lesson plans?' However, I think I could get lost in this" (Becky L., Blog Post 36, 8/18/04). By mid-September, she had a slightly more focused idea—to share all of her curriculum online in order to enhance communication with students and parents—but still felt it was too large (Becky L., Interview 1, September 2004). Her concern also connects to the idea that she, like everyone else, felt that the digital portfolio itself had to be a part of the research process. As I reflect on the decision that they all made to have the portfolio itself be a part of their research, I keep trying to discern whether they thought that I wanted their portfolios to be a component of their research (which I did not, per se; rather I wanted it to *represent* their research) or whether creating the portfolio and doing the research became so intertwined that one contributed to the other inherently. In retrospect, I feel that things became interwoven in generative ways.

So, the research questions themselves became integral to the portfolio design process. In terms of research design and design of her portfolio, Nicole made an interesting connection between the types of data that she want to collect and how best to represent it:

> Well, I am pleased to say that the WPG [*Web Portfolio Guide*] is getting me extremely excited to get moving on this project. I love the part about textual rhetoric and the process of connecting artifacts through reflection. When thinking about structure, right now I am struggling with which form of research I want to do-more of a random selection of student work (as it fits the needs of my search) or posting selections from only the same certain students and watching their change and progress in relation to "teacher as writer" as the year goes on? I feel that the latter is a more authentic form of research, but how do I select the students? I thought of choosing a lower level writer, medium level, and strong writer, but then how do I explain to other parents who may wonder why their child's work was not selected? Also, if I were to choose several students, how do I assure their parents that the students are not in my class merely to be lab rats? (Nicole, Blog Post 54, 9/10/04)

As she contemplated how much research she could do and how much she could actually create on the portfolio itself, these issues of equity guided her decision making process; a decision that ultimately led to a major portfolio design choice that I will discuss in the next chapter. Like many other times in the project, Anne followed up to validate Nicole's feelings and ask a similar question about her own research; she discussed her feelings on student publishing and said, "Our administration is constantly urging us to advertise to the community the 'good work' we do in the classrooms, and I can't think of a better way to do it" (Anne, Blog Post 72, 9/26/04). Again, audience and purpose came back into the discussion of the portfolio itself and, inherently, the teacher research project.

Finally, doing meaningful research surfaced as an issue. When asked about other questions and concerns, Nicole shared her main worry: "How will I show progress? I think [is a concern]. And not just by merely posting things that we do. But, how can I keep it all focused?" (Nicole, Interview 1, September 2004). In other words, Nicole and other participants were concerned that the work they chose to represent on the portfolio actually *shows* something happening. In contrast to many of the performance-style portfolios described in the literature, using teacher research as a guiding framework to

develop and sustain a digital portfolio encouraged the participants to think both about what they were doing and how they would represent it in ways useful for themselves, their students, and other audiences.

Creating a Collegial Network of Support

As we headed into late October, we began the recursive process of moving towards the second stage of the Pedagogy of Multiliteracies, over instruction, while keeping our thoughts on Situated Practice as well. Learning the technical skills for creating the portfolio was important, and thus needed to be an integral part of the work we did. Anne had summed up her feelings about participating in the project by saying "I hope I can just take some [technology] skills with me that will help in the classroom" (Anne, Interview 1, September 2004). Moreover, the idea that they would receive collegial support encouraged the participants to engage in the work. For instance, Becky S. discussed support in this way:

> It makes me want to do it [create a digital portfolio] because I see other people doing it. It's just you get around the participants and everybody learns from everyone else. It just becomes this really big fountain of information and there's a lot of positive energy and you can glean a lot of things off of that. (Becky S., Interview 1, September 2004)

The feeling that Becky S. reports here is one that is echoed in the literature about professional learning communities and the ways in which teacher knowledge can be shared and validated amongst groups of like-minded peers (M. W. McLaughlin & Talbert, 2006). When asked about collegial support, all the participants felt as if they would give and receive such support, especially as it related to explicit technology learning. Based on her experience in the RCWP summer institute, Nicole was expecting this type of help:

> Oh, I definitely think that they'll provide feedback and a lot of support because I think a lot of us from our first initial meeting just feel like we're in the same boat with this trying to get all the technology straightened out. So, I think they'll provide a lot of support and feedback for me. (Nicole, Interview 1, September 2004)

As a part of this support, and to act as models for one another, all the participants wanted to update and maintain their portfolio on a regular basis. Their responses ranged from daily to weekly to monthly updates. Even though those goals were not met over the entire scope of the project, they were goals that participants' kept in mind as they considered the timeliness and usefulness of their work, especially for students and parents.

Conclusion

This initial phase of Situated Practice differed from what I understood to be happening in the digital portfolio literature in at least two respects. First, the task at hand—a teacher research project—was not one of the foci that other digital portfolios discussed in the literature took; most were class-level or programmatic assessments, not inquiry-based, self-selected designs. Stock (2001) highlights the way in which teacher research takes shape through genre, usually the anecdote and the workshop, and I began to wonder if a digital portfolio could be another way in which this happened. The texts that participants were framing had deep rhetorical and critical perspectives attached to them, in addition to functional ones. Thus, the portfolios themselves could serve as a genre for teacher research to present itself in different ways, ways that were potentially useful in more public discussions about literacy teaching and learning.

Second, while some teacher educators report longitudinal approaches to building digital portfolios (Britten, Mullen, & Stuve, 2003), this initial twelve-week stage of situating ourselves in the contexts surrounding digital portfolios was about as long as

some entire projects reported in the literature (Bartlett, 2002: two workshops outside of class and twelve class hours; Gatlin & Jacob, 2002: workshops taken before semester of methods class; Willis & Davies, 2002: one semester). By orienting the participants to broader visions of literacy while simultaneously discussing their teacher research questions and framing the vision for their portfolios, I had hoped to create a rhetorical situation in which just adding the "bells and whistles" would not suffice for them as technology learners and teachers who would use these portfolios in their teaching. If the purpose and audience could be extended for something more than just a class project, I hoped that the participants would find value in sustaining their technology learning beyond the year of work that we would put in for ENG 896.

In relation to my research questions then, a few points stand out as significant from this phase of our project. In terms of portfolio construction and maintenance, the sustained approach that we had begun helped the participants frame their work in a rhetorical context, one that situated them as learners who would be representing their work to outside audiences. As far as engagement with technology, the participants all reported a great deal of enthusiasm, partially because of the technical skills they knew they would be learning and partially because of the collegial support they knew that they would receive. Finally, in terms of their teaching practices, the participants began to highlight concerns that they had about constraints they might face—both technical and institutional—as they began to represent their work online, but all felt that creating a digital portfolio could help them expand their understandings of literacy, especially expanding visions of literacy that include technology and multimodality.

I end this chapter with an anecdote. Of interest, but not recorded in text or captured on tape, was a conversation that Tara and I had as she left our first meeting in September. I paraphrase and take some memoir-like liberties here, but her question essentially boiled down to this: "Troy, what do you want us to *do*? Am I doing what you hoped I would be doing? My husband (a doctor) and I were talking about research design and this is not the kind of experiment and observation that I would expect a researcher to be doing..." As I look back at this initial phase of the project, and consider the larger implications of her question, I understand her concerns. Along with the fact that our educational system often relies on structures that impose learning goals, I think that Tara was curious to know more about how I hoped to learn anything from this group if they didn't know what they were doing. Her feelings speak to a number of concerns that I have about how and why teachers learn to use technology—in isolation, usually for perfunctory tasks, at someone else's request—and that portfolios, by their very nature, are an assessment of what one knows and can display for others. As we moved towards Overt Instruction, learning the ins and outs of website design and further probing the critical and rhetorical questions that teacher research would raise for us, I kept Tara's question in mind. At the very least, if I wasn't going to tell participants what to do, we could discuss how and why they might do their research and design their portfolio in purposeful ways. That became our task in Overt Instruction.

Chapter 4 –"Something That All of us are Proud to be a Part Of": Overt Instruction in Digital Portfolio Design

Situated Practice August 2004 – October 2004	**Overt Instruction** September 2004 – March 2005	Critical Framing October 2004 – June 2005	Transformed Practice January 2005 – November 2006

During the fall and winter, our group began to move from initial discussions about teacher research and creating digital portfolios into the composing process, relying on one another to offer technical know-how and, at times, a shoulder to cry on when the technology did not work as planned. This phase of the project demonstrated the need for technology learning playtime as well as how understanding all the steps in making a digital portfolio—from technical procedures to conceptual understandings of visual rhetoric and website design—integrated to form a creative process that can be enhanced through a broader vision of functional literacy. By viewing the digital portfolio as a rhetorical situation for writing with new media, we moved beyond a myopic focus on step-by-step instructions for posting a website to a situated writing task that required the participants to think carefully about purpose, audience, and their role as a teacher researcher. In this phase of Overt Instruction, the teachers kept these rhetorical concerns at the fore front of their work.

The New London Group defines Overt Instruction as a scaffolding process, one that "focus[es] the learner on the important features of their experiences and activities within the community of learners; and that allow the learner to gain explicit information at times when it can most usefully organise and guide practice" (New London Group, 2000, p. 33). Additionally, Overt Instruction introduces "metalanguages," "languages of

reflective generalisation that describe the form, content, and function of the discourses of practice" (p. 34). In the context of our digital portfolio project, we employed two metalanguages as we discussed 1) concepts of web design and digital portfolio construction and 2) the procedures and ethics of teacher research.

In terms of the technology, the metalanguage that we were learning included terms specific to web design such as "HTML" (hypertext markup language), "FTP" (file transfer protocol), and "index.htm," all terms that Kimball's text (2002) explains in detail. In particular, Kimball argues that web-based portfolios offer writers a variety of advantages: the ability to reflect on and share work, a real audience to read that work, and a practical means for creating, revising, and updating one's site. He argues that a combination of textual (the actual words on the pages of the site), visual (the combination of images, colors, and fonts), and structural (the way that the site navigation and nested folders are created) rhetorics can combine to show a reader that the portfolio writer has "real and valuable skills," (p. 40) both in terms of their field, but also in terms of thinking about how to represent one's work in a digital environment. A well-designed home page and, in turn, entire portfolio can have "a very strong [intellectual and emotional] effect on what [a reader] think[s] about the site's contents and creator" (p. 57). A rhetorical approach values the many metalanguages—textual, visual, structural—of web design. In the next section, I will return to the discussion of this technical metalanguage in light of the Pedagogy of Multiliteracies approach.

We also utilized the metalanguage Mohr et al. (2004) introduced related to teacher research: intentional, systematic, public, voluntary, ethical, and contextual. These terms suggest a stance towards classroom-based inquiry that values the questions teachers

bring to the table while simultaneously keeping their students education and well-being at the forefront of their research. In one of their concluding chapters, Mohr et al. argue teacher researchers experienced a variety of benefits:

> Supported by time and expectations, teachers conducted research and saw it as contributing to their students' learning. They also began to see it is helpful to their teaching colleagues and to their schools' planning and evaluating. They adopted a view of themselves as professionals outside the classroom as well as inside. Along with this professionalism came a growing understanding of the connections between their individual research in school policies and professional development programs. (Mohr, 2004, p. 168)

Framed in the understanding that teacher research should, to borrow from the Hippocratic Oath, "do no harm" to their students or school, the six key components of teacher research named above offered us touch stones for discussions throughout this stage of the project, especially as it related to student safety: can or should we represent student work online? To what degree should that work be edited or approved by the teacher? These questions about the ethics of teacher research comprised our other, concurrent metalanguage that guided us.

Throughout this phase of the project, we continued to build on our understandings of what digital portfolios could represent while we acknowledged and responded to our personal needs for interaction with one another by learning more about web design from our peers. It would be easy to say that the participants' needs to learn the basics of web design became an overriding force in our discussions, yet that would not tell the entire story. While in some professional development contexts teachers might focus specifically on these technical issues—leaving issues of classroom practice and concerns about student behind—because of our use of these two metalanguages—web design and teacher research—our discussions kept their classrooms and students in the forefront. For

instance, the day before a face-to-face meeting in late September, Anne centered her thoughts about joining the project in the context of her classroom:

> Luckily, we're in the early stages of the DP [digital portfolio] project, b/c I am really struggling with the logistics of mine for my classroom. Do I want to be selfish and use it to help me better organize lesson plans, websites, materials, graphics, etc. that will in the long run benefit my students? Do I want it to be a place for my students and I to celebrate our writing? And if so, will it be strictly for final draft quality work (showing off our best) or honor our improvement along the writing process with multiple drafts? Can it be both? Can I use it for multiple purposes, such as creating blogs for summer study with my Honors 11 students, as well as the above? How much of it, if any, do I want to advertise to the community, administration, WORLD?!?! And how would that change my intentions/purposes for the page (i.e. final draft quality vs. process)? Should I set the goal to go paperless? To have my students create digital portfolios of their own? And is that even feasible with only 1 computer lab in our school that is tough to reserve? AHHHHH! Will I have a question by tomorrow? Probably not. :) Advice is very welcome! (Anne, Blog Post 69, 9/26/06)

Here, Anne struggles primarily with questions of purposes and audience for her portfolio, and then with questions of what exactly the portfolio will look like. Gaining a sense of what to post to her site, how much to post, and, for better or for worse, how that information will be viewed by others shows that Anne is engaging in this process as both a technology learner and a teacher as well.

While these are technical questions about website design at one level, they also include deeper questions about the types of work she wants to share and with whom she will share it. It raises questions of authenticity, audience awareness, and how to organize one's online experiences. These are the questions that Selber's vision of functional literacy illustrate and that make the work of Overt Instruction that much more important to the overall process of learning how to compose in digital environments and, in turn, teach those skills to students. Examining these issues more fully in light of the composing process is the topic in the next section.

Selber's Functional Literacy in the Context of Overt Instruction

As teachers who will be teaching with technology in their own classroom, I wanted participants in this project to feel confident about the skills that they were learning so that they could continue to maintain their digital portfolio. As mentioned in Chapter 1, the literature in teacher education and technology shows that teachers who do not feel confident in their own pedagogy, connect technology with the content area they are teaching, and/or understand how to solve technical problems will most likely not choose to use technology in rich ways. Moreover, the New London Group suggests that the goal of Overt Instruction is a "conscious awareness and control over what is being learned—over the intra-systematic relations of the domain being practiced" (New London Group, 2000, p. 33). In terms of learning about website design and teacher research, both Kimball and Mohr et al. offer some language for getting at this conscious awareness, but there are other social and historical forces at work in teacher education that another framework can help make explicit while offering a useful tool for analysis.

As teacher educators have integrated technology into their practices, the "technology as tool" trope has been a popular way to describe how to use technology. However, Selber urges us to push against that line of thinking in that "the tool metaphor discourages users from contemplating the mediating role of computers and their multifarious impact on everyday life. As a result, it diminishes teacher understandings of the nexus of pedagogy and technology" (Selber, 2004, p. 40). Although he is focusing on students in composition classrooms, Selber's five dimensions of a functionally literate student map onto a vision of what teachers, too, could be in their classrooms while also offering another metalanguage—this time about the role of computers in teaching—that allows me to analyze what happened in this phase of Overt Instruction. Rather relying on

the "technology as tool" view for functional literacy, according to Selber a functionally literate student (or, in this case, teacher) would:

- Use computers to reach his or her educational goals;
- Understand how computer use is governed by social conventions;
- Engage in the "specialized discourses" related to computers;
- Manage his or her "online world"; and
- Be able to solve technical issues "confidently and strategically" (Selber, 2004, p. 45).

These qualities foster independence and the ability to continuously learn about new technology as well as position the computer user well to take a critical and rhetorical stance towards the technology, which I will discuss in later chapters.

Instead of focusing only on the step-by-step instructions related to using a technology (although they are important and not to be taken for granted), Selber argues that the heuristic noted above helps students "become more resourceful and discover effective ways to work through performance-oriented impasses" (2004, p. 72). I extend this argument by suggesting that these dimensions are ones that teachers need to have in the day-to-day life of their classrooms when technical support is not always available or advisable. And, given one of the main goals of the project—that the teachers represent their research through a digital portfolio—this heuristic offers a way of thinking about what that would look like, day in and day out, as a teacher engages in such a project.

This goal of redefining functional literacy also became important to the participants. For instance, Anne wanted to understand how to use technology in new ways so as to gain some social capital with her students:

> I, too, am excited about simply attempting to be technologically savvy in the classroom by allowing my students to put their work "out there." Sure, I can publish class anthology after class anthology (at the school printer), but I think the kids will appreciate the fact we're going global, you could say. (Anne, Blog Post 72, 9/26/04)

For Anne, learning the technology could allow her to think about teaching and sharing work with audiences well beyond the classroom (and school) walls as well as give her a certain type of reputation with her students. Tara reflected on this initial technology learning and noted how she got off to a slow start, "because the technology aspect really overwhelmed me... I really needed to see what things could look like before I designed my portfolio and to see in my mind how I would use it" (Tara, Interview 2, Winter 2005). The capacity for using technology was there, yet Tara was looking for particular ways in which she could engage her elementary writers and had not yet figured one out. Recognizing the ways in which their portfolios could speak to broader audiences, integrate technology in meaningful ways, and help them become better writing teachers, the members of the group began discussing the nuts and bolts of web design within the context of developing an effective and professional digital portfolio.

I saw my goal in this phase of the project as twofold. First, I wanted to share some of my knowledge about website design as the "expert" in the group. Second, and more importantly, I wanted to invite the participants to begin seeing themselves as literate users of the technology, as teachers capable of learning on their own and sharing that knowledge with others. In the context of Overt Instruction, this meant that very rarely was there one person standing in front of the group showing the rest how to do any particular task. Instead, it often meant group members sharing knowledge and experience with one another, side-by-side, both in face-to-face and online settings.

This process was not without its challenges and sometimes instruction came from self-directed learning, too. For instance, Becky S. had been learning Dreamweaver and identified her own learning style as one of "perseverance." By "muddling around" with the program, she noted how she was able to learn many things by trial and error. Also, she relied on an instruction manual to learn how to create links. Once she was able to do this, she talked in her second interview about how "The flood gates are opening up now that I feel a little bit more confident" (Becky S., Interview 2, Winter 2005). Combined with the collegial support that we could offer one another, each one of the participants also seemed to adopt this kind of resolve as the project went on; they grew more and more confidence that they could learn how to learn the technology as they had more successes with their work.

The Reciprocal Relationship of Portfolio Design and Collegial Support

Since this phase of the project was focused on web design, and we encouraged each other to grow and share our own technology skills while developing their portfolios, the design process and collegial relationships became interwoven. For me, as the project facilitator, this was an unexpected—but quite welcome—outcome of the work. As mentioned earlier, participants identified and acted on the need to work together more often in face-to-face settings than I had originally planned for and, moreover, these meetings became the cornerstone for each of them in the design process. How, exactly, the project might have turned out differently had we not had those meetings is a thought that I don't want to speculate on, for I imagine that the final portfolios and the experiences participants had in developing those portfolios would have been similar to the ones that the literature describes: disconnected, technical, and utterly forgettable. This section explores how the

group felt about working together and a specific example of how the group working together influenced Nicole's design process.

Having met once in a face-to-face setting, the group began conceptualizing their digital portfolios towards the end of September and beginning of October. As a part of this process, I met with Tara and Nicole one afternoon to reiterate the basics of website design because the two of them were expressing some concerns about how to get their sites up and running. Cathy had also posted a "how is it going" type prompt on the blog, to which Nicole reflected on our meeting and shared some of her concerns about the design of her portfolio:

> Well, I've been doing some reflecting since Tara and I met with Troy on Monday (which was incredibly helpful, might I add!) First of all, and Cathy, this sort of relays where I am with WPG [*The Web Portfolio Guide*], there is alot more that goes into a quality website than I ever imagined! I think my largest struggle on Monday was visual rhetoric-how am I going to present myself in a positive, professional way, while also letting my personality shine through? How will the layout of my website reflect what I am trying to portray (my students and myself as writers, along with some reflections of what this means)? Troy sat there with me, and very patiently guided me in changing backgrounds to create something I would be proud of (thank you, Troy!). Obviously, it is just a start, but so far, I actually like what I see! Looking back, I can't believe that I created that site. I would not go so far to say I feel completely comfortable with the entire process of creating a site, but I'm getting there, which is a step! (Nicole, Blog Post 100, 10/13/04)

As mentioned above, these concerns permeated our initial discussions about creating digital portfolios. What Nicole added to the conversation here was an element of *how* this would look, what design choices it would take, on a technical level. In our meeting, Tara, Nicole, and I had discussed a number of aspects of site design, including backgrounds and color schemes, all the while thinking about the ways in which these aspects contributed to the site's overall appearance and purpose. Also, Nicole shows her excitement for learning the technology ("I can't believe that I created that site") in this

context of a larger design decision, one that affects her as a teacher representing herself online.

The discussions that followed on the blog and through emails, along with the group's earlier decision to meet on a regular basis, prompted us to meet again on a Saturday morning in late October. At this meeting, we all brought food and converged on the Writing Center so that participants could have some focused time to spend on designing their sites. Throughout the morning, we worked individually and collaboratively to discuss technical issues and help everyone get something posted to their websites if they hadn't already done so. Aram discussed the feeling in the room as we worked as well as his thoughts about how to be a collaborator:

> I also felt the energy (almost a "high" if you will) from Saturday morning. Working with my website was like seeing a friend for coffee that I met this past summer, but hadn't seen or heard from since...I missed her. :) It reminded me that I am only useful as a teacher consultant (whether in a digital forum or as a teacher of writing) when I am immersed in the genre. I need to work on my site more often so I don't forget what I am doing. It's that simple. (Aram, Blog Post 126, 11/2/04)

By meeting together at the Writing Center, participants were able to stay focused and get the just-in-time support that they would not have been able to get at home or at school. As Aram notes, the idea that participants could help one another was empowering in a technical sense (being "immersed in the genre") as well as in a collegial one (being "useful as a teacher consultant"). Again, I had not envisioned how important it would be for the participants in the group to feel this sense of connectedness, this sense of purpose for learning themselves and helping one another, when I initially planned the project. However, I quickly came to understand how important it was.

For instance, Cathy queried the group about the Saturday session and Becky S. described why the time working together was helpful for her:

> My general feelings with regard to the dp [digital portfolio] are not frustration with the creation, but frustration with finding quality time to really sit down and work on it. Each time I sit down, there is a re-learning stage I have to go through that experienced developers would not have to experience. By not using the development software everyday, I lose some knowledge that I have to re-locate before continuing on to another level, and that takes time. If I used the skills I am learning more consistently, I would be a lot more proficient, and therefore a lot more productive. That's why that Saturday time was so great. . . I learned so much that I was able to use right then and there. It comes down to the old adage... if you don't use it, you lose it, and right now, I don't have these big blocks of time to spend working on the next phases of the portfolio. I think about it a great deal, and I plan in my head, and make notes, so there is work going on, because I am planning over time how I want things to look and I am always rethinking things. So, my frustrations stem from time issues and experience issues. . . sounds like I need to just take a day off school . . . (Becky S., Blog Post 131, 11/10/04)

While Becky ends this post with a touch of self-deprecating humor, the point about spending focused time shines through in the final comments. Like the literature on teacher technology use shows, Becky's post makes the point clear that time and support are two crucial factors in helping teachers adopt new practices. She then complicates this notion by discussing, tangentially at least, the literacies involved in web design and the time it takes to reacquaint one's self with a new program.

In these examples, the metalanguages of website design, teacher research, and functional literacy begin to overlap and offer group members new ways to think and talk about the work in which they are engaged. By situating their portfolios as writing tasks, the teachers began to examine the rhetorical and ethical situation in which they found themselves working. In turn, they began thinking about the social conventions and specialized discourses related to creating a website in the context of their own classroom inquiry as well as they larger school and educational community with whom they wanted

to share their work. Moreover, they were thinking intentionally about the goals for their portfolios as well as how they would represent and manage themselves in an online environment. Finally, and perhaps most importantly at this stage, they were beginning to be able to solve technical problems, as Selber would say, "confidently and strategically" because of their willingness to work with and ask technical questions of their peers.

Anne may have best articulated this feeling about collaboration and support—as well as the ability to grow more functionally literate in a community of her peers—in her second interview:

> As far as the time we have together, here, it's just refreshing I guess. We don't have a lot of time to do that at [her school]. We have Wednesday mornings [two hours for professional development], there's a lot of collaboration. But knowing that my colleagues in this group are kind of working on the same goal, even though we have different areas of research, it's nice. It's nice to vent and get some suggestions, and just kind of help each other along. (Anne, Interview 2, Winter 2005)

By focusing our attention on the digital portfolios, at least once every few weeks, the participants felt motivated and encouraged to continue working on them. But, there were also "aha" moments of epiphany that helped them, too, one occurring for Nicole on a Saturday at the Writing Center and highlighting this complex relationship between design decisions, collegial support, and individual learning.

Nicole's Structural Design Change Based on Group Work

As we worked that Saturday, Nicole attempted to solidify the organization and navigation of her digital portfolio. Kimball (2002) highlights a number of visual and structural rhetorical issues to consider when designing a digital portfolio including: subtlety in avoiding "bells and whistles," consistency in color scheme, typography, hierarchical navigation structure, images, and amount of content per page. He also classifies

portfolios on different continuums, from academic to professional, from a portfolio showing work in progress to one that presents representative examples of your best work. As these criteria for designing a portfolio begin to culminate, it is worth briefly reexamining Selber's goals for a functionally literate student in that the portfolios' rhetoric reflects the author's educational goals as well as social conventions that define what a "good" website looks like. This combination of factors in their thinking frames where we find the group working together on a Saturday morning in the late fall at the Writing Center.

Most everyone had a basic home page created and were working on a template page, a page that "includes only the common elements that appear on every pages in the web site" such as the layout and navigation scheme, the colors of text, links, and background, and other graphics or text elements that will be consistent throughout the portfolio (Kimball, p. 64). While the group was working, Nicole struggled to reconcile the essence of what she wanted to represent about her research through the portfolio with the technical choices that she had to make as a web designer. She wanted a clean layout, but didn't want to rely totally on the traditional blue hyperlinks in a banner across the top of her page and, instead, wanted to create something visually appealing with graphical buttons for navigation. In terms of her functional literacy, Nicole saw this as an opportunity to meet her own standards for design aesthetics while also effectively managing the navigational structure of her digital portfolio.

At one point in the morning, we were all huddled around Nicole's computer, offering her advice and encouragement. She captured her thoughts and feelings about this later in a blog post:

> My portfolio is professional and developmental and will illustrate our work as the year progresses. I chose the visual structure of my site carefully, so as to portray a professional aura throughout my portfolio. I carefully read the visual rhetoric section and chose the background color of my portfolio painstakingly. I agonized over the color and the buttons so that those who were reading the portfolio would focus on the content, and not on all of the "bells and whistles." I want this portfolio to reflect myself, but also present the students' and my work in its best light. Whether we are publishing drafts or finished pieces, I would like the site to be something that all of us are proud to be a part of.
>
> While I agree that artifacts are key in communicating my findings, which artifacts will I include? I do not intend for my portfolio to include every work that we have ever done in class, but would like to include those in which my models as a writer could have an impact. This could be poetry, essays, short stories, or the like. When trying to decide the manner through which I was going to set up my website, I initially decided to divide my portfolio into expository and narrative text, combining the sixth and seventh grades. Soon, I came to discover that many types of writing that we would be doing throughout the school year were a combination of both genres. It became very difficult for me to distinguish which category certain texts would fit into. I did not want to confuse my reader (or myself), so I decided to reorganize the structure of my site. Struggling with the structural rhetoric of my site helped me to reflect more deeply into the idea of how I may best set up my site to portray my findings in the most straightforward way. If the site is not set up in a way that both the reader and myself are comfortable, neither of us may take from the site what we ought. (Nicole, Blog Post 178, 1/22/05)

Among the multiple concerns that Nicole touches on in this post, two stand out. First, she attempts to balance her wants and needs as a professional trying to represent herself with new media. She wants to "portray a professional aura" and struggles with the question of whether to represent her own work or her students work in progress rather than in a final draft form. Second, she wants her site to be clear and navigable. As a learner trying to understand web design, this is certainly important. More important, as a teacher she wants to create an example of a web site that appeals to her students both visually and in terms of the content. The fact that she reorganized her initial site architecture and navigation to move from the assignments she was giving (narrative and expository) to representing each class of students—and their writing—on an individual page was both a

technical and pedagogical move. In making this move, Nicole literally and figuratively foregrounded her students and their work as a key fixture in her portfolio. Figures 4.1 and 4.2 illustrate how this design played out as she developed her portfolio.

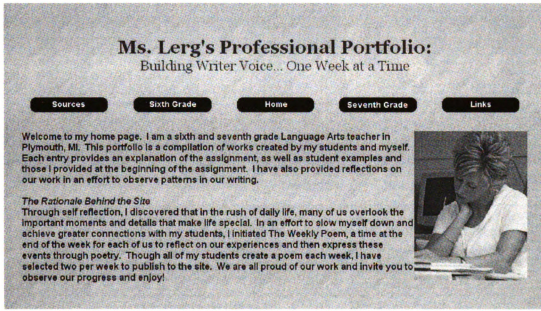

Figure 4.1: Nicole's Digital Portfolio Home Page Design after Group Meeting

In Figure 4.1, the "Sixth Grade" and "Seventh Grade" buttons are a clear part of the navigation scheme and take the place of the "Narrative" and "Expository" ones that Nicole originally imagined, as noted above. This allowed her to frame her portfolio by individual class, making it more student-centered, and not the genre of writing, which would have kept it teacher- and curriculum-centered. Also, by using buttons for the main navigation structure of the site, Nicole avoided the "bells and whistles" that she was originally concerned about; instead, she was able to learn how to use Photoshop to create these buttons that complimented her vision for the site while avoiding a line of blue hyperlinks for the main navigation scheme.

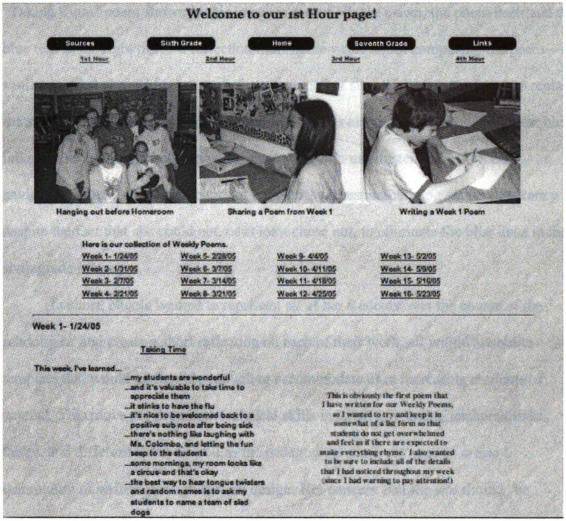

Figure 4.2: Nicole's First Hour Class Page

In Figure 4.2, this 1st Hour Page shows—as it was the template for all her other class pages—how Nicole has foregrounded her students with pictures across the top and through the rest of the page. She also used tables to create consistent layouts and then added a "table of contents" to create consistent navigation on all her class pages for the weekly poems. By doing this, she was able to use one template for these pages on her site and quickly add content week after week for five classes. She aided the reader's ability to

navigate the site by creating anchored hyperlinks for each week's poems. And, while the "Taking Time" poem shown in this image is one of Nicole's own, the poem itself and the blue text to the right of it—a reflection that Nicole wrote about composing the poem—is similar to what she did for every student poem on her site. While she chose not to replace the second tier of navigation for her four sixth grades classes—represented with the blue links for the four hours' class pages—she was able to use the template with her navigation banner on all nine pages of her website, thus maintaining some consistency despite the fact that she could not, or at least chose not, to eliminate the blue links in the sixth grade subpages.

In short, Nicole wanted to represent all of her students over the course of the school year and create a short reflection on each of their work, all within a website template that would be flexible enough to accommodate ever-increasing amounts of content. This move required both technical skills in terms of creating anchored links, tables, and different fonts, as well as the pedagogical sense she used to create a community of writers through the site design. Her concern that the site should "be something that all of us are proud to be a part of" shows how she kept making design decisions based on her understanding of how to construct a web page as well as the social and pedagogical implications that it would have in her classroom.

In her second interview, Nicole discussed how working with the group and with the technology had begun to change her thinking about how to plan both her portfolio and her teacher research:

> I think definitely in the blog and just our communications through email or with everybody else in the group, I think that it's definitely forcing me to just think deeper, again, about how I am teaching and just taking in different people's perspectives and talking about audience. Like that one day when I was trying to

> figure out how I wanted to set up the website in general, I think is just all of a sudden, when you actually start doing something, the way you think changes than what you originally planned. And, that's OK with me. And, so, before, I am like a planned person. I like to just stick with what I originally said, and I think that it's making me be more OK with changing it because it just makes more sense to change it. So, it's kind of helping me think more logically. (Nicole, Interview 2, Winter 2005)

As the project went on, Nicole continued to think about how she could enlarge her website and represent a variety of student voices, an issue that she discussed at the end of the project as one critical to helping her think about using technology in her teaching and one instrumental in helping her move from a static website that she controlled to a blog that all her students could contribute to on their own.

In reviewing Selber's conditions for a functionally literate student, Nicole's example highlights a number of key points that she, and the other group members in their own work, engaged with during this stage of Overt Instruction:

- In using the computer to reach her goals, she figured out a way to represent students and their work while also creating a navigable and easily updatable website;
- On a related note, Nicole understood the social conventions of her adolescent learners and how they would both want to read the portfolio and have themselves represented on it;
- She engaged in the metalanguages related to website designs, teacher research, and writing pedagogy; and
- In making the site template with clear navigation and tables, she figured out how to confidently manage her online experience.

In short, she engaged in the process of composing a digital portfolio as a functionally literate digital writer.

Goals and Vision for the Digital Portfolio

Throughout this phase of the project, and in concert with the quality of being systematic that Mohr et al. describe, participants continued to discuss their goals and visions for their digital portfolios as the technical aspects figured into the larger discussion about its purpose and audience. For instance, Becky L. wondered whether her vision for her portfolio—complete with webquests—had her thinking about design in a backwards manner. By constructing her digital portfolio as a webquest that would guide students through the research process, she hoped to help students plan out their work ahead of time and reduce the number of perfunctory questions that they might ask along the way. She said,

> Hopefully it will be like the digital portfolio is the teacher when it is all done... I have to figure out how I am going to present it online so the students will understand it and see it as a step-by-step process that comes all together at the end. (Becky L., Interview 2, Winter 2005)

However, she also wondered if she was moving backwards, creating a lesson plan and then trying to tie curricular standards to it, instead of thinking through the portfolio and the webquests in a more logical manner (Blog Post 138, 11/23/04). Becky S. replied to Becky L. and suggested that this was a viable option in working with the digital portfolio:

> I don't think it is backwards, as you say, to know what your end product will be, or what you want it to be, and work from that perspective. That is a viable approach for many designers and creators, and could fall under the large umbrella of a "vision" or "mission". Especially this first time through with a website, I think having a solid view of what your website will be like is great, and knowing it will change somewhat with the reality of making it, I would argue that it would be imperative to have an end product in mind, so as to not stray too far from the goal of the site. (Becky S., Blog Post 139, 11/25/04)

By continually thinking about the site design as well as the research process, the participants found synergies in their work. Becky L. wanted to see her high school students work independently through a webquest, and designed her site accordingly. Becky S. wanted to share many aspects of her teaching on her site, and thus had sections appropriate for sharing her research with colleagues and parents to read as well as pages representing her classroom and her student's work. Tara, Nicole, and Anne all wanted to represent student work, too, and did so by using images and samples of student writing, much like Becky S.

While the prospect of managing all this information could have become overwhelming, the participants were able to begin managing their online lives, one of Selber's components of a functionally literate computer use. Becky S. elaborated on this in her second interview:

> As the reality of what I am doing becomes more 'real,' it makes it easier for me to think about what I want to include as information [in my digital portfolio]. And, after reading the blogs for the last couple weeks, and having everybody else having their own questions about their projects, I kind of am starting to get a better picture of my own. Their questions have helped me kind of answer my own questions and I am starting to <pause> I'm not as nervous about presenting the information and I am starting to get a better picture of what it looks like. (Becky S., Interview 2, Winter 2005)

Again, the recursive nature of the blog discussions about the teacher research process as well as the continual viewing and reviewing of each other's portfolios allowed participants to gain a better sense of the group's work as well as their own, thus contributing to their overall understanding of web design and the rhetorical choices they could make in their portfolios.

This sense of purpose began to take more shape as the project went on and more Overt Instruction in terms of technical skills was needed. For instance, Anne and Nicole

both expressed interest in putting videos on their portfolios so they could, as Nicole explained, "spark it up" a little bit. As time went on, their descriptions of what their portfolios might look like became more elaborate, as this blog post from Becky S. shows:

> In many of our earlier discussions about the intended audience viewing our web portfolios/sites versus the actual viewership, we balked at the implications of putting ourselves and our students out there in cyberspace. It is hard to accurately limit the scope of readers to our sites, and the only reliable form of control may be the relative obscurity that we enjoy.
>
> The purpose should be conveyed in a multi-modal fashion, with layers of design providing the visual cues a reader or viewer would use to initially assess the site. From there, the navigation buttons should allow choice for the user to consider what information they want first. It may be to learn about the designer, the creator, the main information provided at the site, the links to other sites, or the visual imagery available. Possibly, if the reader/viewer is like me, they may randomly select a navigation link based on impulse, and explore the sight in more or less random order. There is no way to know how the user will negotiate the experience of viewing a site, so, in a way, the designer needs to consider all the possible ways to explore and adjust accordingly. (Becky S., Blog Post 176, 1/16/05)

Becky S. makes it clear that she and other participants knew they were sharing their work with the world, even though it may be tough for the world to find them at first. As such, this process created a sense of purpose and audience that required a more sophisticated level of composing including discussions about images, links, and multimedia. As our conversations continued about how and why to use the technology to represent the participants' work, as well as that of their students, we also broadened our discussions to consider the nature of literacy and how participants' perceptions of literacy were changing as the project moved forward.

Technology Learning and Broader Views of Literacy

At this point in the project, I wanted to get a better understanding of how the teachers perceived "literacy" in the broadest sense. While we did not specifically discuss Selber's

components of functional literacy as individuals or as a group, we were using the metalanguages of web design and teacher research, and I was curious to see how our discussions about ethics and representation, digital and visual rhetorics, and the technical aspects of updating a website where connecting for them. When asked in their second interview what it means to be "literate," all of the participants acknowledged the influence of technology in some way. For instance, Anne connected being literate to our discussions of visual rhetoric:

> A lot more of it includes visual literacy. Before, it was basically being able to read and comprehend, and write, and take ownership. But, so much more of it is looking and understanding what images mean and how they can add to a piece or how they can detract from a piece. It just encompasses the visual, the writing, and the reading all together. (Anne, Interview 2, Winter 2005)

Becky S. and Tara mention visual literacy specifically as well. In her second interview, Becky L. acknowledged the many ways in which literacy is changing, but also questioned whether or not we, as teachers, were losing focus:

> To be literate? <asks self> <pause> On a simple basis, I would say that it its communication. If you can communicate with someone, then you are literate. But, the more traditional side of me means you need to know how to read and write. So, I know, you can be literate through pictures, and sounds, and images, but I also think reading and writing is a huge part of being literate, or understanding how to communicate. So, communication is the key is how I would say it. But, I really do think that reading and writing is a huge part of that, which in some cases, I think we are going away from. We have email and instant messenger and all of that is symbols and shortened, shorthand type stuff, so I am still traditional. If you are literate, you can read and write. (Becky L., Interview 2, Winter 2005)

To be certain, the participants in this project understood that I had an interest in new literacies and the ways in which we might explore them through the use of digital portfolios. That said, Becky L. raised an important point that we continued to circle back to in later interviews and in group discussions: to what extent do teachers have a responsibility to prepare students with the traditional literacies that schools have honored

and to what extent should we invite them to explore new ones? All of the teachers struggled with this and, to some extent, ended up taking the new literacies upon themselves in designing their own sites without challenging students to compose hypertexts or multimodal texts.[4]

The literacies that these teachers honor in their classrooms, most likely as a result of their participation in the RCWP summer institute, became evident in this phase of the project, too: process writing pedagogy and the connection to technology learning. Becky S. discussed how she viewed digital portfolios from both her colleagues in the project and also by doing general searches on the internet, looking at them in terms of aesthetics and content. Then, she explains

> It [this process] is forcing me to think about what I want to put in there [the digital portfolio]. And, it also makes me self-conscious about what I want to put in there. But, it's really making me think and through the process of going through this I've realized it is the process and not the product so much that is counting. And, I think as teachers we are sort of programmed – it's a hard cycle to break, to think about that product all the time. It's not the product. It's the process that you go through to get there. It's hard when you are putting yourself out there like that. I've gotten more into the process now, and I think it's been, it's a really cool to go through. I can't imagine any other teacher on my staff doing this though. I keep thinking 'this is so cool,' and there's nobody I can even talk to this about, except you guys [the rest of the digital portfolio group] because there's nobody that is even close [to understanding this or being interested in it]. (Becky S., Interview 2)

Becky S.'s point that the process is what's important comes as no surprise to teachers familiar with a writing workshop model for classroom instruction. What I found surprising, however, is the utter lack of interest that Becky felt any colleagues in her building would have in learning about technology and integrating into her classroom. Again, this points to the difficulty that individual teachers face when trying to bring technology into their own teaching as well as to the deeply-held conceptions that teachers

[4] The exception here is Anne, and we will look more at her students' work—and how it helped her rethink her teaching—in Chapter 6. In the second year, Tara did invite her students to create podcasts, too.

and schools generally hold as they think about and value particular literacies. All the same, in thinking about implications for participants' views of what it means to be literate, technology began to play a key role in our work.

Conclusion

As we continued our discussions about the how and why to create and maintain a digital portfolio, we engaged in technical discussions about website design and moved to conceptual understandings of visual rhetoric and how to represent teacher research online. These discussions melded into a creative process that was enhanced by focusing less on step-by-step instructions—the traditional mode of teacher technology training—into a broader vision of functional literacy. So, what did the teachers actually produce? Table 4.1 outlines the basic technical components of their portfolios. While the numerical description of what each teacher produced and shared on her portfolio is useful for a variety of comparisons, I caution the reader to look at this table with two caveats. First, it is not useful, or advisable, to compare individuals to each other in terms of the number of pages, images, links or other materials on their website. In the next two chapters, I will include versions of this table that take into account the growth of their individual portfolios over time and discuss each participants' experiences more.

Second, in terms of portfolio construction and maintenance, all of the participants found it initially difficult from a technical standpoint, but not as hard as it seemed it would be. From a standpoint of time management and updating on a regular basis, however, each participant had to work out her own system for being able to create and maintain her site. As a group, we never counted pages or specific numbers of artifacts that each person had during the project itself, as if to say "I have more than you do."

Instead, the reader will note the growth and change that each individual had over time and how they coped with their ever-growing portfolios. In relation to engagement with technology, all five of the participants found working with the technology, given the authentic purpose and audience for which they were pursuing it, to be valuable, personally and professionally. Finally, in connection to teaching practices, all of them talked about learning the technology, to some degree or another, in the context of their teaching or in response to their students.

	Pages (Total)	Instances of Student Writing/Projects	Images of Students	Other Images and Graphics (1)	Other Multimedia (2)	External Links (3)	Pages listed in Navigation
Anne							
Fall 2004	13	3	0	0	0	0	4
Becky L.							
Fall 2004	12	0	0	1	0	0	4
Becky S.							
Fall 2004	0	0	0	0	0	0	0
Nicole							
Fall 2004	9	0	3	1	0	0	8
Tara							
Fall 2004	7	0	0	1	0	0	6
Totals							
Fall 2004	34	3	3	2	0	0	16

Table 4.1: Content of Participants' Digital Portfolios, Fall 2004*

*Data in this table represents visible, navigable portions of the teachers' digital portfolios; that is, from the "index.html" page of their MSU web space, what links, images, and other multimedia aspects of their portfolio were clearly linked for others to find.

1. Other Images and Graphics included photos of their schools and classrooms, as well as of themselves teaching or engaged in other personal interests. In some cases, the teachers photographed or scanned student work, although these instances are included in the column representing student work. It also includes images (such as clip art or stock photos) used to enhance the site, as well as some instances of charts or graphs representing their research. It does not include, however, navigation buttons. These numbers do not include images that students included in their own work (as is the case with Anne's hypertext poems that she had her students make).

In contrast to the current literature, this model of Overt Instruction for portfolio development focused on creating a product immediately applicable in the classroom, not just as a collection of artifacts for a performance. Moreover, discussions about functional literacy were happening with the "Situated Practice" of the previous weeks' work, thus causing participants to think about purpose and audience for their work almost immediately. Also, in relation to Selber's points about functional literacy, the teachers engaged in a number of practices that led to a better sense of themselves as web designers:

- Educational goals: Clearly connected to completing ENG 896 and creating a resource for their classrooms;
- Social conventions: recognized the ways in the group could support them, both in face-to-face and online settings;
- Specialized discourse related to computers: began using terms like HTML, FTP, and uploading with confidence;
- Manage his or her online world: were able to create and upload initial sites, interact with the blog and email; and
- Be able to solve technical issues: still had some reliance on others, but most were beginning to figure out how to approach problems heuristically.

As the group moved towards the next phase of the Pedagogy of Multiliteracies, "Critical Framing," we also began working on an article for *English Journal*, one of the leading

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2. Other Multimedia could include different file formats (such as docs and pdfs) as well as items like sound or video files. In Becky S.'s case, the large number of multimedia files has to do with the Flash animation banners that she put on nearly every page of her site.
3. External links include a variety of items such as links to personal blogs, resources for students, professional websites and texts, etc. These do not include links that students made from their own work (as is the case with Anne's hypertext poems that she had her students create).

publications in the field of English education and aimed at secondary teachers. This allowed us to consciously step back from the day-to-day work of updating our portfolios and think about why and how we were doing what we were doing, a process that I will describe in the next chapter.

Chapter 5 – "Not Just a Paper Portfolio on a Computer": Critically Framing Digital Portfolios

Situated Practice August 2004 – October 2004	Overt Instruction September 2004 – March 2005	**Critical Framing** October 2004 – June 2005	Transformed Practice January 2005 – November 2006

Throughout the late fall and into the winter, our group continued to meet and blog on a regular basis, supporting one another's work both in face-to-face and online settings. During this time, I consciously moved our work into what the New London Group defines as the "Critical Framing" stage of the Pedagogy of Multiliteracies. In this stage,

> learners frame their growing mastery in practice (from Situated Practice) and conscious control and understanding (from Overt Instruction) in relation to the historical, social, cultural, political, ideological, and value-centered relations of a particular systems of knowledge and social practice. Here, crucially, the teacher must help learners to denaturalise and make strange what they have learned and mastered. (New London Group, 2000, p. 34)

The New London Group gives particular attention in this stage to the larger contexts in which literacy learning occurs, suggesting that learners begin to question and critique their own experiences in the process of redesign. As mentioned in Chapter 1, many of the historical, social, cultural, political, and ideological tendencies of technology professional development for teachers focuses on a very limited set of skills or applications and rarely, if ever, approaches technology from a mulitliteracies perspective where teachers design their own texts and experiences. Again, recall that "Design," from the perspective of the New London Group, is a process in which people engage their own "creative intelligence" (p. 19) as practitioners to both work within and actively change their own contexts—in this case, examining their classrooms and representing their teacher research through a digital portfolio. Typically, teachers are asked to use technology in ways that support the perfunctory aspects of their work (taking attendance, calculating grades) and

to keep students engaged in low level tasks (typing skills practice, introductions to programs and functions, skill and drill software). Design, sadly, does not often enter school-based discussions of technology.

Given the many demands that teachers had on their time related to learning the technical aspects of maintaining a digital portfolio while simultaneously continuing to conduct and represent classroom research, this period of Critical Framing needed to both "make strange"—through an ideological lens—all the website development strategies they had just learned in the past few months while at the same time allowing them to move forward in their work. In other words, while participants were learning how to create HTML documents, they were also being asked to critique existing portfolios, question their own choices about colors, fonts, and images that they were using, and continue to think about their portfolios from the perspective of multiple outside audiences. In contrast to typical types of assignments in teacher education classes, where they may have had to just "post a website," we were making strange the process of posting by engaging in critical inquiry around purpose, audience, and situation related to their portfolios. Unlike many of the uses of technology that they had previously experiences, this project invited participants to examine the "historical, social, cultural, political, ideological, and value-centered relations" in which they engaged as teachers and teacher researchers. To do so, I invited the teachers to participate in two main activities: exploring visual literacy and collaboratively writing an article.

First, we read a text focused on visual literacy, discussing it on the blog and in our meetings while attempting to employ its principles in our portfolios. As teachers began to create more detailed portfolios, I felt that offering them some practical advice on color,

typography, images, and other elements of graphic design could help them represent their work through the portfolio in a more nuanced and, ideally, personal manner. This need for understanding of visual communication was more than just a discussion about aesthetics; indeed, it was rooted in larger discussion about verbal and visual literacy practices as they combine in the teaching of English. Stroupe, for instance, argues that a

> more hybrid approach of a visualized English would describe instead the potential for dialogically constitutive relations between words and images—in a larger sense, between the literacies of verbal and visual cultures—which can function as a singly intended, if double-voiced, rhetoric. (Stroupe, 2004, p. 15)

As noted in the introductory chapter, the convergence of digital technologies and teachers' ability to use those technologies has come to a head in the field's discussion of "literacies," in this case "visual literacy," and Stroupe's argument for a hybrid approach to understanding English (and, in turn, the teaching of English) could offer participants a different perspective about how and why to design their portfolios. Thus, we began to read and discuss Burmark's *Visual Literacy* (2002), a text designed to introduce the fundamental concepts of graphic design for teachers so that they can translate those skills into their literacy teaching. Given that this approach towards visual literacy falls outside of traditional English-types of learning (such as the canon of literature and five-paragraph theme in composition), this line of inquiry itself contributed to the Critical Framing of the project, thus "making strange"—as well as questioning the fundamental assumptions we had about—literacy practices, especially in digital environments.

Second, we began to collaboratively compose an article where participants reflected on their experiences in the project. Earlier in the year, I ran across a call for manuscripts that we were able to use as an opportunity to write for *English Journal.* This

provided an external motivation to critically frame our work, as the call for manuscripts spoke directly to the work that we were engaged in:

> ... For this issue, we want to hear about participation in effective professional development that has enhanced teacher and student learning, and we want to know about the research base that supports such practices. **How has your participation in a professional learning community or a teacher-research group informed your teaching and changed your teaching practices?** How have you used your leadership role to improve teaching and learning in a department, school, affiliate organization, or other context? What professional development programs or processes have increased your understanding of diversity—cultural, economic, linguistic, and so on? What classroom practices reflect your learning from a professional development opportunity? **How has professional development in technology resulted in changed practices and increased learning?** In what ways have mentoring experiences influenced your teaching? (Reid, 2004, emphasis added)

This call highlighted at least two of the questions that our group had been coming to terms with over the fall and early winter. First, we were interested in talking about how our teacher research group functioned in both face-to-face and online contexts, highlighting the ways in which each method of meeting moved our work forward. Second, we wanted to frame our discussion of technology learning in ways that focused on the literacy practices that we were involved in—digital and visual literacies—not just as a simple application of a technological tool. Traditional technology professional development, as I have noted previously, does not engage teachers in such a manner. In thinking about professional development as changing practice and increasing learning, as this call invited us to do, we were able to ask questions about the process in which we were engaged as well as the products—the portfolios—that the participants were creating.

Thus, in using the *Visual Literacy* text and the opportunity to write for *English Journal* as starting points, our group began to Critically Frame the work of representing one's teaching self online. Together, these two activities allowed us to distance ourselves

from the immediacy of the work and to explore many of the relations, especially social, cultural, and ideological ones related to the purposes of creating a portfolio as well as how teachers were perceived within and outside of their schools. In particular, the participants began to question their roles within their classrooms, schools, and communities while seeing themselves almost as ethnographers, drawing a more robust picture of their students than what is (or, in many cases) can be represented through test scores or periodic reports in the media. In so doing, we also began to look at our learning through Selber's critical literacy lens, a point that I will elaborate on briefly here before discussing the teachers' learning in this stage of the project.

Expanding Selber's Critical Literacy for Teachers

Like the functional literacy that he describes earlier in his text and was discussed in Chapter 4, Selber attempts to broaden the notion of what counts as a literacy practice as it relates to technology by introducing critical literacy as well. As the New London Group suggests we "make strange" the literacy practices in which we engage, critical literacy responds to the limits of traditional functional models of computer literacy in that

> Instead of reproducing the existing social and political order, which functional models tend to do, it strives to both expose biases and provide an assemblage of cultural practices that, in a democratic spirit, might lead to the production of positive social change. (Selber, 2004, p. 81)

In terms of learning about and implementing digital portfolios in their practice, participants had to think carefully about the cultural practices that they engaged in, both and home and in school, as well as about their purposes and audiences for posting their sites, not just the technical task of how to get the site posted. Selber goes on to suggest that "students who are critically literate can work against the grain of conventional preoccupations and narratives" (Selber, 2004, p. 95) in order to understand and critique

the ways in which technology works. Selber's concerns about the technical and ideological aspects of using technology combine with the New London Group's historical, sociocultural, and value-centered concerns to allow us a multi-faceted lens through which to question the purposes and processes for designing and marinating a digital portfolio.

For teachers, this becomes a task that involves an understanding of how portfolios have been co-opted as tools for assessment, how their original intent was meant to represent authentic learning (Barrett, 2007), and how teachers could integrate such pedagogies and technologies into their own teaching in order to, as Selber argues, "work against the grain" of the predominant narrative of assessment. Moreover, it meant a great deal of work to overcome limited technologies and access available at their schools. By critically framing our work in the larger context of their classrooms, schools, and communities, we were able to discuss implications that these portfolios—and the process of creating and maintaining them—had for the teachers and their various constituents. Who would be viewing these portfolios? What are their expectations of schooling and what "good" work from teachers and students looks like? Most important to that line of our inquiry was the fact that varied audiences, such as principals and parents, all have different expectations of what comprises good teaching and learning, as well as what counts as evidence of that teaching and learning, a topic to be taken up in more detail throughout this chapter.

In terms of the design of the portfolio and integration into their teaching practices, then, all the participants were able to create their own critical understandings of how to represent their work. In the next four sections of this chapter, I highlight themes that the

participants and I discussed during our interviews and group meetings, as well as on the blog. First, I discuss how our focus on visual rhetoric gave the group language to talk about the Design (in the sense of the New London Group's definition) of their portfolio and have visual elements of their portfolio worked to support their teacher research. This section includes a discussion of two portfolio snapshots—Anne and Becky S.—as well as Tara's portfolio revision, a striking example of how adopting a critical perspective on Design allowed a teacher to reframe her work. Then, I elaborate on three themes that the group developed in our article for *English Journal*: the effects of collegiality and collaboration, a new sense of accountability that participants felt, and an emerging sense of continuous technology learning that participants described in their work. Together, these four themes each represent a critical perspective that the teacher participants took in designing their portfolios and adopting technology into their practice.

As I examine these themes in this chapter, I find it timely to return to Yancey's concerns about identity and assessment that I introduced in Chapter 1:

> Put differently, what we ask students to **do** is who we ask them to **be**. As important, these representations constitute a rhetorical situation, precisely (1) because they are immediate, direct, and substantive—composing, as they do, the material of our teaching lives and those of our students'—and (2) because they perform a double function—providing grist for the twin mills of identity and assessment. (Yancey, 2004, p. 739, emphasis added)

Participants in this project became deeply concerned about how this rhetorical situation—representing their teacher research through a digital portfolio—affected their identities as well as their students' while at the same time serving as a window into their classroom practice, sometimes for better, and sometimes for worse. These are issues of identity and representation that are more than technical; they are ideological and reflect the teachers' understandings about themselves, their students, and their teaching. Yancey's caution for

teachers (and, by extension, teacher educators) is well heeded as teachers make their classrooms and pedagogy more and more transparent through digital portfolios, blogs, wikis, podcasts, classroom websites, and other online spaces where they report on their experiences in schools. Since the New London Group and Selber both encourage us to question dominant ideologies that frame the production and consumption of texts, especially digital ones, and Yancey suggests a rhetorical lens through which to think about assessment and identity, the combination of the three perspectives offers a more complete critical frame through which to view this stage of the group's work. Given this additional concern of examining the rhetorical situation, I now look at the four themes we explored in this stage of the project.

Portfolio Design and Visual Rhetoric

Introduced first in *The Web Portfolio Guide* (Kimball, 2002), our group began a more thorough discussion of the structural and organizational aspects of the portfolio at this stage of the project. We framed these discussions by reading Burmark's *Visual Literacy: Learn to See, See to Learn* (Burmark, 2002) so as to better understand how to employ visual rhetoric in constructing the portfolios and, as Stroupe suggests, to broaden our understanding of literacy. In this text, Burmark argues that

> It's no longer enough to be able to read and write. Our students must learn to process both words and pictures. They must be able to move gracefully and fluently between text and images, between literal and figurative worlds. (p. 1)

Reconceptualing literacy to include the visual was, at first, difficult for at least two of the teachers in the project, Becky L. and Anne, who continued in their interviews to define literacy as the ability to read and write. My contention is that Becky L. and Anne saw their roles as high school teachers to prepare students for the types of literacy expected in

college—academic reading and writing—and that the focus on visual literacy could be seen as periphery to their main pedagogical goals (or, perhaps, what they perceived their goals to be, at least, based on local and state curriculum standards and a focus on test-based reading and writing). Tara, Nicole, and Becky S. were more willing to engage in discussion about the expanding definitions of literacy, perhaps because in their roles as elementary and middle school teachers they felt that they had more time to examine this aspect of literacy or because their students, especially Becky's second graders, were still emerging in their reading and writing practices. It is worth remembering, too, that our work came on the heels of the RCWP summer institute, in which we explored multiple literacies and, for one teaching demonstration, teachers constructed a visual argument poster.

As we continued our work, *Visual Literacy* complimented Kimball's focus on the technical aspects of portfolio construction with an in-depth look at visual rhetoric within the context of literacy instruction. In reading this text, our group's understanding and definition of literacy began to account for visual components, too. Because participants were able to see a clear argument for why they should be considering visual literacy in their own classrooms, the experience of reading the text while working on the digital portfolios offered them an opportunity to put theory into practice. Anne, Tara, and Becky S. provide three examples of how they solved pedagogical and design problems through the composition of their sites.

Anne's Use of Structural Rhetoric and Repetition

For instance, Anne discussed how some principles from *Visual Literacy* helped her design her site.

> I didn't want a confusing portfolio. That was a big issue for me in the beginning. Like, "How many links do I want to have?" I didn't want it to be page after page and get lost in Bens' [one of the student whose work was on her site] fourth draft and not know where to go back. So, that was a big decision on where, and I think Dave [another consultant at the Writing Center] actually helped me out on "make it as consistent as possible." And you [Troy] did, too. You said that from the beginning. And *Visual Literacy* said that, too. Make sure you're consistent. Make that picture a link back to your home page so every page you go on you have it look pretty much the same. (Anne, Interview 3, Spring 2005)

Anne's focus on consistency across the navigation scheme of her website offers one straightforward example of how the participants employed the principles of visual literacy in their work. She was synthesizing the principles of consistency and repetition in order to make a more cohesive design for her site. Ultimately, she chose to use a picture of her classroom (taken from the hallway looking in) as the unifying element in the upper left-hand corner of each page, so as to create a welcoming feeling for her students as they visited the site.

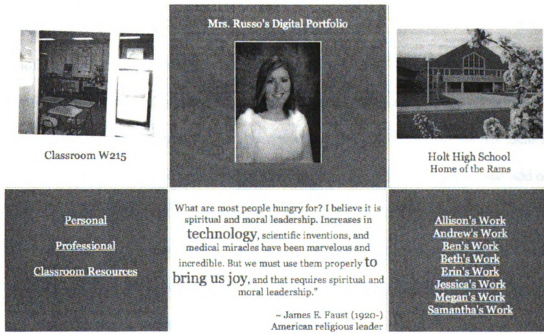

Figure 5.1: Anne's Digital Portfolio Home Page

Looking at this snapshot of her website, and the way in which she framed it, a viewer can see how Anne's choices determined certain aspects of the portfolio. She kept this image of her classroom in the upper left hand corner of all the pages in her site while also utilizing the checkerboard design for each of her students' sub-pages as well, although she allowed each of them to pick their own color scheme. Thus, she kept many of the structural and visual elements of her site consistent while allowing for some variation and individuality. In so doing, she reproduced her pedagogical efforts to highlight her students' work while also maintaining the site's navigation. This rhetorical analysis of her site points to some of the ideological choices that she values as a teacher that she was able to represent through her portfolio design: reasonable allowance for student choice in topic and genre, foregrounding student work, and an organized and welcoming (online) classroom space.

Tara's Use of Visual Rhetoric for Audience Appeal

Another more striking example of this change came when Tara redesigned her digital portfolio. She and I had worked together in December to turn her initial ideas into a viable website. Even though she had been working through the fall to put her ideas into action, she was not able to create a site template that she could go back to and add on later. Compounded with the fact that she couldn't download Mozilla Composer at school and had a dial-up connection at home, Tara was feeling frustrated at her ability to create an initial site. We were, however, able to get her up and running with a basic home page and some sub pages where she would put student work, including the image of a tiger, her school mascot, as shown in Figure 5.2.

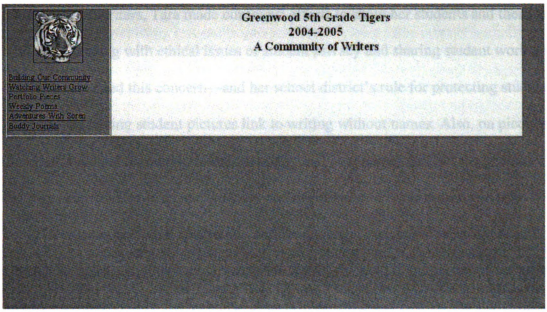

Figure 5.2: Tara's Initial Design for her Digital Portfolio Home Page

After the holiday break, however, Tara's reading of *Visual Literacy* and thoughts about what she wanted to do with her site caused her to rethink its design. She described the process of revising her site in a blog post:

> Shortly after reading Visual Literacy, I went back to my portfolio to make major changes. I yanked the dark, drab orange and green background colors and implemented a calming blue and happy, pale yellow. I also changed the majority of my text to Georgia in response to Burmark's report that that this font is "especially readable" as a screen font (27). In addition, I made sure that my headings and titles were all composed of just one other font (comic sans, in order to relate to my juvenile students) because "the rule of thumb is to use a maximum of two typefaces per document" (22). Finally, I replaced my anchor clipart with a more jovial-looking tiger and began sifting through class photographs in search of appropriate images to add to my pages. I decided that my portfolio's audience would feel more willing to journey through what would mainly be text-driven documents (due to the nature of the portfolio's writing-related purpose) if they were greeted by an approachable tiger and could constantly see the "real" faces of the texts' authors. (Tara, Blog Posting 180, 1/23/05)

As Figure 5.3 shows, Tara's revised portfolio indeed showcased her students and had a clearer navigation scheme. Since the goal of her teacher research project was to create a

community of writers, Tara made conscious efforts to show her students and their work while also dealing with ethical issues of student privacy and sharing student work online. Tara circumvented this concern—and her school district's rule for protecting student identity—by having student pictures link to writing without names. Also, on pieces she did want students' names identified, she only used first names and left the pictures out of the page. Her reading of *Visual Literacy* and negotiation of these design variables helped her to overcome her initial frustration, which was largely anchored to software and connection speed; in other words, when she started thinking critically about her audience and focused beyond just the technical aspects of creating and posting the site, it became a more rhetorically effective document.

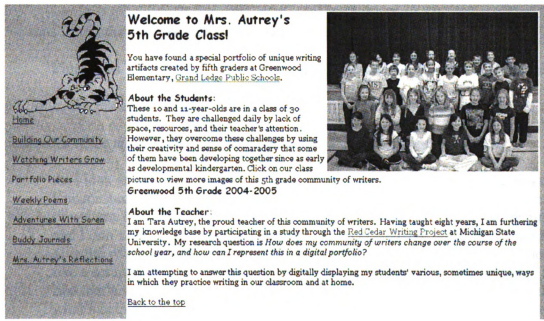

Figure 5.3: Tara's Redesigned Digital Portfolio Home Page

Tara's redesign was met with enthusiastic support from the entire group, and Nicole's blog posting sums up the general feeling about her work quite well:

> Wow!!
> Tara, I completely commend you-your hard work on this project is totally paying off. I had chills as I looked through your site-it's astonishing to see how far you have come since our first frustrating day together!! I don't mean to sound cheesy, but I am so amazed and proud of you! But...with genius comes responsibility-if it's okay, I might need a little counseling on my tech abilities when this weekly poem thing gets going! Thanks for pointing me in your direction-your site is so wonderful and helpful! (Nicole, Blog Post 188, 1/26/05)

Nicole highlights the success that Tara had in the redesign, especially considering how Tara claimed to have little or no tech knowledge at the beginning of the project. Also, Nicole's comment both invites and suggests that Tara take her new knowledge and move into the role of what the New London Group would call "an expert novice," sharing what she has learned with the group. This pattern of one participant learning a particular skill or moving to a new level of understanding with visual literacy was often met with similar requests from others to share their ideas with the group.

Finally, as Tara reflected on her growth and the changes that she made in the portfolio, she felt as if she had to tell the entire story of what was happening in her classroom while at the same time keeping the site professional and organized.

> As I look at what I am putting on the portfolio, the digital portfolio, I guess that I'm constantly changing, again, how I want to represent my class as a community of writers. I want to be true to what we are actually doing and how we're growing, and I don't want to just put one piece of our writing on the portfolio – I need to give the whole picture. That's been a big concern. I don't want it to look too much like a scrapbook, but in a way it kind of is. It's like a family photo album... I feel like that's what my digital portfolio is starting to become, good or bad, but that's what's helping really show how we are developing as a community of writers. (Tara, Interview 2, Winter, 2005)

While she went on to say that she could use Mozilla Composer to change "each of the little nuances" of her pages in her digital portfolio, Tara seemed to stay focused on the big picture and not let herself stray too far from the goals she had set for herself in focusing on the community of writers in her classroom, even if she did spend some time

on the details. By remaining focused, she was able to keep the many visual elements of the portfolio as compliments to the content rather than letting a focus on design overtake her need to represent the teacher research she was conducting.

Having been scaffolded to that point in her own learning by the group, Tara was able to apply what she had learned in a thoughtful and pedagogically sound manner. Moreover, she felt compelled to work on the portfolio in a way that she had not believed was possible:

> As soon as I had a picture in my mind of what it really could look like, and I had a few tools, you know, that was it. I could start exploring. And then it became a night and day process. For a while there, I was rushing home from school to get on the computer and just really work with some little detail. And, it may have taken hours. But, as I have described to you before, it was kind of like an artistic process. And, I enjoy anything creative. I had never seen technology as being something that was a creative outlet for me before. (Tara, Interview 3, Spring 2005)

This creative process, one that Tara could liken to her previous experiences as a musician and artist, allowed her to reconceptualize how and why she wanted to work on her portfolio. Moreover, it gave her the opportunity to see connections between her classroom and the portfolio—especially in sharing students' writing—that she had previously not envisioned technology serving. This subtle but significant shift worked in different ways for each teacher, but all of them began to see their portfolios as extensions of their professional identity.

In terms of Critical Framing, Tara was able to synthesize a number of competing ideological concerns into a well-designed site. First, she understood the needs of her students to engage in a community of writers and the centrality of the portfolio in that process. Thus, she made choices about font, color, and layout that would appeal to them as well as represent them appropriately. She also made note of the fact that she had

parents volunteers typing the students' work who wanted to correct misspellings and other errors. Based on her beliefs about writing process pedagogy, she adamantly opposed that. Yet, she was also worried about how these same parents—as well as other teachers, her administrators, and community members—might perceive her teaching abilities as well as her students' writing abilities should the mistakes have been left in her students' writing. By consciously choosing to keep the misspellings and other errors (and, in some cases, keeping students' names attached to those texts), she accurately reflected her pedagogical choices about how to teach writing through the portfolio, as difficult as it was for her to make that public. In Critically Framing her work, and choosing to stick to her pedagogical principles, she felt that her portfolio represented herself and her students fairly, even with a few errors present.

Becky's Design Decisions and Teacher Persona

As an interesting contrast to Tara's student-centered vision of the portfolio, Becky S. was more focused on creating a site that represented her professional persona first and was functional for her students second. She described the choices that she made in keeping the theme of her site monochromatic with simple navigation on the side bar.

> To make it [the portfolio] something that is easy to navigate, you can read a lot of books, but you just [have to] get in there and make a mess of one once to try. The thing that I did was to look at a lot of different websites and the websites that just go against my nerves are all the teacher ones that have the hideous wallpaper in the background. And, they're too busy. They're over-stimulating. And, you do, you get personal preferences from what is easy for you to read on the page. So, I sort of went at it from a really selfish standpoint because this is what I thought would be the easiest and certainly I liked the way it looked. (Becky S, Interview 3, Spring 2005)

Becky S. made decisions about the visual rhetoric of her site based then on both her personal preference for an aesthetically pleasing site as well as her perception of what a

good teacher's site should be and do (See Figure 5.4). Her use of white (or, in this case, gray) space and flash animation reflected what she felt a good website could incorporate without being, as noted above, "over-stimulating."

Figure 5.4: Becky S.'s Digital Portfolio Homepage

In designing her portfolio this way, Becky S. clearly wanted to appeal to an adult audience rather than directly to her students. As she noted in our journal article, she felt that the portfolio could be a window into her classroom, a way to present the "reality show of education" beyond simply showing test scores (Autrey, Cathy O'Berry Edington et al., 2005). But, the site was not just for adults, despite its spartan design. She noted the ways in which she could use her portfolio as a "portal" for her second grade students as they worked on the computers in her classroom and began to become more internet-savvy.

> What was needed was a very controlled environment where students still had many choices, but their "navigational tendencies" could be curtailed. Employing my own digital portfolio and website as a portal through which they could access the Internet has been a successful alternative to having an open desktop, where students literally navigated themselves into a corner... With the website-as-portal idea, I have eliminated all navigation buttons on the toolbar except for back, forward, stop, refresh, and home. I also eliminated the address window, so their only choice is to use my "student links" page to make a choice. The links take them to some of their favorite sites where they can listen to fluent reading, read leveled text, and write. There is still a great deal of choice for students, and they are having even more success navigating because there is less interference and distraction from peripheral buttons and toolbars. (Becky S., Blog Post 213, 2/23/05)

Like Tara, Becky S. was being very conscious in the overall visual rhetoric of her site, yet she employed very different tactics to keep her students' focused during their use of the site. In both cases, the participants began to recognize the overlapping aspects of audience, purpose, and situation as a rhetorical context. In Becky's case, Critical Framing took the perspective of an educator working in a K-2 magnet school for students who had already failed a grade and were labeled "at-risk." Unlike Tara, then, Becky's focus on the core academic competencies and not on community, per se, made a great deal of sense given her position as a teacher and rhetorical situation as a teacher researcher.

Taken together, Anne, Tara, and Nicole's portfolios demonstrate how the participants were both learning about technology and thinking about identify at the same time. As Yancey notes, the portfolio became a part of who all the teachers in this project wanted to "be" in this online space and they had to continually reevaluate that identity. As noted above, while we engaged in this process of learning and implementing aspects of visual rhetoric, we also Critically Framed our experiences by developing themes for our collaboratively written article. The next three sections of this chapter explore these themes, beginning with collegiality and collaboration.

Collegiality and Collaboration

Throughout the project, participants felt at ease with one another and often admitted their own self-doubts about technology learning, knowing that they would find sympathetic ears and helpful hands. Unlike traditional teacher technology learning which usually occurs as one-time professional development session focused on a particular application, all of our discussions were embedded in the larger context of representing teacher research through the digital portfolio. Thus, despite the differences—and differing approaches—in their teacher research projects, all the participants were experiencing similar questions related to investigating and reflecting upon their own practice. Becky S. articulated her thoughts on the process by noting that

> Participation in a teacher research project focusing on our own classroom inquiry has presented the perfect opportunity to model the concept of professional development as teacher driven inquiry with a multi-faceted approach, which can then be paralleled in the classroom as a means of integration. Not only are we asking specific questions about our own use of technology, and how it impacts our teaching of writing and language arts, but we are presenting the results of our teaching through the use of educational technology, in the form of digital portfolios...
>
> As we integrate teacher learning into our projects and individual digital portfolios, we have completed a cycle of profound learning, and perhaps shifted our paradigms to include technology as a wholly integrated part of our classrooms. Developing a digital porfolio [*sic*] is so much more than just creating a website. It proves the model through presentation of our new knowledge, from our use of the technology to our use of research methodology to satisfy our creativity in teaching with technology. (Becky S., Blog Post 204, 2/6/05)

Here, Becky notes the recursive process of inquiry, leading from a question, to presentation, and then classroom integration. Her thought that this process is about "so much more than just creating a website" spoke to the deeper purposes for which the individuals and the group worked toward, especially related to representing themselves and their students in the best possible light and being able to do so in a creative manner.

In contrast to the typical context in which portfolios are constructed as tools for assessment, this focus on audience provided participants with the motivation and encouragement to both continue their own work and comment on the work of others. This challenges the typical vision of a teacher alone in his or her classroom, struggling to integrate technology in some fashion without support from his or her peers. In our project, then, collegial support generally happened in two ways: getting ideas from each others' portfolios and asking each other specific questions.

Building Off One Another's Pedagogical Design

Participants built on one another's' ideas in many ways, especially in relation to pedagogical design of their sites. In one of many instances where this happened, and to return to Becky S.'s blog post about creating a "portal," as noted above, Tara replied to Becky S.'s idea.

> Today, I do not always know what I am doing when I interact in a digital environment, but here is what I am sure of at this point in the research process. Being part of this inquiry group has raised my comfort level with technology...
>
> Just by interacting with Becky on this blog today, I have encountered a fabulous idea for improving my students' (and my) experiences while accessing curriculum-related websites. I love Becky's idea of making the digital portfolio a "portal" for access to sites, eliminating students' sometimes hindering "'navigational tendencies.'" When I first asked my students what they would like to see in the portfolio, many of them requested that I include a set of resources for them to access through the website. Becky has helped me think about how this might work. And it is both comforting and exciting to know that I will soon be able to see her idea by accessing her digital portfolio through our group's blog. (Tara, Blog Post 222, 3/1/05)

In this response, Tara acknowledged the role of the group as a whole as well as Becky's portal idea, showing how she could adopt it in to her own portfolio and for use with her students. In this case, it is especially important to note that Tara had no external links on

her site before this, yet went on to develop a page of links for her students with categories such as English, math, social studies, and science sites for them to visit.

Another idea that participants got from one another came from viewing one another's students' work. For instance, Becky L., who did not have any samples of student work on her site in the fall noted that after

> Seeing Tara's work, Anne's work, and Nicole's work, where they put the kids' stuff right on there [their digital portfolios], like, I am interested to read it I like to go on those websites and read their students' work. And they're not even my students, you know? I don't even know who they are. And, so, because I'm fascinated in that, I think the more I could do that the more my parents may be [interested]. (Becky L., Interview 3, Spring 2005)

Based on this experience of viewing others' portfolios and their students' work, Becky L. also began including student samples. In the fall, she had no student work and by the spring she had two sample scripts that students had created of a rewritten balcony scene from *Romeo and Juliet* with modern characters. In fact, largely due to Anne, Nicole, and Tara, the total instances of student work went from only three items in the fall to 144 in the winter. By viewing one another's work with a critical perspective and opening themselves up to the possibilities that other portfolios offered for their own work, participants were able to continue redesigning their sites and adding content in ways that added data for their teacher research as well as value for their students.

Responding to One Another through the Blog

The second main form of collegial support came from asking technical and design questions. By viewing other group members' portfolios and building off of each other's constructive criticism and encouraging comments, they were able to develop their own portfolios in more robust and rhetorically-appropriate ways. For instance, Nicole, in

talking about how she reviewed Tara's website made this point about the immediate nature of support that she could find from the blog:

> One of the most positive aspects of the blog is that we are able to access each other's sites with just one click on the appropriate link. This feature, therefore, helps us remain immediately connected to the work of our colleagues. This connection to the other sites has been a motivating and guiding factor for me many times within the past several months. I have recently honed my "dissertation-worthy" proposal into a much more manageable question. Once I had finally reflected on these changes and placed an item into the blog discussion, I immediately heard back from Tara, who loved the idea of using The Weekly Poem in class. She had been using something similar in her class, and because I had decided to introduce this as a new aspect of our Friday class, she suggested that I take a peek at her website to see what she had been doing and if any of this might work for me.
>
> In just the click of a button, I was looking at Tara's supremely constructed website and had numerous ideas on how I might like to lay out the Weekly Poem portion of my site. I had been struggling with posting artifacts to my site because I felt overwhelmed and as if I had been lacking focus. By looking at the list of links that Tara had created for each week, I realized that something like that was exactly what would help my site remain visually and structurally appealing, while simultaneously empowering me to alter my website to meet my needs as well.
>
> Looking at this site gave me a surge of energy, as well as a feeling of pride for Tara, because she and I had delved into creating our initial sites together four months prior to that day. I saw all of the progress that Tara had made, and because I had not made any changes, simply experiencing her site motivated me and assisted me in overcoming my frustration of feeling "stuck." I have since made numerous updates to my site, and realize that without Tara's digital support and the positive feedback provided by my other colleagues on the blog, I could have still been stagnantly visualizing my site instead of actively altering it. (Nicole, Blog Post 217, 2/24/05)

Within this post, there are multiple points that Nicole makes about how the blog, and working with others through the blog, helped her. Most notably, she discusses the way in which previous conversations had supported her in narrowing her research question and then, at just the right moment, she was able to use Tara's portfolio as a model for winnowing down her own into a clear and manageable site. While this wasn't specifically

technical help in terms of how to code HTML or upload a file, it did allow Nicole to get a grasp on the scope of her portfolio and, in turn, begin to visualize it.

Tara then reflected on Nicole's post and suggested a reason for why working together in such a manner made everyone feel more encouraged and willing to try new ideas.

> I have noticed a huge difference between looking at strangers' work and looking at the work of my cohort. Knowing the background workings of, say, Nicole's portfolio allows me to offer her meaningful, useful advice. At the same time, knowing her concerns encourages me to go back and look at my own portfolio with fresh eyes. Viewing the tremendous development that has occurred on her site recently caused me to go back to my own portfolio and see possibilites [*sic*] for revisions in areas I thought I had completed. (Tara, Blog Post 223, 3/1/05)

At the same time she is able to offer a compliment to Nicole, Tara also encourages the rest of the participants to engage in this collaborative process. And, they did. Becky L. summed the experience up like this:

> Having the teacher research group as a support group provides so much more than a sounding board. In this case, I think we can be, and in fact are, all inspired by what others are doing. In some way, we are learning from "real" teachers. They are real to us because we talk to them, we see them, we know that they are just like us. (Becky L., Blog Post 226, 3/2/05)

The fact that these portfolios were "'real'" to the participants stemmed, at first, in large part because they were looking at one another's work. While that audience was, in some ways, still an artificial audience, it also provided participants with an opportunity to begin creating a portfolio that would be both aesthetically pleasing and representative of their work.

As noted in Chapter 2, since one of the problems that RCWP has had over the years is a low completion rate for the ENG896 class, this sense of community was important as teachers got further into the year and, at times, further away from their

teacher research projects. Life in school gets busy, of course, and drifting away from one's teacher research can be a normal part of classroom inquiry. Yet, all the participants reported that having one another to look at as models as well as to offer support made a difference in their inquiry and portfolio development. Perhaps Nicole summed it up best in saying that

> I suspect that we as a Red Cedar community are actually invested in each other's web sites and work because we have heard and seen the changes in thought process and the actual products since day one. We have a common goal, and that is discovering how researching digitally is affecting our practices. It is from building on this common goal and sharing digitally that we are able to actually feel bonded with one another and not isolated in our research. (Nicole, Blog Post 221, 3/1/05)

The notion that seeing each other's work and responding to it over the course of the year can not be underestimated. By almost all accounts in the literature, teachers create portfolios for one main reason: to be assessed by a teacher educator. In this project, teachers created portfolios to be viewed by other teachers. By Critically Framing their own work in light of other group members' portfolios—colleagues who they could trust and talk to about how to change their own portfolios rather than simply admire from afar and get disappointed about—they were able to strive for more authentic work in their own portfolios.

Accountability to Self, Students, and Others

With this newfound sense of audience and purpose also came the realization that there was, indeed, a new audience. Moreover, it was not just one audience—the peers in this project—but others who might view the portfolio, either through the teachers' active advertisement of their sites or by happenstance. At one point, Tara bemoaned how narrowly her digital portfolio was distributed, at least to Google:

> Contrary to my earlier beliefs, my site does not seem to be something that someone could "stumble upon." Will/do we really have the "accidental viewers" that we blogged about a while back? I have googled every darn word and phrase that I can think of to take someone to my DP, but nothing has worked. This is a little disappointing because I have really enjoyed looking at many other individual and classroom digital portfolios out there. I guess I had hoped that someone could get to mine and find it a small bit helpful. (Tara, Blog Post 288, 5/24/05)

Then, just a few weeks later, Tara reported in her third interview that many parents had been emailing her and talking to her at conferences about her site and the value that they thought it added to their students' education. She even mentioned an anecdote about how well-known the site became towards the end of the school year; for instance, during a trip to the local hardware store, the clerk recognized her as "the lady doing the website" (Tara, Interview 3, Spring 2005). Tara went on to describe how these external audiences also demanded things from her as a teacher that she wasn't quite sure that she wanted to share on the portfolio:

> There are lots of things that I now need to think about including. Several people said that they wanted to see more of my comments on the students' work, and I've been working with that in my mind all year. How do I share my thoughts in a constructive way that's going to be beneficial without sounding flowery and without leaving out some of that constructive criticism? (Tara, Interview 3, Spring 2005)

In many ways, these are the types of questions that writing teachers have been dealing with forever. Yet, in a very real sense, the teachers in this project began to feel as if they were under a different kind of scrutiny. The awareness that one's teaching life was, suddenly, online and available was both exciting and disconcerting at the same time. Becky L. described the digital portfolio as a "window into your classroom" (Becky L., Interview 3, Spring 2005), noting that this could be good for students and parents to see what was going on but also difficult to structure exactly how one wants in order to represent your teaching accurately.

Becky S., when asked how she felt the digital portfolio was impacting her teaching, replied by saying that

> It's like there's this other accountability issue now. [Laughs] But, I really do feel accountable... I could make it look any way I want it to, I could present a façade of something. (Becky S., Interview 3, Spring 2005)

She went on to describe the ways in which a company can present itself through it's website as something that it is not. Yet, when creating a digital portfolio and knowing that other people she knows will view makes the situation different; she must be honest or else the colleagues and students that view the site will not see it as credible. This became a topic in which a critical approach—one that recognized and responded to the social and political forces that surround schools—became important for participants as they continued work on their portfolios. In an era of accountability where test scores often dictate public perceptions of schools, participants in this project found it imperative to represent themselves and their students in a fair and realistic light that gave a complete sense of what it meant to be a teacher and learner, an issue that I will discuss more in Chapter 6.

Continuous Technology Learning

The fourth theme that participants developed in their work on the article as well as through online discussions centered on a process of continuous technology learning. As I have described before—and will offer suggestions for in the conclusion of this dissertation—the typical model of teacher technology learning that only focuses on a particular application or process and ignore larger perspectives of literacy learning. In this stage of the project, the participants began to question some of the ideological assumptions behind their previous technology-based learning experiences and began to

broaden their understandings of what we were doing in our project from just technical work to include functional and critical literacies. Anne may have best articulated all that is wrong with traditional technology learning in teacher education courses:

> Five years ago, we had to do one [a website] for a summer class, and it was really basic. It was with [Netscape] Composer and I actually just finally deleted it because it was so horrible. Like, I had stolen so many pictures from websites. And the colors, you could barely read the [font]. It was just really amazing, the small things that you don't learn about. It was basically just, "Get your webpage up there, get your answers on there." And I could barely read some of the font. (Anne, Interview 3, Spring 2005)

In this model, teachers are simply expected to post a website with no context for their work, let alone ethical practices for composing in digital environments. Understanding that digital writing is different and that "[c]onnectivity allows writers to access and participate more seamlessly and instantaneously within web spaces and to distribute writing to large and widely dispersed audiences" (Writing in Digital Environments (WIDE) Research Center Collective, 2005b), this approach to simply "posting a website," especially in courses where students are learning to become teachers, appears naïve.

As we continued our work in the project, I was conscious in my attempts to center discussions of portfolio development in terms of the digital writing process. Unlike print-based writing portfolios, a digital writing environment that is fully networked requires a number of other decisions that the teachers had to make about design, hyperlinking, embedding multimedia, and what is appropriate to share in a networked space. This makes the composing process both more difficult in terms of technical aspects as well as complicated in terms of ethical concerns. To return to the notion of Critical Framing, then, digital composing is a more ideologically-fraught process, one in which a writers'

choice are both magnified and publicized in ways that paper portfolios simply can not allow.

As noted in the sections above, this digital writing process sometimes works with the help of peers, yet sometimes, inherently, must be an individual working alone. When asked, for instance, about how she felt her technology skills were progressing through the project, Becky S. talked about self-sponsored technology learning:

> [Part of technology learning is t]o feel self-taught. I mean, everybody here helped, but the bottom line is you are sitting at home by yourself, there are just a lot of things to do, to get through on your own. (Becky S., Interview 3, Spring 2005)

Part of this technology learning, too, came in the form of getting a pattern for working on the portfolio. In much the same way as writers describe a routine of getting into their work, Nicole discussed the process that she had to go through in order to regularly update and maintain her site:

> Finally I feel like I understand what I need to understand for my portfolio. I mean, others people's could be completely different.. but for me, putting up the poems and putting up reflections with it and the images and just the background and everything like that—I feel so much better... Oh, and getting a system. I know in the last interview, too, this was something that I kept referring to... when I didn't have a plan I was feeling very overwhelmed. And I know that a lot of that, now having gone through TE 808, was just because I didn't feel like I had a manageable focus question, which I didn't... Once I finally narrowed it down, I felt way better. And, so then I could develop a plan from there because I knew what I needed to do. And, so maintaining it and actually creating new parts made so much more sense than when we first started out and I had the 'narrative' and 'expository' and we changed that. I knew that I wanted to put 'sixth' and 'seventh grade' writing, but it wasn't until we did this until I knew what it was going to be... Once I had the plan, that was a big step. (Nicole, Interview 3, Spring 2005)

This idea of "getting a system," having "the plan," or simply finding a regular time in which to update and maintain the portfolio became important for all the participants. Interestingly enough, from my observations of their sites, only Nicole and Tara updated

pages (all pages that shared student work) on a regular basis where as Anne, Becky L., and Becky S. all did periodic, but more significant, updates to their entire sites.

At least for Becky S., part of this irregular updating could have had something to do with experimenting with the technology itself. In talking about all the different things that she tried to do with her site, Becky S. said that

> I tried to give a sampling. I kind of felt like a lot of things I did on my portfolio were me trying to see if I could do them, for example, the [embedded] music [file] thing which had absolutely nothing to do with anything. But, it became this challenge to put something on there that you sort of run across in everyday websites. You know, if you're just surfing across the web and you come across this thing that sort of makes it unique and it grabs your attention. (Becky S., Interview 3, Spring 2005)

In this process, she had to invest money and time in the software. At a certain point, how she had to stop learning new things about the software and "be true to this design" of her digital portfolio. Thus, Becky S., like the rest of the group, all found that there was a threshold at which the deadlines for finishing a portfolio took over and they had enough technology skills to complete the task at hand. She sums up her feelings about technology learning, as well as the process that she has gone through, in a late-winter blog post:

> Six months, 58 pages, 24 photos, 36 artifacts, and 200 links later, the digital portfolio is not complete, but certainly more complex, and more importantly, serving many functions. The process of learning was deliberate, intentional and essential to the success of the digital portfolio, and this is a process that will continue. As the need for different elements within my portfolio has arisen, new learning has taken place; the kind of learning that sticks with you because you went through a great deal to get it right, and there were probably some sacrifices along the way. The ratio of time spent to knowledge gained is almost a perfect ratio, though. What I know now versus six months ago has impacted my teaching, and in turn, my students. Their learning of new technology has taught me that you don't have to have a complete understanding of the how's and why's in technology to tap into its power. (Becky S.. Blog Post 231, 3/3/05)

My interpretation of their attitudes toward technology learning centers on the observation that all of the teachers wanted to *keep* learning. Given the goal of the Critical Framing process as well as the numerous technical and ethical issues that were embedded in the issues of visual rhetoric, collegiality, accountability, and continual technology learning, I feel that their desire to want to keep learning means that they found the experience personally and professionally compelling. And, in contrast to literature outlined in Chapter 1 that suggests most teachers see building a digital portfolio as a series of disconnected steps, unrelated to the task of teaching, I argue that this compelling desire to continue learning about technology came about because of participants' interest in pursuing their inquiry questions and desire to represent themselves and their students in an accurate manner, unique aspects of the Pedagogy of Multilieracies approach we took.

Conclusions

> So, whereas it may not look like much, the portfolio itself, really there was a lot put into it. (Tara, Interview 3, Spring 2005)

Trying to sum up both the technical aspects of the participants' learning as well as their critical interpretations of what was going on at this point in the project, I return to the three points that I have used to conclude each chapter thus far: portfolio construction and maintenance, engagement with technology, and teaching practices. Tara's words above illuminate the ways in which all of the participants worked in that, like any type of writing, the text that appears on the final draft of their portfolios is not indicative of the total amount of work they engaged in over the course of the project. Yet, at this stage, there was clearly more to look at in their portfolios. To return to the table first introduced in Chapter 4, I add another row of data for each participant reflecting the work that they

had completed on their portfolio between the initial count of items in the fall and the halfway point of the project in the winter.

	Pages (Total)	Instances of Student Writing/Projects	Images of Students	Other Images and Graphics	Other Multimedia	External Links	Pages listed in Navigation
Anne							
Fall 2004	13	3	0	0	0	0	4
Winter 2005	52	26	8	3	0	0	11
Becky L.							
Fall 2004	12	0	0	1	0	0	4
Winter 2005	16	2	0	8	1	60	5
Becky S.							
Fall 2004	0	0	0	0	0	0	0
Winter 2005	14	0	5	0	0	0	9
Nicole							
Fall 2004	9	0	3	1	0	0	8
Winter 2005	9	116	30	2	0	0	8
Tara							
Fall 2004	7	0	0	1	0	0	6
Winter 2005	33	219	31	10	0	13	
Totals							
Fall 2004	34	3	3	2	0	0	16
Winter 2005	91	144	43	13	1	60	33

Table 5.1: Content of Participants' Digital Portfolios, Fall 2004 and Winter 2005

Table 5.1 highlights a number of important stories that were developing with individual participants. First, Tara and Nicole were both adding significant amounts of student work each week to their sites. And, although the number of pages on her site remained static at nine throughout the entire year, Nicole continued to put weekly poems up for each of her five classes, usually at the rate of two students per week. Thus, both her and Tara's digital portfolios were growing quickly throughout the school year.

Second, Anne and Becky L. (both high school teachers) were struggling with what their portfolios should be and whether and how they should represent student work on their sites. Anne—who was inviting her students to create hypertexts and multimodal texts—decided that she would put students' work on her site. When she was sharing this innovative work at a department meeting in her school, she noted how many of her colleagues were impressed with the students' efforts, having never seen multimodal texts composed by students. Yet, one of her colleagues reverted to a traditional critique and chastised one of her students' multimodal texts for having a spelling mistake, most likely because Anne assumed she had nothing significant to say about the multimodal composition in front of her as it challenged her assumptions about teaching writing. In this case, Anne felt discouraged by the fact that she had worked so hard on her portfolio (nearly quadrupling the number of pages and having helped her students compose multimodal texts), only to have her colleague focus on such minutia.

In a different example, Becky L., in her attempt to de-center herself from the classroom, created a World War II webquest with over sixty external links for students to read and respond to while studying the *Diary of Anne Frank.* Although this effort resulted in a more robust website, it also forced her to re-center herself. Although she had hoped students would complete the project independently, she found that they were easily distracted doing online work and that they kept asking her questions about what to do next. She had to continually redesign the site and reteach individual students because of this when the webquest was meant to keep them focused from the beginning. In both Anne and Becky L.'s cases, then, designing and maintaining the portfolio—constantly

reflecting on the process through these ideological lens that Critical Framing provides—became a part of their teaching processes.

In terms of engagement with technology, all five participants worked on their portfolios in productive and personal ways. Participants were keenly aware of the functional and critical literacies that they had to use to keep up with their sites. Anne made an observation about how and when she could work.

> It's so much easier when it's in a digital environment, just to go in and make a few changes and it's there every day. I can work on it at home, I can work on it here [at the Writing Center]. There's a lot of time and effort that I put into this. It's more valuable the more time you put into it. (Anne, Interview 3, Spring 2005)

Along with the flexibility of the digital environment, the recursive nature of teacher research impacted their process, too, leading to changes in teaching practice. And, over time, the two processes became almost synonymous, as described here, first by Nicole, then by Tara:

> Really, the two of them [my teacher research and my digital portfolio] wouldn't be what they are without the other one. So, they are completely interconnected because we could do the poems and everything and another aspect of that was publishing them for people other than our class. So, when I made the website... it became not just my website, but really our class's. You know, I refer to it as 'ours' because I need their poems as much as they want to see the reflections or we need a space to put it there... [Before the weekly poem project], I didn't know where I wanted to go with portfolio. And then the portfolio was just kind of—I guess we could have done the poem project without it—but it didn't make sense to me. I felt that we needed to take it to the next step and show that, "OK, but we are writing this for a reason." There's a real audience, there's a real reason. I feel like the two of them are definitely connected. It wouldn't make sense for them to be separate. (Nicole, Interview 3, Spring 2005)

> It's been just a wonderful process for me personally and for my students. Although they haven't been as involved in the creation of the portfolio, it's still been a good experience for them because they've seen me as a learner. And, then, they've also seen their work along the way. And, I think being able to look on one screen at a group of their writing has helped them see, step-by-step, where they were [at the beginning of the school year] and where they progressed by the end of the year. And, of course, the parents really seemed to enjoy the fact that a lot of

> them commented, "I've never had this opportunity." And, outsiders not involved with our classroom commented, "Gee, I wish that when I was a kid I could've had something like this." Or, "I wish that when my child was going through school that we'd had access to something like this." So, overall, it's been a positive experience. (Tara, Interview 3, Spring 2005)

Both Nicole and Tara show how intricately intertwined the processes of teacher research and building their portfolios became. For the two of them (more so than for Anne, Becky L., or Becky S.), it also became a process that involved their students in an almost day-to-day act of reviewing and revising their portfolios. For all the participants though, the process became one in which purpose and audience moved to the forefront of the digital composing act.

If, as Yancey suggests, what I asked the teachers in this project to do with their portfolios is who I asked them to be, then I feel satisfied that each was her own person, her own teacher, representing her work in a way that was personally and professional satisfying. Critically Framing our work encouraged us to explore our ideological understandings of both literacy and pedagogy, allowing us to engage in the teacher research process in a collaborative manner all the while asking ourselves and each other questions about self- and student representation in ways that moved beyond simply discussing how to upload a document or design a navigation bar.

Moreover, I contend that the themes that we studied and articulated—visual rhetoric, collegiality, accountability, and continuous technology learning—contributed to an authentic sense of purpose for the project. Unlike any project in which they had engaged before, designing a portfolio and examining our work through the lenses of functional and critical literacies allowed participants the opportunity to think about using technology in ways that they had not experienced in previous teacher education or

professional development. It also gave them a sense of what is possible. In reflecting on the project and its potential impact on the National Writing Project's work, Nicole suggested that "I think that [it's important] for other NWP sites to see that a digital portfolio is not just [a] paper portfolio on a computer" (Nicole, Interview 3, Spring 2005). I agree and feel that we might extend the invitation to review the purposes and processed for digital portfolios to teacher educators in general, a topic that I will take up in the conclusion of this dissertation. For now, in the next chapter, I will describe how the participants continued working over the course of the 2005-06 school year and what, if any, changes they felt led them to "Transformed Practice."

Chapter 6 – "A Real Reason to Write and Learn": Towards Transformed Practice

Situated Practice August 2004 – October 2004	Overt Instruction September 2004 – March 2005	Critical Framing October 2004 – June 2005	**Transformed Practice** January 2005 – November 2006

As the group neared the end of its originally-slated time together—the close of the 2004-05 school year in which they were completing their independent projects for ENG 896—we began to think about how the process of designing and maintaining digital portfolios that reflected their teacher research had influenced their teaching practices. As the previous chapters have shown, especially Chapter 5, the teachers involved in this project began to seriously question the purposes for their portfolios as well as the audiences to whom they were addressed. To reconnect our experiences to Yancey's discussion of identity and the composing process, I would agree with her point that a digital portfolio creates a new curricular place. Teacher can

> write *for the screen* as well as *for the page*; to create relationships between and among linked material, as between and among experiences; to update it as a habit of mind; and to represent learning in part by exploring the connections the digital environment invites. (Yancey, 2004, p. 754, emphasis in original)

This complex relationship between materials and experiences was complicated even more by the fact that the teachers were taking this process back into their own classrooms, sharing their work with their students, and making it public for audiences within and outside of their school. As a living document, their portfolios became a part of their teaching practice. And, while I will not attempt to make an empirical case for *how* or *how much* these teachers changed their teaching practices because of their experience creating these portfolios, I will argue in this chapter that all of the teachers made some changes over the course of the 2005-06 school year in response to their work in our project.

This change, in terms of the Pedagogy of Multiliteracies, is a culmination of the processes of Situated Practice, Overt Instruction, and Critical Framing. The New London Group argues that Transformed Practice comes only when we attempt action in our own contexts:

> It is not enough to be able to articulate our understanding of intra-systematic relations or to critique extra-systematic relations. We need always to return to where we began, to Situated Practice, but now a re-practice, where theory becomes a reflective practice... In Transformed Practice we try to re-create a discourse by engaging in it for our own real purposes. (New London Group, 2000, pp. 35-6)

In our case, returning to where we began involved both reconsidering what we had learned about designing and maintaining a digital portfolio that reflected their teacher research as well as returning to the "particular epistemic community" (p. 30) in which all of these participants worked: schools.

As noted throughout this dissertation and in much of the literature on technology in education, schools present teachers with the unique challenge of demanding technological innovation while simultaneously creating an ideological context in which such innovation is difficult. Schools are nearly impervious to change, despite the technologies that are becoming more and more present in and around them. Why? There are multiple reasons for this phenomenon, all of which help explain how our group's approach to using technology sometimes did—and sometimes did not—transfer back to the schools in which these teachers taught.

First, Tyack and Cuban note the many ways in which technology has been brought into schools, and explain how the overwhelming bureaucracy that teachers face and structures of the school day itself prevent effective use of computers. They argue, then ask:

> Simply having access to computers and learning to use them as tools is only part of the story of educational use of computers. To what degree are they actually employed as sophisticated teachers' aides and integrated into instruction? (Tyack & Cuban, 1995, p. 125)

Unfortunately, not much, by their assessment, or more recent reports (e.g., Education Week, 2007). Selber suggests that, at least in part, adopting a more robust approach to teaching with technology from a multiliteracies persepective is difficult because such an approach requires an over-lapping series of decisions at the technical/infrastructural, pedagogical/individual, curricular/departmental, and overall institutional levels (Selber, 2004, p. 186-7). When viewing the entire system in which a teacher must work, integrating technology into one's teaching in ways that are pedagogically sound and align with one's personal, departmental, and institutional goals and abilities becomes a significant undertaking.

To put this in more concrete terms, Zhao et al. discuss salient factors necessary for teachers to successfully integrate technology into their classroom practice in the form of the innovator (the teacher), the innovation (the technology-based project), and the context (the school's technical and human infrastructure):

- The **innovator** must have knowledge of technology, feel that technology is pertinent to his or her teaching, and understand the organizational and social culture of the school;
- The technology **innovation** in which the teacher engages students must align with the overall school culture, the available resources, and the teacher's current teaching practices, and;

- The **school's technical and human context**, as well as the organizational culture, must promote technology integration. (Zhao, Pugh, Sheldon, & Byers, 2002)

If these factors align, argues Zhao et al., then teachers will generally succeed with technology integration. If they do not align, as is often the case, then the project is more likely to fail.

Thus, if participants were to take the multiliteracy practices learned in our project and adapt them in their own school setting, that is as the New London Group suggests, to "to re-create a discourse by engaging in it for... real purposes," then considering what they had accomplished over the past year and determining what they wanted to attempt in the second year would be important. That is, I wanted to continue discussing the ways in which participants perceived what they had done with their digital portfolio in the first year as they moved into Transformed Practice in their second year. If they were to succeed at learning multiliteracies, then they would need to somehow transfer that learning back into their own school contexts. Again, it is worth noting the generally difficult task that effective technology integration becomes in schools, even in the hands of the most skilled teachers, as that will be a recurring theme in this chapter.

Finally, also worth noting, although I will not elaborate on it in great detail until Chapter 7, are the overarching themes of collaboration and collegiality that permeated our work in year one. "Professional learning communities," like technology integration, are a ubiquitous part of the discussion of school reform, and I feel that the lack of shared purpose and regular meeting times for our group shaped participants' experiences in year

two, a point worth discussion near the end of this chapter and into the conclusion of this dissertation.

A Snapshot at the End of Year One

At the end of the 2004-05 school year, I gathered another set of data in order to gauge the participants' self-perceptions of what they had learned and what they might do in the next school year. To do so, I invited everyone to make a presentation about their teacher research at the Writing Center in early June, 2005. At that meeting, I had them complete a follow-up survey modeled after the one from the fall, turn in a current digital draft of their portfolios, and offer a twenty minute presentation of their portfolio and teacher research to the entire group. While I will briefly state here—and elaborate in the rest of the chapter—that they all found the project a significant personal and professional learning experience, the survey and numerical snapshot of their portfolios also give an indication of how they felt about their work.

First, Table 6.1 summarizes the post-survey data about participants' perceptions of their technical skills as compared to the beginning of the project. As first described in Chapter 3, the pre-project survey asked participants to rank their confidence levels with particular technologies on a four point Likert scale, with four being the highest. Recall that none of them felt particularly confident in their ability to design a website before our project began, nor had they really used blogs. I present the table here with the post-project average of the exact same confidence survey, with the percent change listed in the farthest right column.

Skill/Application	Pre-Project Average	Post-Project Average	Percent Change
General Computer Use (e.g., creating documents, saving files)	4	3.8	-5%
Word Processing (e.g., Word)	4	4	0%
Email, including attachments	4	4	0%
Presentations (e.g., PowerPoint)	3.8	4	5%
Basic Internet Browsing	3.8	4	5%
Taking Digital Pictures	3.2	3.4	6%
Spreadsheets (e.g., Excel)	2.6	2.8	8%
Using a Scanner	2.4	2.2	-8%
Desktop Publishing (e.g., Publisher)	2.2	2.8	27%
Basic Web Site Design (1-10 pages)	2.2	3.4	55%
Adv. Int. Brows. (e.g., databases)	2	2.6	30%
Brainstorming (e.g., Inspiration)	2	2.2	10%
Photo Editing (e.g., Photoshop)	1.8	2.8	56%
Course Sites (e.g., Blackboard)	1.8	2.2	22%
Participating in Blogs	1.6	3.4	113%
Managing Websites	1.4	3.2	129%
Adv. Web Site Design (10+ pages)	1.2	2.4	100%
Using FTP Software	1.2	2.4	100%
Creating Audio Files	1.2	1.6	33%
Creating Video Files	1.2	1.6	33%

Table 6.1. Comparison of Pre- and Post-Project Skill and Application Confidence Survey on a Four Point Likert Scale

Given that our group had been participating in a group blog and had spent time in Overt Instruction related to website design, the gains in participant confidence for these skills makes sense. Two items that strike me as I review these final surveys are the fact that 1) one participant rated herself at a 3 out of 4 for "General Computer Use," thus lowering the overall score to 3.8 out of 4 and 2) that many of the multimedia skills in which I had hoped participants might engage (using a scanner, photo editing, or creating audio and video) were not skills that they felt particularly confident in at the end of the project, despite the fact that three of them each engaged in at least one of these processes. Despite the expected nature of result, I argue that it is still significant to see a 100%

growth in the four core competencies of participating in blogs, designing and managing advanced websites, and using FTP software for uploading those websites.

Second, Table 6.2—an extension of the table seen in Chapters 4 and 5—summarizes the changes that happened over the course of the year for all five of the participants' portfolios. Like the results of the winter tally, each participants' site increased in size; Nicole's total page count, remember, is slightly misleading in that she was adding samples of student work to her existing pages rather than adding new pages. Also of note:

- Anne included one multimedia element, an iMovie that one of her students created and filmed as a one-act play;
- Becky L., based largely on her experience seeing others in the group post student work, added five more samples to her webquests;
- Becky S. created sixteen Flash-based banners for different parts of her site as well as sixty-seven external links, most for her student resource portal;
- Nicole continued to expand her website relying on a template based on tables, thus figuring out a way to quickly update her students' work; and
- Tara (as well as her parent volunteers) typed up nearly 500 samples of student writing that became the centerpiece of her digital portfolio.

In short, the participants were continuing to design and add to their portfolios throughout the year, and especially at the end.

	Pages (Total)	Instances of Student Writing/Projects	Images of Students	Other Images and Graphics	Other Multimedia	External Links	Pages listed in Navigation
Anne							
Fall 2004	13	3	0	0	0	0	4
Winter 2005	52	26	8	3	0	0	11
Spring 2005	60	26	8	7	1	7	11
Becky L.							
Fall 2004	12	0	0	1	0	0	4
Winter 2005	16	2	0	8	1	60	5
Spring 2005	29	7	6	14	1	83	5
Becky S.							
Fall 2004	0	0	0	0	0	0	0
Winter 2005	14	0	5	0	0	0	9
Spring 2005	61	49	26	22	16	67	12
Nicole							
Fall 2004	9	0	3	1	0	0	8
Winter 2005	9	116	30	2	0	0	8
Spring 2005	9	162	45	2	0	0	8
Tara							
Fall 2004	7	0	0	1	0	0	6
Winter 2005	33	219	31	10	0	13	
Spring 2005	94	692	32	18	0	51	
Totals							
Fall 2004	34	3	3	2	0	0	16
Winter 2005	91	144	43	13	1	60	33
Spring 2005	159	244	85	45	18	157	36

Table 6.2: Content of Participants' Digital Portfolios, Fall 2004, Winter 2005, and Spring 2006

Moreover, they began to change their perceptions about literacy as well as what was possible for their classrooms in the next year. Anne's discussed how her students composing multimedia texts changed her thinking about what it means to be literate.

> Lastly, coming off a great RCWP summer, I really had "other fish to fry" when it came to trying to incorporate a lot of technology into my classroom. Nearly everyone in RCWP gave me another technological tool to use, but I simply didn't have the time or motivation to put into it. **Now, because of our research, blogging, discussing and work on the DPs, I am really excited and much more comfortable about thinking outside of the text box.** I felt before that it

> was my duty to protect the written word--you know, the one that is plain black text on plain white paper and in a book you can hold and put in your school bag. I no longer feel that we're losing something sacred if the literature looks different. It's showing up in my lesson plans, and I'm having great conversations with my students about how and why we write and revise what we do. (Anne, Blog Post 234, 3/4/05, emphasis in original)

As the New London Group, Street, and Selber remind us, conceptions of literacy are ideological. For Anne, as well as the rest of the group, to consider broadening their original definitions of literacy—all of which were largely based on traditional texts—as a result of our work suggests that engaging in the Pedagogy of Multiliteracies can lead to Transformed Practice as literacy learners and teachers. Schools, however, function in a particular ideological context, and transferring this new found knowledge and practice back to that remains a challenge.

Reconsidering how the group functioned also serves to remind us of the ideological nature of schooling and the typical types of support teachers receive there, if they receive any at all. Becky L. offers her feelings about the group as a motivating force and how, if it were to dissipate, she might not find the time to keep working with technology in the way she had that year:

> I think if we did not stay together as a group, if I didn't have that peer support and knowing that we had to meet here [at the Writing Center] every third Saturday or something like that, I don't know if I would do it [keep up with the digital portfolio]. I think that I need the peer group and the support to do it just because "I have to go, this is what I have to do, we have to be here and have scheduled time as opposed to..." [trails off]. I think that we would all love to go on to do it, but I also think that we all volunteer for so much and we all do so much that I don't know that it would necessarily happen if we didn't keep together as a group and say, "OK, come here on such and such a day and we will talk really briefly about what we did, what we want to do and where we see it going." So, I would like to keep doing that, I would like to stay connected in some way, shape, or form, just to kick myself in the butt. (Becky L., Interview 3, Spring 2005)

Becky L.'s feelings reflect those of the rest of the participants. Of course, as a participant researcher, I attempted to ask the question about if and how they would like to continue in a way such that they had room to politely excuse themselves from the work that we would be doing for sure (presenting at the National Writing Project Annual Meeting in November, 2005) as well as other potential workshops and opportunities that we might engage in. Yet, all of them said that they wanted to stay connected in some way to the group, a signal to me that the community of practice that we had built offered them the kind of support and encouragement that they could not get in their own schools.

Finally, each of them noted ways in which they wanted to continue to use technology with their students in the next year. Anne wanted to continue to expand her digital portfolio to share more student work and make it more applicable to her students. Becky L. wanted to continue using and expanding the webquests on *Romeo and Juliet* and the Holocaust. Nicole and Tara both discussed the idea of using blogs to have students post their writing. Lastly, although she was moving into a new role as an assistant principal and part-time media specialist, Becky S. hoped that she could get her students engaged in a technology rich project so as to improve all of their literacy practices, mostly reading and writing. In other words, all of the participants aimed to transfer some of their learning back into their particular context and continue to transform their practice in the process of doing so.

This praxical approach to learning is, however, not without its problems, most notably the fact that working with a small group of interested, RCWP colleagues at the Writing Center—a site that values technology and literacy—is not the same as working in one's school. Here, I am reminded of bell hooks' understanding of a critical, praxical

pedagogy in which a teacher opens her students eyes to the injustices of the world and then the students (as well as the teacher) have to deal with the painful consequences of this new awareness (Hooks, 1994, p. 69). It is with this in mind that I now turn to a series of follow-up interviews complete one year later, in the spring of 2006, and offer a brief glimpse into what each participant did over the 2005-06 school year to implement her multiliteracies learning into her pedagogy.

Transformed Practice(?): Participant Snapshots at the End of Year Two

In the fall of 2005, I interviewed participants again in order to get some sense of their plans for the year. During that year, two other developments unfolded for us. First, all of us but Becky S. were able to travel to Pittsburg in November present our work at the National Writing Project's Annual Meeting. There, I was invited to contribute an article to the *Journal of Adolescent and Adult Literacy*'s themed issue on electronic portfolios. This invitation resulted in a mid-March deadline for and eventual acceptance of our second collaboratively written article, "Rethinking the Purposes and Processes for Designing Digital Portfolios" (Hicks et al., 2007). While our group's work was not nearly as in-depth and consistent as it had been while they were all enrolled in and trying to complete ENG 896 the year before, I did make a conscious effort as a participant researcher to honor their requests to continue working together. In the last stage of what I am reporting in this dissertation, I interviewed them one final time in the spring of 2006, nearly two years after our project began. Here, I offer a brief summary of what happened with each participant, followed by a discussion of why and how they were able (or not able) to transform their teaching practice.

Anne's Self Perceptions: "Technology is a lot more doable now."

In working with her students to design hypertextual and multimodal compositions, Anne had chosen a teacher research project that would engage students in a multiliteacies approach, and felt a great degree of success in doing so. Yet, she continued to run into resistance in the context of her school, both with the technology available to her and the general response that many of her colleagues offered to her students' compositions. Over that second year, she did not make any revisions to her portfolio, largely because her district's IT department—after multiple requests and attempts to justify doing so—would not download and install Netscape Composer on her classroom computer, the place where it was most convenient for her to work.

Moreover, she couldn't easily get her students to engage in such composition practices either. Although she did invite them to create slide shows as part of a research unit and the fact that they had ready access to a lab, there were still problems. Anne noted:

> I think we have access as far as getting into the lab, but, again, what we're allowed to do seems pretty constrained with what the district's gonna [trails off]. Several times I had students, we were looking at different websites for a Native American Unit and they weren't technically webquests, but the students would – I'd give them some ideas and they would do a little research with websites. And, um, "Oh, Mrs. Russo this is blocked." You know, it seemed like so many things were getting blocked and I understand that the district has to be really careful about that, but it's kind of frustrating when I can pull mine up on the digital image projector and that's about all they can do." (Anne, Interview 5, Spring 2006)

Thus, she did not do any hypertext writing with her students in the 2005-06 year, most notably because the original group she worked with for her teacher research was for an honors project that had taken place after school. In short, the logistics of her teaching load as well as lack of access to the technology she needed stymied her work.

Anne went on to suggest that there was an inherent conflict in the public position that her district took as technology advocates and the experience she was having as a teacher:

> I'm really frustrated with what our district kind of allows and doesn't allow. And, I understand it, but they keep pushing for technology initiatives. Well, you know, they bind our hands so much that it's difficult. So, I am thinking maybe some of the tools that we just talked about [the photosharing site <www.flickr.com> and social boomarking site <www.furl.net>], and getting a new website up, and maybe doing some blogging. I can see so many journals and writing prompts that we do just on a regular basis just that the kids could go home or go to a lab and I could look at all of them online and the paper load would be much better. (Anne, Interview 5, Spring 2006)

While she had pedagogical purposes in mind for using technology, Anne could not bring her vision into the reality of her teaching life. In her case, the social and technical capacity of the school prevented her from transferring her multiliteate understanding of the composition process—a process that involved hypertext and multimedia—into practical teaching activities. Although there were no major changes to portfolio, Anne suggested that "[Technology] is a lot more doable now" and that she wants to continue to learn about technology so that she can talk intelligently to the IT department and advocate for certain uses, such as blogging.

Her experience confirms Zhao et al.'s argument that "technology standards be expanded to include the social and pedagogical contexts and implications for teaching" (p. 511). As an interesting footnote to Anne's story, it is important to note that Michigan has in the past year adopted a sweeping high school reform initiative that requires, in part, an "online experience" that can consist of teaching with blogs, wikis, and other social technologies such as the ones that Anne suggested she wanted to use. Her understanding of Transformed Practice and teaching digital writing, in this case, are now

reflected in these standards, although I have to wonder if the culture of the school has changed in any significant way to reflect these new standards in practice.

Becky L.'s Expanding Web Presence: "You can't really mess it up."

Becky L. had reflected on her experience at the end of the first year as one of continual growth and one that would continue to be a part of work the second year. Becky L. continued to use her digital portfolio's original two webquests and developed a third on Elizabethan England. She was also invited by her principal to be part of a pilot website for the school in which teachers had a personalized homepage that they could update with assignments and announcements. As she reflected on the design options available to her through these two different spaces, she talked about why and how she might use one instead of the other.

For instance, with her digital portfolio, managed through her MSU webspace, Becky L. felt as if she had more control and was able to make the site more of her own. In particular with the Elizabethan England webquest, she broke from the original design of her digital portfolio template, created a new color scheme and consciously integrated (and cited the sources of) pictures that illustrated the concepts that she was trying to share. She incorporated principles of visual literacy that we had discussed as a group and felt that building her own site made her want to "know more about the possibilities" of web design. As Figure 6.1 shows, Becky L. was able to synthesize a great deal of her learning about design in relation to contrast, font, and color, as well as effective online pedagogy into this opening page of her webquest.

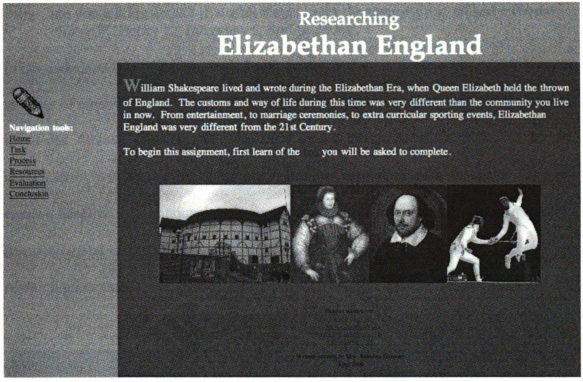

Figure 6.1: Becky L.'s Elizabethan England Webquest Homepage

By comparison, Becky L. found the school website that she was asked to work on a little stifling in terms of her creativity. Like most database-driven content management sysmtesm and especially ones that are designed for schools, her website has a standard design and content is displayed in a similar manner from page to page, despite the best intent of the teacher to compose something more engaging. This has benefits, however, as Becky L. explained how she felt about the project:

> Well, at first when they asked me to do it [pilot the new district website] I was really excited. But, then when I got here [to her homepage] and I saw this [the interface for changing her site] [pause] well, uh, I don't need a day's worth of PD to learn how to fill this out. Fill in the blanks is basically what we are doing, we are filling in the blanks. And, to be honest, there are some good things about it... [she lists the fact that parents can access it easily, she can create surveys, the ease of uploading documents such as power points, and the archival abilities of the site]. It's easy. You can't really mess it up. So, time management-wise, this one [as compared to my digital portfolio] is better. As far as individuality and stuff, people are like, "Oh, your website looks so good." And, I want to be like, "What

are you talking about? [Laughs] Yours looks the same—I just picked different clip art!" (Becky L., Interview 5, Spring 2006)

In her understanding of design, then, Becky makes the point that loss of control equates to a loss of creativity even though there are some benefits associated with the template-based site. A recent snapshot of her page in Figure 6.2 does, however, show that she has some control over the content of her site in that she has embedded some HTML code to create a headline look announcing the upcoming research project. Note her use of HTML to embed a Star of David image as well as enlarge and color the font announcing her research paper unit.

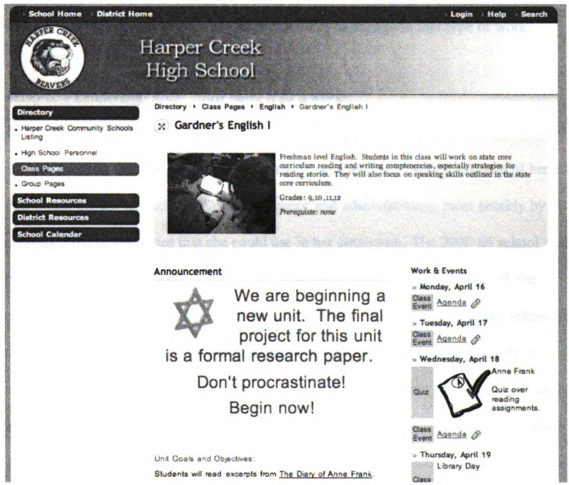

Figure 6.2: Becky L.'s School Site – English 9 Homepage

When I asked in her final interview how she would define a digital portfolio, she responded by saying that it is "[t]ruly whatever you want it to be," a broad definition that had been a common response during many of our group's previous conversations. She ended the interview by suggesting that the school site was not a part of her digital portfolio, per se, but that she could include a link to her school site as an example of her professional work. She also stuck to her definition of literacy as being able to read and write, citing the poor grammar skills of her students as a justification for this position. All told, Becky L. presented an interesting picture of a teacher engaged in multiliteracies pedagogy: on the one hand, she embraced principles of design and hypertext authoring while on the other she wouldn't invite her students to engage in that type of work.

Becky S.'s Leadership Role: "Just make it so it works."

As mentioned in Chapter 5, Becky S. wanted to design a professional website, one that avoided looking too cute or over-stimulating. In so doing, she created sections of her site that would appeal to students, parents, teachers, and administrators, most notably by creating a list of resources that she could use in her classroom. The 2005-06 school year brought a significant change to Becky's role in the school, however, as she left the classroom for a year to be an assistant principal and part-time librarian for the school. In this new leadership role, she felt that she could use her digital portfolio as a hub of activity for the school, creating a rich set of resources for students and teachers as well as a space for announcements and other information for parents and community members. Alas, when we sat down for our interview in the spring of 2006, this plan had not come to fruition and she had not made any significant changes to her portfolio in over a year.

Although she continued to use her portfolio—as well as other technologies—in her role at the school, she described what she felt was the main reason for her lack of interest in doing any significant work with her portfolio. In the fall of 2005, she was asked by her principal to introduce her colleagues to the district's new email system and, in the same session, she wanted to share the technique for setting her digital portfolio student portal page up in kiosk mode so all the teachers could have that set in their classrooms. Needless to say, things did not go as planned:

> Getting everyone on the same page, technologically speaking, is a challenge. It is certainly a challenge in our building. Getting everyone to value the same kind of resources.
>
> [Further on in the interview, she continued] I know that people use the internet in their class rooms. Every single website that they use is on here [the portal page] because there are a couple that every body likes them and they are appropriate... People were like, "Can you come in and do that [set up their internet browsers in kiosk mode with this as a homepage] for me, can you come in and get my computers set so they are ready to go?" So, it was definitely an idea of, "Don't bother telling, don't tell me. Just come in and do it for me" because it was too much [It was like,] "Just make it so it works. Get out your wand and wave it and make it be so." (Becky S., Interview 5, Spring 2006)

This kind of attitude bothered her, and she felt that "[t]here are a lot of roadblocks with people's attitudes and what they value technology-wise as compared to what I think they should value." She then described how four new computers came into the school at the end of the school year and how she asked the custodian to set them in an inconspicuous place so that she could save them for her return to the classroom the next fall. When faced with a school context in which technology was both difficult to use and, consequently, not valued in the same ways by her colleagues, Becky S. began to work alone to use technology in ways that she found valuable. She shared that all the teachers in her building had a computer and internet access at home, yet that she felt none of them

were teaching with technology; the gap, as she put it, was between simply using technology, and teaching well with it.

As would be expected, Becky S.'s portfolio became of little importance to her after this failed attempt early in the year to convince her colleagues to use it and as she took on other duties in the 2005-06 school year. In terms of wanting to maintain the portfolio, she summed up her feelings about it like this, "I think that there has to be a need... perhaps an urgent need" to work on the portfolio. She described this need in ways that were both classroom-based and personal, in that she would use it with her students and have a reason to redesign the site. This is not to say that Becky S. didn't use technology in her role as an assistant principal; in fact, she partnered with RCWP's Director, Janet Swenson, to implement a grant that created a writing center in her school that allowed every child to write and publish his or her own book in the spring of 2006. So, even though she stopped working on her portfolio, she was able to transfer her interest in using technology to support learning into other aspects of her teaching practice and in support of student learning.

Nicole's Understanding of Writing and Technology: "Challenging, but worth it."

Nicole's goal for the 2005-06 school year had been to continue working with her students to publish their work online. As she worked with our blog in the 2004-05 school year and blogs became more and more a part of discussions in educational technology in general and at RCWP in particular, Nicole (as well as Tara, whose experience I will describe below) moved her students' work to a blog which she still maintains regularly (http://lergpoetry.blogspot.com/). Despite the coherent organization system and scalable table-based design that she had created for herself, posting to the blog allowed her a

number of affordances that posting to her digital portfolio did not. In particular, I summarize from Interview 5 with Nicole a list of the many things she said that the blog allowed her to do:

- Create an initial post and having students continue to add comments to that post, thus inviting students into the process of reflection and response;
- Post one poem each week and, in turn, have all students posted at least one time throughout the year (because she began posting at the beginning of the school year, rather than having to double and triple up the posts like she did in her original portfolio); and
- Archive the work through the blog's internal time and date stamping.

She wasn't able to include pictures of students or create an internal navigation system that she liked (clicking back to the top of the page, for instance), but she felt as if the blog offered her new opportunities for sharing her students' worked. She also shared her feelings on having built a digital portfolio originally, noting that building a website from scratch was helpful so she understood the basics of HTML, especially when something was not working correctly behind-the-scenes in the blog. This recent snapshot (Figure 6.3) of her blog shows how it is laid out and, while it provides links to previous posts and easy access for students to comment on their own and others' work, Nicole is still not happy with the overall design of the site in that she can not create internal links and easily add pictures in the ways in which she was accustomed to doing so in her digital portfolio.

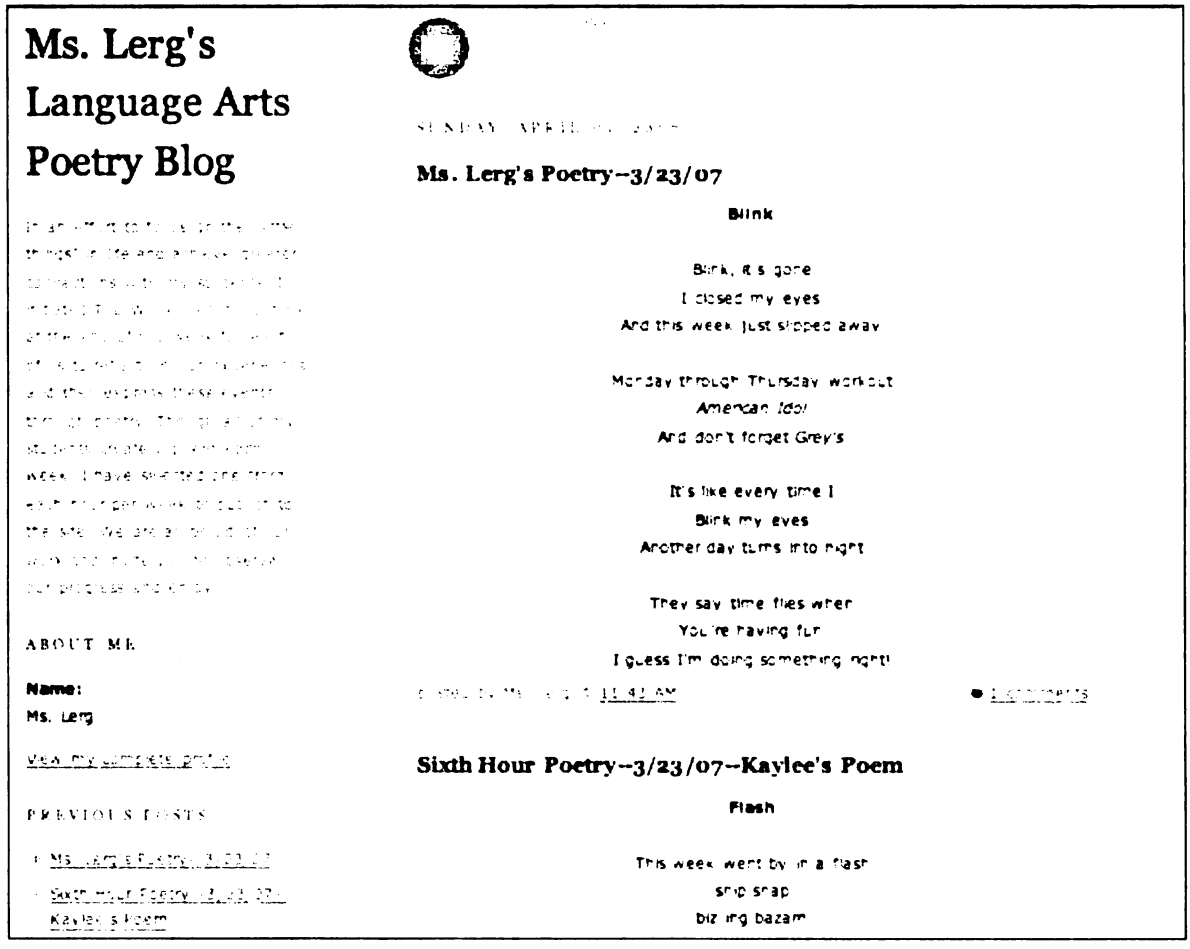

Figure 6.3: Nicole's Student Poetry Blog

When I asked her in the fifth interview what habit of mind she would carry with her from this process of designing and maintaining a digital portfolio, Nicole suggested

> I think the biggest one [habit that I will carry with me] is publishing online. I know we talked so much before about being careful and [how] you open up your audience. But... every child gets asked before theirs gets put on there [her blog]... I think I will definitely carry that in to the future because that's important to them. With all these things where they can go on—three clicks and they have their own MySpace—kids like to be online. They like that feeling. And, so I think that even just to be able to know that that's [her blog] out there and that that's available to them when they have me as a teacher, that's important, I think. (Nicole, Interview 5, Spring 2006)

She continued by talking about how using technology seemed to stimulate students and engage in the composing process in ways she had not experienced before using a digital

portfolio or the blog. When asked about the entire process of learning web design, doing the teacher research, and continuing to publish student work on the blog, she replied that it was "[c]hallenging, but worth it." She also expressed an interest in doing an inservice on blogging for fellow teachers at her school, in effect taking her multiliteracy learning and becoming the expert in her own cultural context.

This type of professional learning and change requires a certain degree of motivation and ownership, she also suggested. Yet, for someone who had "a bad taste" in her mouth about designing websites based on her experience as an undergraduate, Nicole certainly began to understand how to both create websites and effectively blend the use of them with writing pedagogy. Along with working with the teachers in her own school to do this type of work, another pertinent postscript to Nicole's story is that she now regularly presents professional development sessions for RCWP and often talks about how to integrate technology when leading these workshops. Challenging, but worth it, indeed.

Tara's Transformed Teaching: "I don't think I could teach a class without a blog"

As Tara thought more and more about what she wanted to do with her class during the 2005-06 school year, she and I had many discussions about blogging. And, while Nicole found that using a Blogger blog sufficed because it was not filtered at her school, Tara had a stricter blocking policy to deal with as well as the fact that she wanted more administrative control over her blog than what Blogger would offer her, especially since she wanted to try to podcast as well. Thus, I installed a blog for her on a domain that I had purchased (http://room115.thedigitalpaperchase.net/) and "Room 115's Starbooks Cafe Coffee House Compositions" began in the fall of 2006.

Tara felt that the blog offered solutions to a few of her dilemmas that her digital portfolio originally presented. First, like Nicole, she felt as if the technology was continuing to change and her digital portfolio did not respond to the ever-changing, instantly-updatable writing space that a blog did. Second, she knew that trying to keep up with typing all of her students' writing would be impossible. Third, and perhaps most importantly, she saw an opportunity to teach her students how to write with a word processor, post to the blog, offer one another comments, and then do revisions—digital writing skills that went above and beyond the typical typing tutor experiences they had in school the year before. She thought that the students would have been able to do all of these things, but instead she had to consciously scaffold their learning—through Situated Practice and Overt Instruction—so that they would understand the practical and ethical dimensions of posting on the blog. For instance, they had to learn how to create and save a post, how to respond properly to others, and how to effectively revise their writing.

Although she wished she could have figured out a way to make a static front page so as to have some consistent content, she did like the fact that students could tag their posts with their names and assignments, thus making it easy to find all the work from one student or in a particular genre. Also, she dabbled in podcasting and had her students create three episodes during the year, each with regular segments on such things as "Word of the Week" and "This Week in History." While she felt like the digital portfolio had been a great opportunity for her to learn about technology, it had not been so for her students the way she had the year before. In a way, they had just been spectators to her creating the portfolio and, thus, she described the digital portfolio as "antiquated" in light of the new technology and writing skills that she could teacher her students with the blog.

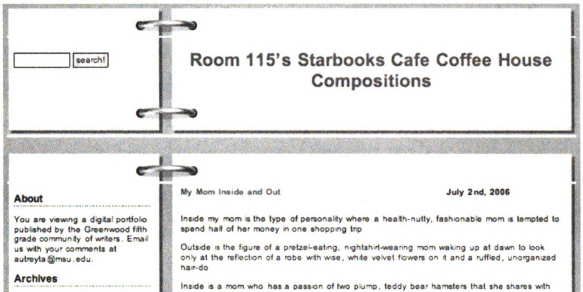

Figure 6.4: Tara's Blog for 2005-06

As she reflected on her current teaching practice and they ways in which using the blog impacted her teaching, she argued that

> I don't think I could teach a class without a blog. It became the heart of my writing program. I kept telling people the last couple of years the reason why we're doing this is so that my students have a real reason to write and I know that my writing program exploded the last two years. Whether it is just because of the technology or because of that and my genuine interest, I'm not sure what played the greater role. But, I was actively interested and working on my own writing and learning with the technology—I would say that had some small part of it. (Tara, Interview 5, Spring 2006)

For Tara, who had originally expressed a great deal of trepidation in using technology and struggled through the first draft of her portfolio, this statement suggests that she underwent a personal and professional transformation in her views about how and why to use technology. An example of why can be seen in "Categories" section in the lower left corner of the blog; this was a tool that she used to have students tag their posts with their name and the genre of writing for easier organization and retrieval. Granted, this superlative claim came in the middle of our interview and she was animated in her discussion about the blog—and she later noted that she *could* teach without a blog, but would prefer not to—but it speaks to the ways in which working with the group and designing a digital portfolio gave her the confidence she needed to be able to do this type of work with her students.

In thinking about how her views changed over the course of the project, Tara described the changes in her beliefs about literacy.

> Before doing this research project, being literate was the basic definition: being able to read and write. And, many people would still say that. And that's very important, very true. But, connected to what I just said, in this day and age I think being literate means also being able to use technology to express one's self and also to understand the world around them. And, a great part of that is being visually literate, knowing—like with the political ads right now—what it is that somebody, some group is really trying to say to us and not being easily swayed by pictures and even the types of fonts that we see. The kind of voice tones... it [all] goes along with the components [of being literate]. (Tara, Interview 5, Spring 2006)

While Tara had noted many of these same themes in her initial survey response in the fall of 2004, she described her experience in RCWP in the summer of that year as one reason for moving towards a broader definition of literacy. The experience of designing and maintaining her portfolio with its explicit vision of creating a classroom community of writers allowed her the opportunity to enact some of the practices that she had learned

about. Technology became a part of her literacy practices and, in her words, should be "a partner with what we are doing with our curriculum." For Tara, she being able to take her new understandings back into her school setting and, despite a number of technical hurdles that she faced with the computer lab at school, Tara was able to adapt her new understandings of technology and literacy into her pedagogy.

Conclusions

If, as the New London Group argues, Transformed Practice occurs when "we try to re-create a discourse by engaging in it for our own real purposes" and, as Zhao et al. contend, the teacher, the project, and the school context must align in order for technological innovation to occur, then the stories of these five participants offer a continuum of how and why that discourse may or may not work in individual contexts. Whereas Anne and Becky S. were stymied by their infrastructure and responses from their colleagues, Becky L. was at least encouraged and Nicole and Tara flourished. While Anne, Becky L., and Becky S. acknowledged the vision that students should be reading and writing multimedia texts, Nicole and Tara invited students to begin blogging.

While all five of the teachers were willing to be part of the group during the 2004-05 school year during ENG 896—and despite our best efforts to do so—our work as a group in 2005-06 fell to the wayside and they were left to work again in relative isolation in their school contexts. It is difficult for me to pinpoint exactly why this group dissipated after our final presentation at the NWP Annual Meeting in November 2005, yet I also know that each of them continued to grow their technology skills and work in their own schools. For instance, Nicole began to and continues to blog with her students. Tara began volunteering her technology skills in a local school while on maternity leave. Aram

is now one of the co-Technology Liasons for RCWP, leading a number of professional development workshops and youth programs. Finally, and perhaps the most personal of all the examples, Becky L. has begun a blog for the baby she and her husband are expecting! Even though our group doesn't work together on a regular basis, the teachers involved are still using (or using even more) technology in their own personal and professional lives in large part due to the technologies we explored in this project.

As I have organized the conclusion section of previous chapters, I will briefly discuss some of the implications for portfolio construction and maintenance, engagement with technology, and teaching practices although I will do so in a more holistic discussion rather than in a point-by-point list. Of interest here are all the ways in which the participants felt confounded by their school contexts, and thus not able to recreate the literacy practices that they had worked so hard to learn the year before when supported by the group and working directly on the digital portfolio. Like DeVoss, Cushman, and Grabill (2005), who argue that infrastructure and social context "make possible and limit, shape and constrain, influence and penetrate all acts of composing new media" (p. 16), I also believe that the act of transferring their work back into the cultural sites of schools is particularly difficult for K-12 teachers in that they are generally not allowed the freedoms to pursue curriculum and enact pedagogies in the ways that a multiliteacies perspective offers. In short, despite their best efforts to change, the "grammar of schooling" (Tyack & Cuban, 1995) and attitudes towards technology continues to hamper participants. Without the group to directly support them—and the need to complete coursework as a common goal—everyone was left to enact multiliteracies in their own contexts, some with more success than others.

Because their own classrooms and teaching were never far from the groups' mind, I want to highlight five overlapping themes that developed related to their portfolios, their engagement with technology, and their teaching practices:

- **Transfer**: While Tara and Nicole succeeded at recreating new mulitliteracy practices, Anne, Becky S. and, to some extent, Becky L. found it difficult to move their learning from the group and building their portfolios back into the "different cultural contexts" of their schools because of access to hardware and software
- **Perception**: All of the participants noted, to some degree or another, their school colleagues' outright ambivalence or limited perceptions about the value of technology as it relates to literacy.
- **Evolution of Technology**: All of them made note of evolving technologies, especially blogs, as a way to make their sites more interactive. Tara and Nicole created blogs for their students, and Becky L. moved most of her work to her school's content management system.
- **Rhetorical Situation**: All the participants noted the ways in which their thinking about what constitutes a digital portfolio had changed. While there was still some element of "anything you want it to be" that permeated our discussions, they all discussed the ways in which different parts of their online persona (a blog, a class website, and a digital portfolio) could be used for different audiences and purposes.
- **Professional Development**: All of the participants agreed that typical models of professional development did not allow for the types of sustained, contextual

interactions that these participants experienced and found valuable in our own blog and face-to-face meetings the year before.

If, as Selber suggests, systematic changes in technology, pedagogy, curriculum, and institutional values must happen in order to support a broader vision of multiliteracies in action (2004, pp. 186-7), then these teachers' experiences once they returned fully to their school contexts does not bode well for lasting change in K-12 technology and teaching practice. I will take up this issue more fully in the final chapter.

For now, it is worth spending a moment more looking at the positives that came from this project. In each of their experiences, the participants seemed to agree on one thing—the time spent together as a group was both personally and professionally valuable. Perhaps Becky S., who took some of the original language from her blog post cited earlier, summed it up best in our article for *English Journal*:

> As we integrate teacher learning into our projects and individual DPs, we have completed a cycle of profound learning and shifted our paradigms to include technology as a wholly integrated part of our classrooms. Participating in this group is more than just the normal professional development routine; designing a DP is so much more than just creating a Web site. It requires a presentation of our new knowledge—from our use of technology to our use of research methodology—to encourage collegiality and satisfy our creativity in teaching through technology. (Autrey, Cathy O'Berry Edington et al., 2005, p. 70)

While I would like to claim all the responsibility for this new understanding that participants gained, it is the Pedagogy of Multiliteracies model that allowed each of them to bring their individual strengths to our work, for collaboration to occur, and for all of them to better understand their own literacy practices in light of their learning and critical reflection. How can teachers use these new literacies strategically and intentionally both in their classroom with students and within their larger school community? It is with this vision of "profound learning" that I move towards my own vision of Transformed

Practice as a teacher educator, a vision that I will articulate in the next and final chapter of this dissertation.

Chapter 7: Conclusions and Implications

> In short, the portfolio would be not simply a means to assess growth and reflection but a vehicle for that growth and reflection. (Yagelski, 1997, p. 23)

"Digital Portfolios as a Space for Inquiry" began with the premise that a small group of teachers could each represent his or her classroom research through a personal website and, in doing so, would have opportunity to learn about technology in personally and professionally meaningful ways. Throughout this dissertation, I have noted the many experiences that participants shared, the insights they gained, and the ways in which they described changes in their technology competencies, professional learning, and classroom practice. Most notably, I feel that they changed in ways that neither they nor I could have expected, thus pointing to the multiple levels of literacy learning that occurred and the recursive nature of composing digital portfolios. Even though there may not be a one-to-one correlation from participants creating a digital portfolio and then translating a technology-infused portfolio pedagogy directly into their classrooms, our work affected them; each participant took up technologies in different and individual ways that changed her thinking about teaching, even if she could not act on that changed thinking due to infrastructural, social, or other contextual factors in her school.

If Yagelski is right, and the portfolio should serve as a vehicle for growth and reflection and not merely assessment, then I conclude that the manner in which our group worked can serve as a model for that type of digital portfolio pedagogy. We moved through the stages of the Pedagogy of Multiliteracies—Situated Practice, Overt Instruction, Critical Framing, and Transformed Practice—in a manner that offers teachers

and teacher educators a model of professional development and technology learning that can lead to lasting changes in teachers' practice.

This chapter will briefly summarize my dissertation study by reflecting on the three themes that emerged from my research question and our group's work, and will then discuss implications for future research and practice related to digital portfolio use in teacher education and professional development.

Dissertation Summary

My goals for this dissertation study, as noted in Chapter 2, were multi-fold and were meant to contribute to RCWP's overall goal of building teacher leadership capacity for technology projects. Our group aimed to:

- Learn the basics about the construction of digital portfolios;
- Engage in professional conversations about how to best represent thinking, writing, artifacts and analysis through a digital portfolio; and
- Determine ways in which digital portfolios may or may not contribute to the best practice of teaching writing and how these practices can influence other teachers and their own students.

Also, in light of the many conflicting purposes and processes for designing and using digital portfolios, as outlined in Chapter 1, one of my additional goals was to better understand how the competing needs of an authentic project (the portfolio), assessment requirements (teacher educators evaluating teachers), and accreditation (teacher education programs being evaluated) conflict and stifle learning. On the one hand, teacher educators want to engage teachers in an individually meaningful experience where they will learn technology that can then be applied to their classrooms. On the

other, programmatic accreditation needs necessitate standardization across individuals to show competency and growth. Given the primary goal of enabling teacher to utilize technology, I suggest that there is another option.

Our project offered an alternative model to the typical digital portfolio project as a tool used for a final course assessment. While that was, to some degree, the case that the teachers created these portfolios in order to be assessed in ENG 896, I argue that they each took up the creation and maintenance of their portfolios in personally and professionally significant ways. That is, they began to develop their portfolios as a part of their professional identity and not merely as a means to earn a grade. The portfolios had multiple audiences and purposes, and they were revised in light of new understandings that the group discovered about digital and visual rhetoric. In many ways, I feel that we set out what I had hoped to accomplish when I first framed this model of digital portfolio development through an article I originally wrote in the summer of 2004, before our group's work began:

> Through reflection and conscientious design, teachers will be able to make informed choices about how to meet teacher education standards and will critically use technology to create a portfolio that is both intellectually solid and aesthetically pleasing for themselves, their instructors, and the many audiences that they will encounter in their future teaching careers. (Hicks, 2005, p. 220)

In approaching portfolio design from this rhetorical perspective (as Yancey would suggest) and also by infusing functional and critical literacies (as Selber would suggest), we were able to utilize the Pedagogy of Multiliteracies model to pursue our own personal and group goals. As I noted in Chapter 2, our group explored three main themes—portfolio construction and maintenance, teacher engagement with technology learning, and transfer into teaching practice—themes that I will elaborate upon below.

Summary of Research Questions and Themes

From my work with this group, I argue that teachers are better able to learn and adopt technology into their teaching when their purposes for learning this technology are broadened through discussions of design, rhetoric, and inquiry to include a multiliteracies approach. Rather than merely going through steps of ineffective technology professional development, a process such as ours that encompasses these broader aspects of literacy learning can lead to transfer of new literacies and technologies into one's teaching practice. Why and how is that? The process of constructing a digital portfolio from a design-based approach that integrated teacher research has yielded a number of insights about individual preferences, group collaboration and response, and participants' school contexts that simply uploading artifacts to a template likely would not have facilitated. As I see them, digital portfolios—documents that are as a beginning point meant to be generative, reflective, and indicative of one's technological competencies—can foster the types of critical and creative thinking that I feel this approach has developed for this group of teachers with whom I worked.

I came to this conclusion based on the three main themes that we explored throughout our project, each of which I will elaborate on the next three sections: portfolio construction and maintenance, teacher engagement with technology, and transfer into teaching practice. Participants took my initial questions for the project and translated them into overarching themes that guided our work, individually and collectively. In the end, I feel that the questions changed for me because of the group's influence, and that contributed to my understanding of these themes. In conclusion, I will suggest implications for teachers and teacher educators in their own work with technology and literacy in their own contexts.

Theme 1: Portfolio Construction and Maintenance

As our group worked and discussed the many ways in which they designed and maintained their portfolios—from careful planning to spontaneous decisions, from weekly updates to periodic overhauls—I sought to better understand this question: Given that digital portfolios created in teacher education courses tend to stagnate or dissipate over time, what does a model of sustained, on-going support look like for teachers to help them think of portfolios as meaningful, living documents? I contend that there are three factors to such a model of support in order for teacher to perceive them in this manner.

First, all of the participants felt that the *process* of designing and maintaining their portfolios was useful for them as they learned specific details about technology, worked in a group, and reflected on how to implement this work in their classrooms. Through this process, they were able to participate with a like-minded group of colleagues who were able to break free from the "grammar of schooling" and imagine what their digital portfolios could be, with all the messy questions about technology and the ethics of teacher research being bounced around amongst a group of peers who would actually listen and respond to them. Rather than being a one-time workshop with a pre-set portfolio template, the recursive nature of our work and the focus on larger professional goals such as writing an article and presenting at professional conferences meant that the portfolios—and the teachers themselves—were able to (and, in some sense, were invited to) keep growing beyond an introduction to digital portfolios. Their portfolios became part of their professional personas, not simply a project they had to complete for class.

Second, the group consciously focused on the act of digital composition, especially related to visual rhetoric. In taking this broader, design-based perspective on literacy learning, the participants began to see their digital portfolios as purposeful,

audience-centered documents. The ways in which they chose to represent student work and images, create internal navigation, provide external links, and create aesthetically pleasing designs complemented what they were attempting to do with their teacher research projects. In so doing, they composed documents that were multi-modal and multi-faceted, meeting their own needs as well as those of students, parents, and administrators. In creating these online identities, they also thought through the ways in which their own students could and would represent their work as well.

Third, a final aspect of the community of support that they built and shared in the first year came through in the second year in that they all kept up with technology in some way. Even though none of them made significant revisions, if any, to their original portfolio, all of them reported using and thinking about technology in different ways in their classrooms and with colleagues at school. Tara and Nicole began using blogs, thus continuing to extend the audience for their students' writing. Becky S. and Anne made attempts to bring technology to their schools and were stymied, but continued personal learning. Becky L. was able to adapt her learning into a new online course management environment. In the New London Group's terms, participants showed evidence that they transformed their practice, even if in only a very slight way because of social or contextual interference, especially related to infrastructure.

In the end, the process of creating and maintaining a digital portfolio may not have in and of itself continued after participants completed the first year and ENG 896. Yet, the habits of mind that a functional, critical, and rhetorical approach to literacy learning engendered remained.

Theme 2: Teacher Engagement with Technology

Beginning with the assumption that teachers must have a personal investment in the technology that they are learning, and noting that I was working with a highly motivated group of teachers, I feel that there are lessons to be learned from this group that can apply to other teachers in different contexts such as teacher education courses and professional development workshops. Based on our work, and noting that teachers often struggle to integrate technology learning into their pedagogy and access to many technologies is limited in certain school settings, I wondered how we could develop a disposition towards technology, a habit of mind framed through the Pedagogy of Multiliteracies, that would allow participants to critically and skillfully merge technology with their teaching lives. To build off of the discussion above, I argue that teachers who have more individual say over their technology learning—and the access to the infrastructure to support this learning, including open access to hardware and networks—were better able to learn about and implement technology into their own teaching.

In all five cases, the participants made decisions in their first and second year about how to engage in the digital portfolio construction process based on the access that they had to certain technologies at home and at school in general, as well as throughout the school day in their classrooms. In one of the worst cases of how participants were stifled, Anne could not get her IT people to install the free Netscape Composer on her classroom computers, thus preventing her and her students from composing hypertexts at school. In one of the best cases of how teachers were supported, Tara was able to introduce blogging and podcasting to her students, eventually earning acclaim both within her school and in the local community. All of them were able to transform their practice only to the extent that their context would allow it.

Thus, if teacher educators want to create teacher buy-in and help them work in their own contexts to integrate technology into their teaching, I suggest that we have a firm grasp of the contexts in which teachers work and advocate for the types of hardware, software, and networks that will support digital composition. Teacher educators cannot take for granted, for instance, the unfiltered interent access and administrative privileges we have on computers on our campuses and then expect teachers to be able to integrate technology in the same way in their schools. As a result, teacher educators should actively search for and use free web-based applications as well as open source software, especially to the extent that we can invite teachers to compose multimedia and hypertextual documents with these websites and programs so they can do the same with their students.

We also need to think critically about—and help teachers gain a language for—understanding how to talk to their colleagues, administrators, and IT departments. As Anne put it in her final interview, "[w]e don't have the vocabulary" to talk about what technology we need nor who to explain the rich multimedia work in terms of standards and benchmarks. This problem has come into sharper focus in the statewide context of Michigan's new high school content standards, technology standards, and requirement for an online experience before graduation. In order for teachers to teach with these new literacies and technologies as a part of their classrooms, they need to first be personally invested in using them. In order for that to happen, they need to have more control over their own technology use in schools. Gaining, in the New London Group's terms, the metalanguge of technology would offer them ways to begin these conversations with the IT departments and administrators in their schools.

Theme 3: Transfer into Teaching Practice

The final theme that we explored began as a question about how teachers could implement digital portfolio pedagogy wholesale into their teaching. Yet, over the course of our project, I reframed that question to ask the following: In thinking about the unique demands that teachers face as they try to represent their work to different audiences and for different purposes, what are the rhetorical, institutional, and political implications of teachers putting their work online in a digital portfolio? Since the time of this project, educators and parents have become more acutely aware of these issues because of social networking sites like MySpace, Facebook, and YouTube. Yet, when we were doing our work during the 2004-05 school year, none of these sites—nor the term blog, wiki, or podcast—were really a part of the educational technology landscape, if at all. Thus, as I think about how they transferred the ethical aspects of our work into their teaching practice, many concerns come to mind.

For instance, Tara might provide the most obvious example of how expectations of students, parents, administrators, and the teacher herself collided and the concerns that this raises. In her original portfolio, Tara was confronted with the fact that parent volunteers typing her students' work would make corrections as they went along; this upset her fundamental beliefs about writing process pedagogy and she argued with many parents about why they should not do this to students' writing. Yet, she knew that her colleagues and administrators were watching her portfolio, and her students begged for daily updates, too, so the work had to continue to be posted. She also had to consider her pedagogical goals for using the portfolio—to share students' writing and build a community of writers—and balance that with the district's policy that students names and pictures could not be connected. She found ways to navigate all these issues, but even

more issues arose when she moved to the blog in year two, as she then had to figure out all the technical aspects of getting her students into a computer lab on a regular basis, teach them how to post to the blog, and monitor all posts and comments.

In every step of Tara's journey—as well as with all the other participants, too—they had to figure out the limits of both the technology that they were working with as well as what the school system they were working in would allow them to do. Once that work was online, all the participants noted how their sense of audience and purpose changed. As Tara noted, it was like she was "blowing off the doors" of her classroom. Or, as Becky S. said, it was like the "reality show of education." While it is still likely that very few people outside of their teachers' immediate circles ever searched for or found their portfolios; whether a world wide audience was watching them or not, each individual felt as if the audience had expanded. To that end, they all thought very consciously about what they would—and would not—display on their digital portfolio.

This suggests that a more intentional focus on technology learning that is somehow made public might encourage teachers to engage in functional and critical literacy learning that is also pedagogically meaningful to the extent that they can transfer ideas and concepts—and not just isolated skills or processes—back to their students. To return to Tara's case, it is one thing to simply tell students not to post their name and their picture together. It is another to talk to them about the school board policy related to that. It is a further and I believe more engaging discussion to talk with them about the ethical decisions that they make when they post their own, or anyone else's picture online, and the types of questions they should consider for both their own safety and, perhaps, future academic and occupational careers. In order for these deeper, more complex

understandings about literacy learning and processes for digital composing to make it into a teacher's classroom, teaches must be able to participate in these literacy practices him or herself.

Finally, I want to reiterate the point that these teachers—while still working in different school contexts—are not working in the most disadvantaged situations that many teachers and students face on a daily basis. However, disparities still exist. Despite the fact that teachers in this group work in (relatively) homogenous settings, and some work in districts that pride themselves on their technology programs, all of them faced systematic, contextual constraints in their schools that—to a small or large degree—forced them to reconceptualize the multiliteracies that they had learned as they transferred these literacies into their own classrooms. As I consider their situations, even those in our group who were best able to integrate what they had learned in their teacher research and digital portfolio development still had a tough time transferring their ideas into teaching practice. Recall what the critics and researchers are telling us about educational technology; critics (e.g., Cuban, 2001; Oppenheimer, 2003) frame the debate, in short, in terms of teachers not using technology well, if at all, and researchers (e.g., Zhao et al., 2002) have found that the challenges of using technology in schools is deeply contextual. Given this previous work, as well as the results of this dissertation study, I wonder whether technical, social, and curricular constraints in these schools will indeed prevent any substantive changes in teaching practice, even with the most motivated teachers adopting a multiliteracies perspective. That leads me to a few final questions that warrant attention in the near future.

Contributions and Future Questions

Barrett argues that models for portfolio development are at odds with one another, pitting individual needs against programmatic assessment (2007). If so, then how can these competing views be merged? Barrett suggests a responsive model of assessment *for* learning that focuses on a learner-centered approach with recursive production, consistent feedback, self-selected audiences and purposes, and no pressure of high stakes assessment. I feel that this is a useful start. Yet, I also feel that we can layer in the approach that I have described in this dissertation: a deeply rhetorical and collaborative one that foregrounds the digital and visual literacy practices embedded in making one's self public in such a manner.

To put it another way, and to return to Yancey one final time, "Through practice, we compose identity, task by rhetorical task, moment by reflective moment. Identity is itself a composition" (Yancey, 2004, p. 757). Teachers, in an age of increasing technology use by their students, surrounded by demands from educational reformers and business leaders, can no longer afford to look at technology as a set of skills. By looking at literacy practices in digital environments, and discussing the deeply embedded issues of identity that are connected to those literacy practices, teachers can make more robust use of technology in their own professional work and in their pedagogy. As this study has shown, it is possible for teachers to gain this understanding, given the appropriate combination of technical and collegial support as well as time and space to learn. Identity, in terms of representing one's self through a digital portfolio or any other multimedia or hypertextual document becomes an exercise in both technical skill as well as rhetorical practice.

As teacher educators, if we ask teachers and, in turn, their students to represent themselves online in these ways, then we need to work with the many other contextual factors—infastructure, acceptable use policies, filtering, professional development, and access to computers both inside and outside of school, to name a few—that teachers and students face every day. In an age now, just three short years after this project began, where blogs, wikis, podcasts, digital stories and other means of technological self-expression are becoming a part of our cultural discourse as well as educational standards, these contextual and rhetorical questions will become even more important to ask.

First, teacher educators need to gain a better understanding of both the modes and media that different technologies allow and how they can be used for literacy purposes. I use Kress and VanLeeuwen's (2001) definition of mode (a semiotic resource that allows the realization of discourse; for instance, narrative, persuasive, or informational genres) and medium a (the material resources and tools to produce semiotic events; for instance, ink and a paintbrush or film and a camera). Thus, the medium of a blog can be employed for various modes of communication such as personal reflections, political musings, or gossip, as we as teacher educators need to consider the many, many possibilities that these technologies allow as we teach them to pre-service and in-service teachers. For digital portfolios, my *English Education* article (Hicks, 2005) offers such a heuristic that teachers and teachers educators can use to talk about digital portfolios and, by extension, multiliteracy learning, in these robust, rhetorical ways.

Second, we need to reconsider technology and its role in the task of teacher education. While there are many, many sets of teacher education and professional standards that I could cite here to make a particular case for this, I will simply say instead

that our goals are much, much too low. Attaching a document to an email could, for example, be a part of a contextual discussion and rhetoric, design, and representation. However, I imagine that it is not. And, attaching a document to an email is far, far too low a task in terms of functional literacy to be considered a "standard" for what teaches should know and be able to do. McKenzie (2001) articulates a model of "robust professional development" that is "generative" in that teachers' "behaviors and daily practice will be changed for the better as a consequence of the professional development they experience" (p. 19). He goes on to suggest that "informal support systems, partnerships, teams and collaborative structure may be the most efficacious elements in a broad-based change effort" (p. 20). I agree with his conclusions and want to extend the notion of what makes technology learning generative. Until we begin thinking about what teachers—and, by extension, their K-12 students—*could* be doing in terms of finding, composing, and critiquing, digital texts, then we will keep our focus on a checklist of technology skills and not on the literacies interwoven with those skills. While I acknowledge that the field is moving in this direction (see, for instance, Swenson, Young, McGrail, Rozema, & Whitin, 2005), we need to be more proactive and conscientious about teaching pre-service and in-service teachers the habits of mind related to teaching with technology in their own contexts, with tools that are freely available to them.

Finally, I think that maintaining an online persona is difficult for anyone, and especially so for teachers who are trying to represent themselves personally and professionally, to colleagues, students, parents, and administrators. Here I can answer what might seem to be an obvious question, given that my entire study focused on using digital portfolios and given the contested nature of digital portfolios in teacher education:

should teachers manage a digital portfolio at all times, from pre-service course work through continuing certification? In our age of constant assessment, one could be tempted to ask that and, quite logically, answer "yes." I answer "no." Instead of mandating teachers to maintain a specific online presence in the form of a digital portfolio, I would encourage us to consider that as one of a number of options. Many teachers now regularly blog and podcast their reflections on teaching. Others are engaged in collaborative projects through wikis and social networking sites.

The question is not whether teachers should maintain a digital portfolio. Rather, I ask whether they should maintain some kind of online persona. To that, I answer with an emphatic "yes." Developing an online persona—be it through a digital portfolio, blog, wiki, classroom website, or other online space—must be a thread of teachers' professional lives. As blogger and educational technology specialist Will Richardson wrote in his recent book, "[w]ithout question, the most profound learning experience of my life has been the ongoing education I have received by keeping my own Weblog for the past 4 years" (Richardson, 2006, p. 45). As teacher educators, our goal is to become at least familiar with, if not fluent in using these technologies to enhance our own literacy practices so that we might create and model our own online personas for the teachers with whom we work.

By pursuing these goals—understanding the interplay of modes and media, reconsidering technology in the task of teacher education, and maintaining an online persona—we, as teacher educators, can move from pixels to praxis and will encourage the teachers with whom we work to do the same.

APPENDIX A – Grant Proposal

Digital Portfolios as a Space for Inquiry

Project Background

In an age of increased educational accountability and technological change, the responsibilities of English Language Arts teachers as mindful researchers of their own practice continues to expand by choice, necessity, or both. As teachers consider how they might best represent their own professional development and competencies as well as those of their students, they find that the range of these competencies is rapidly expanding. Less than a century ago, marking an "X" was considered a marker of literacy; only decades ago the equivalent of an 8th grade education was considered a marker of literacy. We are quickly approaching an era in which we and our students will require a thorough knowledge of how and why to use particular reading strategies, written and visual rhetorics and a critical approach to thinking and representing oneself in not only print, but also digital environments.[5]

As they have in all areas related to educations, these themes have emerged in the Red Cedar Writing Project over the past few years. First, the Write for Your Life Project, and its subsequent teacher listserv discussion, provided fertile ground for professional discussion and growth.[6] RCWP has also acted as a leader in evaluating NCTE's COLEARN online professional development initiative. From invitational demonstrations to listserv discussions, many of our teacher consultants have shown an interest in the integration of technology and literacy, especially as it pertains to student learning. Questions about the technological means, the procedures for assessment and the overall competencies required for this type of literacy have come to be part of our conversation surrounding the teaching of writing. Despite these recent discussions and innovative models, successful examples of and strategies for teaching with new media are scarce, leading many teachers to feel that they can't keep up with the pace of change or match their students' abilities.

Therefore, we propose that teacher consultants from our site engage in a process of inquiry surrounding issues of digital literacy and authentic student assessment through a critical examination of the effectiveness of web-based portfolios. In his 2003 book, *The Web Portfolio Guide* (Longman Publishers), Kimball argues that "Using the Web as a portfolio medium builds on some of the key strengths of portfolio pedagogies... the linking inherent in the Web matches the goal of tightly integrating the elements of a portfolio and adds opportunities to connect the portfolio to the rest of the [real audience throughout the] world" (p. xvi). This type of interrelated, thematic learning aligns with best practice in the teaching of English Language Arts and moves students towards a deeper understanding of writing and revision as it relates to technology as called for in "The Neglected 'R': The Need for a Writing Revolution" (2003) and *Because Writing Matters* (2003).

"Digital Portfolios as a Place for Inquiry" will combine the best of the NWP's model of teachers teaching teachers along with an authentic task related to assessment and technology. Considering the educational trends outlined above and the need for

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[5] A representative list of these competencies can be found at the website of the Center on English Learning and Achievement: http://cela.albany.edu/reports/standards/index.html

[6] Swenson, Janet. "Transformative Teacher Networks, on-Line Professional Development, and the Write for Your Life Project." *English Education* 35.4 (2003): 262.

teachers to become digitally literate, offering TCs the opportunity to engage in inquiry and professional development while also analyzing potentially ground-breaking means of teaching writing through digital portfolios will prove to be an exciting and timely project.

Project Proposal

As a site of the Teacher Inquiry Communities Network, the Red Cedar Writing Project proposes that using digital portfolios as a space for teacher inquiry will both meet the goals of TIC and build capacity for our own site to further understand how teachers' use of personal digital portfolios might eventually impact student achievement. Our research questions, then, becomes these:

- In what ways might an online community of teachers who actively construct, analyze and reflect upon their own and one another's digital portfolios view the role that portfolios play in fostering and representing growth in literacy skills—both their own and their students?
- How might teacher engagement in active inquiry and digital portfolio construction lead to changes in their approach to teaching writing and/or their uses of digital portfolios in their classrooms?
- What methods of creating and reflecting upon digital portfolios for teachers could be easily transferable to students, thus increasing their overall competence in writing for multiple purposes to varied audiences?

Along with the two technology coaches who act as facilitators, TCs who choose to engage in this project will:

- Learn the basics about the construction of digital portfolios;
- Engage in professional conversations about how to best represent their thinking, writing, artifacts and analysis through a digital portfolio and the nature of their inquiry;
- Determine ways in which digital portfolios may or may not contribute to the best practice of teaching writing and how these practices can influence other teachers and their own students.

Data that will be collected to analyze these questions and lead us to synthesize potential outcomes are:

- Pre- and post-participation attitudinal and technological skills surveys;
- Teacher journals (online blogs) during the construction and analysis stage of portfolio construction;
- Group and individual interviews with teachers (both in-person and online) focused on how constructing the portfolio supports inquiry;
- Final portfolios and the portfolio exhibition at the end;

In order to effectively analyze the data, we will:

- Search for key themes related to the construction and analysis of the portfolios;

- Identify specific technology-based competencies that teachers use in the construction of the portfolio;
- Outline these themes and skills as they relate to pursuing further professional development for teachers and integration into student portfolio construction.

The following project timeline will demonstrate how we plan to meet these goals.

Project Timeline

April – June 2004

Two current TCs from our project who have expressed interest in developing their own digital portfolios will be recruited as coaches for the 2004 Summer Institute. These two, Cathy Edington (2003) and Aram Kabodian (2003) will serve as digital portfolio coaches and teacher leaders for the incoming cohort of teacher consultants. As part of their expectations for the summer institute, participants will develop their own digital portfolio to showcase their work for ENG840 and will design the site so they can add further work from ENG896, the year-long teacher-research project following institute participation. These two coaches, then, will be provided a stipend while working with TCs during the institute in small-group and one-on-one settings as they develop their own digital portfolios.

July – December 2004

The 2004 SI cohort will share their initial digital portfolios in a final RCWP celebration and a page of the RCWP website will be dedicated to provide a list of links to them. Thus will begin the first phase of utilizing the portfolios as a space for sustained inquiry. Each teacher will be expected to post the project proposal for their inquiry and subsequent work related to it potentially including book summaries, reflections, photos and other artifacts. These web sites will provide other teachers an opportunity to review and discuss their inquiry in the process. As we know, many teachers begin with good intentions towards doing research in their classrooms, yet get side-tracked. This site will provide an impetus for them to stay focused and share their work with others.

January 2005 – March 2005

In thinking about the data collected from their inquiries, teachers will now begin analyzing and discussing their findings. The digital portfolios will provide space for continued thought, reflection and sharing between project participants as they move towards answering their individual research questions.

April 2005

Teachers who have completed their inquiry projects will share the final results and their completed digital portfolios at an exhibition hosted by the Red Cedar Writing Project. While the focus of the presentations would be on the teachers' own inquiry process and the ways in which they constructed their portfolios, an underlying theme would also be focused on A) presenting this information to other teachers through the NWP Annual Conference in 2004 and B) how to meaningfully integrate a digital portfolio experience into their English Language Arts curricula.

May – July 2005

Two teachers from the 2004 cohort would be selected to participate as facilitators for the 2005 RCWP Summer Institute and would act as coaches for digital portfolio construction. At this point, further monies for future stipends would be pursued so digital portfolio construction could remain a critical part of the summer institute.

August – September 2005

Planning for the NWP conference and updates to the RCWP web site would highlight the end of this phase of the grant. Potentially, the participants may choose to write an article about their experience and findings for a professional publication.

APPENDIX B – Consent Form

Consent to Participate in a Study of a Red Cedar Writing Project Activity:

"Digital Portfolios as a Space for Inquiry" NWP Mini-Grant

In your efforts to complete ENG 896, "Practicum in the Language and Literature," this consent form describes your rights as a participant in this project and the concurrent research study that Red Cedar Writing Project is conducting with this mini-grant money on behalf of the National Writing Project. *Please know that your participation is voluntary and, along with your right to withdraw, failure to participate in any part of this project* ***will not*** *affect your overall evaluation as a student or your standing in the program.*

Investigators:

- Ernest Morrell, Assistant Professor of Teacher Education;
- Troy Hicks, Teacher Education Ph.D. Student, Outreach Coordinator, RCWP.

Purpose:

To study the possible effects of digital portfolios as a space for teacher inquiry; to examine how you, as a practicing teacher, represent yourself and your work through a personal website designed as a professional portfolio and how your work compares to that of other teachers participating in this study by the Red Cedar Writing Project.

Description:

Your work in the Red Cedar Writing Project will be studied by researchers who are try to learn more about the nature of teachers' digital portfolios and may be shared with other professionals in writing and English studies, specifically through future publication or presentations. Your digital portfolio and verbal/written reflections upon constructing it will be reviewed by the research team to discover patterns of portfolio use between participants and compared to other existing teacher portfolios on the internet.

Research Process:

As a part of this project, the investigators will invite you to be interviewed individually and participate in group discussions about the process of creating your digital portfolio. These sessions will be video and/or audio taped and analyzed as part of the data. In addition to postings made on our private web log (blog) space and your public digital portfolio, this information will be used to identify themes and issues related to your use of digital portfolios. By signing this consent form, you agree to be video and/or audio taped and allow us to use that information, along with your online work, in our data analysis.

I voluntarily agree to be audio and/or video taped. Signature: _____

Confidentiality:

Your privacy will be protected to the maximum extent allowable by law. You will participate in decision-making about the uses of materials composed or contributed to this Red Cedar Writing Project study. For example, you will have the right to review data collected by video and/or audio tape in a group meeting, personal interview or from your website, and you may elect to exclude any material that you don't want made public. If you prefer, a pseudonym will be used for you in any publication/presentation of this work. In short, your work will not be shared without your permission and will not have your name attached to it when presented to others outside the research team.

Time Commitment:
The time commitment to participate will include: participation in the Red Cedar Writing Project Summer Invitational Institute; three, three-hour on-campus meetings that will be from approximately 6:00 to 9:00 PM (one meeting each in the fall, winter and spring); individual interviews to be conducted during those meetings; and bi-weekly updates to your digital portfolio that include posting of new artifacts related to your classroom inquiry project (e.g., journal reflections on our blog, photographs of your classroom, or revisions to the website itself).

Compensation:
By electing to participate in this study, you agree to the time commitments as listed above. You will be compensated for your time and travel expenses with a **$200 stipend** that will be paid on June 15, 2005.

Right to Withdraw:
You may refuse to answer questions or participate in the study and may withdraw without penalty at any time. Your participation in this project, or withdrawal from it, will not affect your grade in ENG 896 in any way.

Voluntary Consent:
Any questions you have pertaining to your participation in this study can be directed to the following contacts.

If you have questions about the study, contact:	*If you have any questions or concerns regarding your rights as a study participant, or are dissatisfied at any time with any aspect of this study, you may contact - anonymously, if you wish:*
Troy Hicks, Assistant Director The Writing Center Michigan State University 300 Bessey Hall East Lansing, MI 48824-1033 Phone: 517-432-3610 Fax: 517-432-3828 Email: hickstro@msu.edu Web: writing.msu.edu	Peter Vasilenko, Ph.D., Chair University Committee on Research Involving Human Subjects 202 Olds Hall Michigan State University East Lansing, MI 48824-1046 Phone: 517-355-2180 Fax: 517-432-4503 Email: ucrihs@msu.edu Web: www.humanresearch.msu.edu

I voluntarily agree to participate in the study.

Signature: _____

Print Name: _____

Date: _____

Address: _____

_____

Phone: _____

Email: _____

APPENDIX C – Survey Instrument

Digital Portfolios as a Place for Inquiry
Pre- and Post-Project Attitudinal Survey

1. Mark your level of confidence with the following technology skills by placing an X on the appropriate line:

Skill/Application	Very Confident – I could teach this to others.	Confident – I can use this efficiently on my own.	Somewhat Confident – I have used this to some extent.	Not Confident – I have not used this at all/ unsure how to use it.
• General Computer Use (e.g., creating documents, saving files)	___	___	___	___
• Word Processing (e.g., Word)	___	___	___	___
• Spreadsheets (e.g., Excel)	___	___	___	___
• Presentations (e.g., PowerPoint)	___	___	___	___
• Basic Internet Browsing	___	___	___	___
• Adv. Int. Brows. (e.g., databases)	___	___	___	___
• Email, including attachments	___	___	___	___
• Desktop Publishing (e.g., Publisher)	___	___	___	___
• Photo Editing (e.g., Photoshop)	___	___	___	___
• Brainstorming (e.g., Inspiration)	___	___	___	___
• Basic Web Site Design (1-10 pages)	___	___	___	___
• Adv. Web Site Design (10+ pages)	___	___	___	___
• Managing Websites	___	___	___	___
• Using FTP Software	___	___	___	___
• Creating Audio Files	___	___	___	___
• Creating Video Files	___	___	___	___
• Using a Scanner	___	___	___	___
• Taking Digital Pictures	___	___	___	___
• Participating in Blogs	___	___	___	___
• Course Sites (e.g., Blackboard)	___	___	___	___

2. Mark your agreement with the following statements by placing an X on the appropriate line:

Through technology, I can...	Strongly Agree	Agree	Disagree	Strongly Disagree
Communicate effectively with students	___	___	___	___
Communicate effectively with parents	___	___	___	___
Communicate effectively with administrators	___	___	___	___
Communicate effectively with colleagues in my school	___	___	___	___
Communicate effectively with colleagues outside my school				
Represent my teaching and students' work	___	___	___	___
Reflect upon my teaching and students' work	___	___	___	___
Self-evaluate my teaching	___	___	___	___
Collaborate with others through technology	___	___	___	___
Contribute to my own professional development	___	___	___	___

Pre-Project Survey Questions

3. Do you use portfolio assessment in your classroom? If so, please describe how you use portfolios. If not, please describe why you do not use them and what other assessments you use instead.

4. On the back of this sheet, please respond to the following prompts in a narrative format:

- As a teacher, how do you define literacy for yourself?
- How do you define literacy for your students?
- In what ways do you see concepts of what it means to be literate changing?
- In particular, how do you feel computer technology fits into these changing conceptions of literacy?

Post-Project Survey Questions

Also, on the blog, I would ask that you please reply to the following two prompts by **June 30, 2005.**

3. Describe your thoughts on portfolio assessment in your classroom.

- If you have used them in the past, how has this project impacted your use of them now?
- If you haven't used them in the past, what are your plans for using them in the future? Why?

4. At the beginning of this project, you were asked this series of questions about literacy. Please reply to them again based on your experiences in the digital portfolio project.

- As a teacher, how do you define literacy for yourself?
- How do you define literacy for your students?
- In what ways do you see concepts of what it means to be literate changing?
- In particular, how do you feel computer technology fits into these changing conceptions of literacy?

APPENDIX D – Interview Protocols

Interview 1: Before the 2004-05 School Year

1. What personal and professional interests made you want to participate in this project?
2. What are your initial impressions of creating and maintaining a digital portfolio?
3. In what ways do you think a digital portfolio will assist you during your classroom inquiry (ENG 896)?
4. What technical skills are you most confident about as you work on the portfolio?
5. What skills are you most concerned about developing?
6. In what ways do you think you can represent your thinking about inquiry through the portfolio?
7. What role do you think your RCWP colleagues will play in your inquiry process?
8. How often do you think you might update the portfolio?
9. What other questions do you have about the process of creating or maintaining the portfolio?
10. What questions do you have for me about the project or the research study?

Interview 2: During the 2004–2005 School Year

1. How do you feel you are progressing on your inquiry project?
2. In what ways is the digital portfolio influencing your inquiry work?
3. How have you represent your own thinking through the digital portfolio?
4. How do you feel about participating in the online discussions with your colleagues?
5. Have you shared your portfolio with colleagues outside this project? Administrators? Students? Parents?
6. What technology skills and competencies have been most useful to you? Why?
7. What areas do you still need training or professional development work on? Why?
8. How do you feel the work with your digital portfolio is impacting your teaching?
9. At this point in your inquiry, how would you define what it means to be literate?
10. In what ways might RCWP further support your work?

Interview 3: After the 2004-2005 School Year

1. Having created and maintained a digital portfolio over the course of the school year, what are your overall thoughts about the process?
2. In what ways do you feel the portfolio supported your inquiry project (ENG896)?
3. How did you represent your work (pictures, audio, video, PDFs, etc)?
4. In what ways do you feel working with others on this project supported your inquiry?
5. How have your technological skills and competencies changed?
6. In what ways might you use the skills and competencies you have learned in your own teaching?
7. How would you define what it means to be literate for yourself as a teacher?
8. How would you define what it means to be literate for your students?
9. What recommendations would you have for the future of this project?
10. What else should RCWP know about the use of digital portfolios as a tool for teacher inquiry?

Interview 4: Beginning of 2005-2006 School Year

1. Based on your work last year, what technologies do you want to explore this year?
2. What personal and professional interests made you want to continue to participate in this project?
3. Having already created a digital portfolio, how do you intend to use it during this school year?
4. Do you plan to use your digital portfolio as a place to explore a classroom inquiry question this year? Why or why not?
5. Beyond basic web site design, what technical skills are you most confident about as you expand your portfolio?
6. What skills are you most concerned about developing this year?
7. In what ways do you think you can represent your work and your students' work through the portfolio?
8. What role do you think your RCWP colleagues will play in this process?
9. How have the related professional experiences (learning new technology, writing an article, preparing to present at a conference) contributed to your professional development?
10. Based on your experience last year, how often do you think you might update the portfolio now?
11. If you could point to one element of your teaching practice that you hope to change by using technology, what would that be and why?
12. At this point in our project, how would you define what it means to be literate?
13. What other questions do you have about the process of creating or maintaining the portfolio?
14. What questions do you have for me about the project or the research study?

Interview 5: After the 2005–2006 School Year

1. Having created and maintained a digital portfolio for two years, what are your overall thoughts about the process?
2. As a follow up, could you please describe how you have felt about the experience of working in a teacher research group that has focused its work on technology?
3. Thinking back to your original understandings of what a digital portfolio was and your thoughts now, how would you define the term "digital portfolio?"
4. In what ways has using the digital portfolio as a focal point for your technology learning influenced your teaching?
5. How have your technological skills and competencies changed over the past two years?
6. As a follow-up, how has what you've learned changed your teaching?
7. At this point in our project, how would you define what it means to be literate?
8. As you think about traditional models of professional development and your experience in this project, what recommendations do you have for rethinking teacher professional development and technology learning?
9. What recommendations would you have specifically for the future of this project?
10. How will you continue to use technology in your future teaching?

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