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THE REFLECTIVE PORTFOLIO IN SELF-STUDY: INQUIRING INTO AND REPRESENTING A KNOWLEDGE OF PRACTICE*

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Abstract

This chapter introduces and explores how reflective portfolio inquiry as a process of interrogation of teaching and learning can advance self-study. After delineating this conceptualization, the chapter provides three case studies to demonstrate the process. Validity of the knowledge of practice uncovered through portfolio inquiry is discussed as determined by a method called validation. Although a portfolio process is widely used in teacher education, to date few systematic studies of it have been carried out. The authors argue for its utility, pointing to existing evidence such as the case studies. They contend that a reflective portfolio process can provide a highly accessible structure that scaffolds practitioner inquiries, makes public the knowledge of practice, and opens it to debate to advance a new scholarship of teacher education.

> We are poised on the threshold of an outpouring of practitioner inquiry that will force important redefinitions of what "counts" as research. ... Academics tend to be comfortable with practitioner research as a form of local knowledge that leads to change within the practice setting itself, but are less comfortable when it is presented as public knowledge with epistemic claims beyond the practice setting. (Anderson & Herr, 1999, p. 13)

Self-study, one of the fastest growing areas of research in teacher education, has been heralded as holding the potential to foster practitioner inquiries into teaching that can advance teacher education and contribute to a new knowledge

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of practice (Bullough & Pinnegar, 2001; Cochran-Smith & Lytle, 1999; Zeichner, 1999). By privileging "teacher educators as researchers of their own practices" (Loughran, 2002, p. 240; see also Russell, 1995), self-study holds up to scrutiny teaching how to teach. As such, self-study implies critical questions: Who creates this new knowledge? By what methods? With what kind of validity? Self-study thus joins what Donald Schön (1995) calls an epistemological battle: For even though we are in the midst of a radical transformation and understanding of the relation between the researcher and the researched, self-study pits the inside practitioner/researcher against the traditional outside objective/observer of experimental science, challenging the standard of scientific rigor. While self-study represents a move away from a traditional view of science, some advocates admit, "an adequate grounding and authority for this work has yet to be found" (Bullough & Pinnegar, 2001, p. 15). At a time of intense national scrutiny of educational research (Grossman, 2002), how are these questions to be answered?

Addressing these concerns, this chapter introduces a method of inquiry that legitimates the practitioner as researcher yet provides a means of validating the knowledge uncovered through investigation. We speak of a reflective portfolio inquiry process. Portfolio inquiry is, we believe, particularly useful in that it provides a structured yet highly accessible process that simultaneously can be *both* a mode of inquiry and a means of documenting and representing knowledge. It can document investigations into practice, make public that knowledge, and open it to scrutiny so that a community of researchers and practitioners can engage in its use and/or in rigorous dialogue about its validity – three characteristics the American Association of Higher Education finds necessary for "an activity to be described as scholarship" (Hutchings, 1998). The portfolio inquiry process, then, provides one method – a structure for inquiry – in the service of self-study, validating its role in advancing a new scholarship of teacher education.

Although not all portfolios meet criteria as reflective inquiry, this chapter demonstrates how they can. It also reveals the complexity and subtlety of the portfolio process and some of its tensions, especially as it entwines issues of assessment and professional development and can incorporate a range of divergent purposes for interrogating one's teaching. While the portfolio has become commonplace in teacher education programs in the United States, as yet there are few systematic studies documenting their uses or long-term consequences (Lyons, 1998a; Zeichner & Wray, 2001). For this chapter we turn to the literature and our own teaching and research, some 15 years experience with portfolio inquiry, mentoring teacher candidates through portfolio development, interviewing people about the process and, most recently for one of us, introducing arts and sciences faculty to the process (Lyons, Hyland, & Ryan, 2002).

The chapter first places "Portfolio Inquiry in Historical Perspective" and outlines the critical structure of the process. It then explores "The Centrality of Reflection" within the process and identifies related "Theoretical Groundings." After describing "The Validation of Evidence of Portfolio Inquiry," it presents "A Sampler of Cases of Portfolio Inquiries in Support of Self-Study." The chapter concludes with a discussion of the "Implications of the Portfolio Process for

Advancing Self-Study and the Knowledge of Practice." Here we advocate a means of validating portfolio evidence through a process Elliot Mishler (1990) first introduced and calls validation as trustworthiness: That is, in brief, by the willingness of other researchers/ practitioners to try out a practice in their own settings. Throughout this discussion we consider how ideas and purposes of self-study overlap with portfolio inquiry *and* where they differ.

Portfolios in Historical Perspective

> A teaching portfolio is the structured documentary history of a (carefully selected) set of coached or mentored accomplishments substantiated by samples of student work and fully realized only through reflective writing, deliberation, and serious conversation. (Shulman, 1998, p. 3)

A brief review of the history of the portfolio in teaching and teacher education details how the portfolio first came into teaching and teacher education. It is important to note that the portfolio entered as a new mode for assessing teachers and documenting their practice and, simultaneously, as part of a larger search for alternative means of validating research on teaching. An examination of portfolio development since that beginning reveals a subtle shift in emphasis from the portfolio as document of assessment to the portfolio as a deliberate and intentional method for practitioner inquiries into a range of issues.

The Portfolio as a Theoretical Act

Why portfolios? Portfolios have a long and valued tradition with many professionals – with artists, writers, photographers, and architects, for example. These professionals use portfolios to keep copies or drafts of their work – their writings, models of projects, and sketches of their art – charting how over time it has changed. Some portfolios include only what is considered one's best work, others include a range of work. Although most portfolios typically are housed in a paper/notebook format, they are fast moving into electronic modes. But portfolio uses in teaching and teacher education are only a recent phenomenon.

Portfolios came into teacher education on the second wave of school reform in the late 1980s and early 1990s (Lyons, 1998b). Then, reformers finally acknowledged that there would never be any lasting reform of education unless competent and caring teachers were at its center. How would such teachers be identified? Certified? If competent teaching is a complex, uncertain, and often messy activity, it could not easily be documented or assessed. Traditional ways of credentialing teachers – by grades, courses completed, or a national teachers' exam – seemed inadequate to capture teaching's dynamics or dimensions. Portfolios emerged as one possible medium (Bird, 1990). Life in classrooms, teachers at work could be caught through a portfolio with its entries and evidence of work over time. A portfolio could document how a teacher and his or her students were progressing, recording lessons taught, assessments made. It could carry a syllabus,

a course plan, videos of classes, and ample samples of student work, revealing levels of student understanding – some even including student portfolio entries. Lee Shulman, who introduced the portfolio idea into teacher assessment, argued that portfolio making was far from a casual activity. It is, he claimed, a theoretical act:

> By this I mean that every time you design, organize or create in your teacher education program a template, a framework, or a model for a teaching portfolio you are engaged in an act of theory. Your theory of teaching will determine a reasonable portfolio entry. What is worth documenting, worth reflecting on, what is deemed to be portfolio worthy is a theoretical act. (Shulman, 1998, p. 24)

Portfolio making for a teacher or a teacher education program is a theoretical act.

Elements of a Portfolio Structure – the Scaffold

Several elements of a portfolio inquiry process emerge in the act of creating this kind of documentary history of learning to teach, especially for purposes of assessment within a teacher education program. It is these elements that create the critical *structure* of the portfolio process:

- the collaborative process of mentoring portfolio development, an activity taking place over time through critical conversations with mentors and peers, usually over a semester or year or, in some cases more, of a teacher education program;
- some set of goals or standards held up to a portfolio maker describing what teachers entering today's complex classrooms should know and be able to demonstrate;
- the collection of a body of portfolio evidence – portfolio entries, what some call artifacts – of learning about teaching and student learning, such as videos of classes, student portfolios or other work, curriculum units, lessons that succeeded or failed, etc; or evidence exploring some puzzling aspect of teaching or of student learning (Dewey, 1933, 1998);
- a set of critical reflections or interrogations that accompany each entry articulating what was learned about teaching and learning; and, summarize a portfolio as a whole; and,
- a public presentation of the portfolio evidence and documentation narrated to a community of colleagues, cooperating teachers, and teacher educators.

Typically, a completed portfolio begins with an introduction, a statement of one's teaching philosophy, followed by the set of entries and evidence, each entry labeled with a title, accompanied by a rationale for its inclusion and a reflection. It concludes with a final reflection.

The Centrality of Reflection

Importantly, in this process each portfolio entry carries the crucial element: that is, a reflection. We define reflection as an intentional act of mind, engaging a

person alone or frequently in collaboration with others in interrogating one's teaching, especially a compelling or puzzling situation of teaching or learning to construct an understanding of some aspect of it (Lyons, 2002a, p. 99; see also Lyons, 1998a). Through reflection portfolio makers revisit their own teaching and learning, identify strengths or areas for refinement, critique what succeeded or failed and why, or pursue some aspect of student learning. In this reflective process, teachers uncover the knowledge of the meanings and interpretations they make of their own practices, their refinements of theories, their understandings of what students know and understand, and how they as teachers need to change or try-out new practices (Dewey, 1933, 1998; LaBoskey, 1994; Schön, 1983). This reflective interrogation, then, looks both ways: to past experience and forward to the future, especially to new ways of teaching. Most portfolio-makers claim reflection is the core of the process, essential to bringing new knowledge to consciousness, making it available to themselves and others (Lyons, 1998a, 2002a; Zeichner & Wray, 2001). Most self-study researchers similarly claim a connection to reflective inquiry, seeing reflection as the historical starting point of the movement as well as of individual self-studies (see Chapter 1 of this Handbook and Loughran, 2002). Through reflective interrogation the portfolio shares deeply in the purposes and processes of self-study.

The work of Shulman and the National Board for Professional Teaching Standards, in adopting the teaching portfolio as its primary means of assessing experienced teacher candidates for Board certification, proved pivotal to reflective portfolio development. That work garnered national recognition and support for portfolio assessment and for reflective portfolio-making as a critical experience in the education of teachers (Shulman, 1998; Valli, 1992; Zeichner, 1999).

But the emergence of the portfolio at that time was in part a response to increasingly urgent calls by other researchers to find alternative modes for validating research on teaching. Shulman, for instance, argued for attention to consequential validity, for asking the context-specific question: What difference does this practice make to students and teachers? To their learning? To teaching practice? (Shulman, 1994). Pamela Moss's (1994) answer to the question, "Can there be validity without reliability?" suggests that there can. She offers the idea of an interpretive approach to assessment and its validity along side of independent observers of traditional models in judging the evidence of teaching, even for high stakes. Portfolios, then, emerged in research as a needed alternative for documenting and validating research on teaching.

This portfolio history, with its roots in teacher assessment and development, differs from the historical development of self-study in teacher education. While portfolios began straddling sometimes nearly antithetical purposes – as an assessment for credentialing, as documentation of learning for professional development, even, as a showcase of accomplishments for purposes of employment, self-study emerged in teacher education because of a more focused purpose: the desire and need of teacher educators to experience for themselves how practices they were advocating as teachers of prospective teachers matched the reality of classrooms. Teacher educators returned to teach in elementary and secondary

classrooms to gain a new purchase on learning to teach (Russell, 1995; Russell & Korthagen, 1995). Their broad purposes were to test out and document what they encountered, studying their own practice and contributing to developing a needed body of knowledge: the goal was not the assessment of teachers but of teaching itself (Hamilton, 1998; Loughran & Russell, 2002). Yet both self-study and portfolio inquiry share a significant connection to reflection as a pivotal element of their processes.

Theoretical Groundings

Three other strands of research intersect here to provide additional grounding for a portfolio process. These strands are more directly shared with self-study. They include: recent research on situated cognition that identifies the significance of contexts and collaborative inquiry in learning; research on narrative as a mode of knowing, inherent in both a portfolio process and self-study because of their emphases on the stories and meanings of experience; and, the growing need for a new epistemology of practice, a view of knowledge that validates the claims of insider practitioners to engage in investigations into their own teaching practice. This view, pioneered by teacher researchers such as Cochran-Smith and Lytle (1999), Lampert (2000), and Duckworth (1987), was dramatized by Ernest Boyer's (1990) bold argument for new forms of scholarship for the academy, including a Scholarship of Teaching. Here we elaborate briefly on each of these strands.

Situated Cognition and Collaborative Inquiry

Contemporary research on learning throws light on portfolio processes. It articulates a view of knowledge as a social construction, situated in specific contexts (Brown *et al.*, 1993; Bruner, 1996; Lave & Wegner, 1991; Putnam & Borko, 2000; Rogoff, 1990). This perspective is significant as it takes into account both the importance of meaning and the knowledge of situations, contexts, and particulars – of this class of students, this school, this historical moment, etc., instead of general rules about teaching. It calls attention to the social nature of cognition, to how teachers themselves learn, and to ways of teaching that will foster both teacher and student learning. This perspective shifts attention from the individual learner to the interactions of the people in a common environment as major determinants of learning. These communities of discourse provide individuals with ideas, theories, and concepts that enable them to make sense of experience (Putnam & Borko, 2000). Portfolio construction and development is itself a collaborative activity, deliberative and intentional, that engages oneself and others – one's students or other colleagues – in interrogations into issues or puzzles of teaching and learning one seeks to understand at some new level (Lyons, 2001). So too does self-study.

Narrative in the Portfolio Process

It is a commonplace that teacher discourse about classroom experience or knowledge often takes the story form of narrative. This is not surprising. As psychologist Jerome Bruner (1986) suggests, narrative is a mode of knowing that deals not so much with how to know the truth but rather with the question of the meaning of experience. Narrative as a way of knowing seeks explications that are context sensitive and particular. Because narrative operates on two planes, one of action and one of consciousness, it is uniquely able to capture all the vicissitudes of human intention and action, characteristic of the uncertainty of teachers' work and classroom practice, often messy and unpredictable. Portfolio and self-study processes deal in meaning, interpretation, and understandings. As such, the inherent role of narrative in both is identified.

The Need for a New Epistemology of Practice

Recent history of the portfolio in teaching and teacher education highlights an important development: the subtle shift from the portfolio as a mode of representation and documentation for the assessment of teaching to the portfolio as a more deliberate method for reflective inquiry into teaching. This development underscores, too, a dramatic and fundamental shift to a view of teaching as a kind of scholarly activity. Ernest Boyer's (1990) book, *Scholarship Reconsidered*, helped to precipitate this development. There Boyer made a daring suggestion, calling for new forms of scholarship for the academy that would go beyond traditional research, what he termed the scholarship of discovery. Boyer outlined three new forms: a scholarship of integration of knowledge across disciplines, a scholarship of application to real-world problems, and, a scholarship of teaching that would not only transmit knowledge but transform and extend it.

As Donald Schön (1995) rightly saw, practitioners themselves could best carry out these investigations into teaching. But Schön saw, too, that such a view would trigger a long-standing argument, that is, how practitioners could claim the legitimacy of their own authority to interrogate and name the knowledge of practice. Although teacher research of the last 15 years privileged the teacher as investigator (Cochran-Smyth & Lytle, 1999; Lampert, 2000; Lytle & Cochran-Smith, 1992), such claims raise what Schön terms an "epistemological" battle, even if "a battle of snails." Alternatively, others term it the "slow revolution" (Grant & Murray, 1999): they anticipate the eventual legitimation of the right of teachers to carry out investigations into their own practice – however long it takes. These political and epistemological considerations provide a context for understanding the slow evolution of practitioner research and why issues of validity of portfolio and self-study processes continue to be raised and need to be addressed within today's politicized climate of educational research.

The Validation of the Evidence of Portfolio Inquiry

Acceptance or rejection of a practice or theory comes about because a community is persuaded. Even research specialists do not judge a conclusion

> as it stands alone; they judge its compatibility with a network of prevailing beliefs. (Cronbach, 1988, p. 6)

When Boyer in his role as President of the Carnegie Foundation challenged the academy to advance a new scholarship of teaching, he effectively carried the argument of earlier proponents of practitioner research into the heart of academia and a new audience: American higher education. Researchers took up the questions: What is a scholarship of teaching? How can it best be carried out? Represented and documented? Validated? Two portfolio models resulted from this work: the teaching portfolio – already making its way into teaching and teacher education – and a course portfolio. In these developments one can trace the growing emphasis on teaching as scholarly inquiry, as well as the strengthening of the idea of the portfolio as a mode of reflective interrogation. Now portfolios were not used primarily for the assessment of teachers, but rather for the interrogation of teaching itself (Huber & Morreale, 2002; Hutchings, 1998).

A Template for Inquiry: The Design, Enactment, and Results of Teaching

In brief, the *teaching portfolio* – the portfolio model first developed for the documentation and assessment of teachers, primarily surveys various tasks of a teacher's work: of several courses being taught; methods of assessment of students; student work; etc. In contrast, *the course portfolio*, developed by the American Association for Higher Education and the Carnegie Foundation for the Advancement of Teaching, focuses solely on a single course of a practitioner. The course itself is conceived of as an investigation (Hutchings, 1998; see also Huber, 1998). Three critical conceptualizations suggest the evidence for a course portfolio: *its design*, that is, how the course is conceived by the teacher as demonstrated by its syllabus, its tasks for students, etc.; *its enactment*, that is, all the ways students interact with it, through assignments, performances, assessments, etc.; and, *its results*, that is, evidence of what it is that students have actually learned from the course. It seeks to answer: How does a teacher know what students of this course have learned and now know? By what evidence?

This template for investigation – course design, enactment, and results – also provides a map of a possible way of inquiring into teaching. It is clearly applicable as an organizing set of ideas to all kinds of portfolio models. But it is the structure of the portfolio process – the collaborative effort, the gathering of evidence, the critical reflecting, the final presentation – that provides the scaffold for carrying out the process. These conceptualizations structure the portfolio process and make it useful to practitioner inquiries for self-study. If self-study fundamentally implies an interrogation of one's practice in the service of meaning and new understandings about teaching and learning (Loughran & Russell, 2002), then the reflective portfolio can provide one method to scaffold and support that work.

Validity through Validation

We consider that validating the evidence of portfolio inquiries may best be thought of as occurring through a process of validation, a method first put

forward by Elliot Mishler (1990) for inquiry-based research. Mishler argues that certain research practices that serve as potential models of how a practice works are and can be validated, but not by traditional experimental methods. For, rather than relying on an investigator's strict use of standard procedures, these researchers rely on their own understanding of the actual situation of practice in a field of inquiry. Exemplars – models of how a practice works – are tested, not through hypothesis testing but through a process Mishler calls validation: "The essential criterion for such judgments is the degree to which we can rely on the concepts, methods, and inferences of a study, or tradition of inquiry, as the basis of our own theorizing and empirical research" (p. 419). If our assessment of a research or teaching practice is positive enough so that we act on it, trying it out in our own setting, we grant the finding a sufficient degree of validity to invest our own time and energy and put our reputations at risk. Mishler in effect redefines validity as validation. "Validity claims are tested through our on-going discourse about these practices and in this sense, scientific knowledge is socially constructed" (p. 415). We argue that this process is at work with exemplars of practice revealed through portfolio inquiry, one equally applicable to self-study.

In that spirit, we present a set of three case studies that explore the portfolio inquiry process as self-study investigations. We offer these as potential exemplars for debate and discussion that others may decide to try out, or validate.

A Sampler of Cases of Portfolio Inquiries in Support of Self-Study

A central feature of this chapter is a set of descriptions of portfolio inquiries. Three cases are presented here. While of necessity these cases do not include all of the entries, evidence, and reflections of a complete portfolio, they do provide enough data so that a reader can begin to see how the portfolio process works. We do not look to make distinctions here of portfolio types. Rather, we wish to emphasize the kinds and purposes of interrogations undertaken by a range of practitioners engaged in a portfolio process and how the process structures self-study, when explicitly named as self-study or when not; and, even as in Case #2, when the portfolio process itself is a first-time experience. The cases include:

- "Case #1: Using Narrative Teaching Portfolios for Self-Study." In this example, two teacher educators describe their intentional use of portfolios for self-study for themselves and their student teachers. After introducing teaching portfolios as a means to scaffold self-study, they then assigned students a narrative portfolio as their cumulative assignment as they "concurrently ... worked on our own self-study." The teachers describe their use of narrative in this process, outcomes achieved, and their sense of the power and vulnerabilities of the process as they "pushed our self-study work and engaged more educators, our students, in this valued process."
- "Case #2: The Portfolio Process as Self-Study – an Embedded Perspective." This second case, "A Post-Tenure Review: A Collaborative Venture," describes the efforts of a tenured professor to use a portfolio process for a

post-tenure review of his teaching and professional development. In this example, the portfolio process is not identified as "self-study." Rather, the case demonstrates how self-study can be embedded in a portfolio process, even when that process is also new.

- "Case #3: The Bank Street Model: Portfolio as Nested Self-study." This case shifts attention specifically to the relationships and the interactions between teacher educators and students who create reflective portfolios. In particular, this case reveals mutual learning that emerges through the portfolio process.

These three cases invite consideration of the purposes of a portfolio process, of how subtle differences in intentions or purposes can alter and shape the experience. Case #2 is provocative in this regard. What, we ask, was the author's purpose? Was it achieved? Case #1 reveals how narrative interacted in self-study because of the explicit, intentional uses of narrative by the authors. Case #3 reveals the interactive nature of the self-study/portfolio process between participants when reflection and self-study are intentional and how it is not simply a linear process but rather is better thought of as recursive. Case #2 is a cautionary tale; it also reveals how rare a process reflection is in academia. The author, appreciative of the chance to ask the "So what?" question about his own practice, is aware how infrequently it is formally introduced into academic life. The cases invite also consideration of the following larger questions and implications of using a portfolio process in the service of self study:

- How does a portfolio process serve as a scaffold for self-study?
- What is necessary for the process? What is validated through it?
- What may stand in its way?

Case Study #1: Using Narrative Teaching Portfolios for Self Study

This case is excerpted from a larger work of the same title written by Vicky Anderson-Patton and Elisabeth Bass for Narrative Inquiry in Practice: Advancing the Knowledge of Teaching (Lyons & LaBoskey, 2002). The authors provide a context describing how they came to engage their students in using a portfolio for self-study as they carried-out self-studies of their own.

We want to be good teachers and we want our students to be good teachers. Previous experiences convinced us that merely reading research on teaching is not effective in transforming practice. We started doing self-studies in 1997 and discovered how powerful this methodology is. We developed narrative teaching portfolios to further our ongoing self-study and used this narrative process to guide our students' self-studies.

In the fall of 1999, Lis conducted a practicum for new writing teachers and Vicky was teaching creativity in elementary school; both are marginalized courses. Our outsider status enabled us to experiment more freely, so we engaged our students in self-studies. Self-study is a methodology for examining one's own teaching, carried out collaboratively, with the goal of transforming one's practice.

Studying one's own practice may seem, at first, methodologically unsound. Yet for teachers who have experienced force-fed best practices, working with what is real is a great palliative. However, self-studies can become cumbersome; when anything related to our classrooms becomes data, most of us are overwhelmed. To manage this we used narrative teaching portfolios to scaffold a focused self-study.

We introduced our students to self-study (Hamilton, 1998; Loughran & Northfield, 1998) and teaching portfolios (Lyons, 1998a) then to research where portfolios were used to scaffold self-studies (Cuban, 1998; Gipe, cited in Hamilton, 1998). We assigned students a narrative teaching portfolio as their cumulative assignment. Concurrently, we worked on our own self-study narratives. This project pushed our self-study work and engaged more educators, our students, in this valuable process.

In self-study and teaching portfolios, narrative is both research process and product. We reflect on what we do, tell our stories, and then create portfolios to share our stories with others. Narrative methods allow us to explore the complexities of teaching, incorporate self and context, and more fully understand the lives of others. Narrative enables imaginative identification (Achebe, 1990) and personal voice, two ingredients we believe are necessary for transformative learning. In the context of the stories we tell, we can see the small moves of transformed practice that might otherwise disappear. The narratives make these changes real and allow more complex reflection because they help us get outside ourselves and connect with others.

The portfolio assignment was a seemingly open-ended process, yet we carefully guided its structure. First, we asked students to write a personal narrative (their creative self for Vicky and a literacy biography for Lis). We structured reflection on their teaching values and practice through journal starters and group activities. Students discussed their teaching artefacts – such as their students' work, lesson plans, and student interviews – and captioned them. Students also experienced other classrooms. We provided a guiding question and asked students to develop sub-questions to focus their portfolios (Grant & Huebner, 1998). Finally, we invited students to experiment with alternative representations in their portfolios and presentations. To reinforce the reflective nature of the portfolio process, we required an introduction and a concluding reflection. For our self-studies, we conducted follow-up interviews with these students three months after the semester (Lyons, 1998a).

Our Narrative Teaching Portfolios

Over the past two years, our teaching portfolios have grown to include five parts:

- Part I: A reflective paper presented at a conference and published as part of the proceedings.
- Part II: A dialogue representing the process students went through while creating their portfolios.
- Part III: Student artifacts – selections from their teaching portfolios and our

version of their stories.
Part IV: Alternative representations of our process.
Part V: Feedback from presenting at the conference.

We include segments from each part below to provide a sense of our overall portfolio process and product. [NOTE: Here only a sample of each section is included].

Part 1: Reflections

The following segments are from a group of 14 reflections. ... These reflections articulate our teaching values and allow us to explore how we enact them.

Vicky asked, How do I structure freedom in the classroom to foster creative expression and development?

> REFLECTION 1: Owning creativity. I tried to give students space to talk about their creativity and engage in the process. The final portfolios evidenced students experiencing themselves as creative. Further, the students value their creativity and saw the importance of role modeling it.

Lis reflected on the role of personal involvement and self-study:

> REFLECTION 6: I am intellectually committed to doing personally meaningful work. I don't buy the mind-body split. I can't teach writing without making room for voice. I can't help teachers become teachers without helping them to connect deeply with themselves. It's harder this way. I become more vulnerable when I am not the expert glibly providing predigested theoretical texts. Self-study forces me to do personal work and allows students to do the personal work that they are ready for.

Part II: Dialogue.

This narrative dialogue tells the students' story of developing their portfolios. We created it from our teaching journals, their comments, and pieces of their writing.

THEME 1: PROCESS ANXIETY

A: What does she want?
B: What's a teaching portfolio?
A: She said we could do anything we want.
B: But we need artifacts, and it has to be about our teaching.
A: What's an artifact? This is too loose for me. I need more structure. Tell me how many words, and I'll do a research paper. I'm good at that.
B: I just want to learn some new tricks to be more creative in my classroom.
A: Self-study – what's that?
B: She's not clear. She said it is a process and will emerge.
A: I guess it has to be about self. That's so different than research.
B: I just don't get it.

THEME 2: COLLABORATION

A: Where are you teaching?
B: I'm teaching in West Chester. I have 22 kindergarten kids.
A: I teach adults.
B: That's interesting work, but kids are so cute. Today they made picture books with new endings to their favorite stories.
A: I'd love to see them. Could you bring them as an artifact?

THEME 3: CREATIVITY AND ALTERNATIVE REPRESENTATION

A: I'm teaching college writing and it's not creative.
B: Well, I'm not really creative, either.
A: I like creative writing.
B: Maybe you could do that for your portfolio. What can I do?
A: Didn't you tell me you redid all the bulletin boards in your classroom because they were so boring? That's creative.
B: What am I supposed to do, bring in 6-foot bulletin boards?
A: Why not take photographs?

THEME 5: REFLECTION

A: How much have you done on your portfolio?
B: I was really worried that I wouldn't have enough artifacts, but now I have so much stuff, I don't know where to begin.
A: What was your portfolio focus?
B: How can I teach for creativity when I don't feel creative.
A: But when you look at all the stuff you do, you are creative.
B: It's funny, but when I started captioning the artifacts, I realized I was being creative.
A: Because I decided to write a short story for my portfolio, I have to create student characters. I decided to interview students. I'm learning more about teaching from talking to them than I thought I would.

Part III: Student artifacts

We include a few brief excerpts from some student-teaching portfolios. These portfolios intrigued us because (1) they showed the insight and transformation of the student's ideas, (2) they resonated with our teaching (both struggles and values), and (3) they included something creative that moved us. We conclude each excerpt with a reflection.

[NOTE: Only one example is included for each author.]

Vicky's Student Artifacts

Jackie's Portfolio. Jackie created an imaginative storybook filled with her art, photographs, and writing. She concluded:

> I learned so much about my creativity. I will teach for creativity by encouraging imagination, non-conventional thinking and constant exploration of the world. I will practice my creativity by being awake to the world around me, thus finding inspiration everywhere. It's too easy in life and in teaching to just keep our feet on the ground and steadily move forward, the way we always have. It's much more rewarding to fly; to shoot for the stars, to spread our wings, and see what is possible to create by leaping into the unknown, by attempting what we aren't yet sure we can achieve.

VICKY'S REFLECTION

> I found the rich artistry, insight, diversity of ideas, and media experimentation in Jackie's portfolio compelling. These elements are central in teaching for creativity. Teachers must encourage students to fly, take risks, and be flexible.

Lis's Student Artifacts

Pam's Portfolio. In Pam's poem about her fear of teaching, she noted that her success as a teacher "depended on courage and the ability to make conscious contact with that fear." Her process became "one of remembering to incorporate into my teaching the practices that I have found helpful in my life: taking risks to push past my comfort zone, reflecting on my life experiences, and asking for help."

LIS'S REFLECTION

> Unlike a victory narrative, Pam's poem maintains the tensions that she feels. She sees herself as living the contradictions, involved in the dynamic process of learning to teach.

Part IV: Alternative representations of the process

To facilitate transformative learning, we felt if necessary to integrate the arts with research. ... Also, a guiding principle of self-study – walking the talk – required us to incorporate alternative representations into our portfolios because we asked the students to do so. Our first discovery was that the process is more important than the product. We struggled with how to articulate our learning in artistic forms and how to work with our vulnerability. ... Do alternative representations stand by themselves as art? We don't believe so. But the process: trying something different, being vulnerable, exposing oneself, articulating one's teaching, and interacting with a wider world were engaging and valuable experiences. ... We presented our narrative teaching portfolios at the Self-Study Conference (July, 2000) at Herstmonceux ... [a] process akin to our students final portfolio presentations.

Conclusions

We continue to use narrative teaching portfolios because they did scaffold self-study. The process of responding to them, however, was time consuming and stressful. Because the self-studies required individuals to examine their teacher-selves, many issues emerged. We spent hours crafting responses that were attentive to the work, respectful in relational terms, and real to us. Each student received a lengthy feedback letter. ... Another dilemma we wrestled with was how to respond to the diversity in vulnerability and insight revealed in the portfolios. We had to be aware of each student's level of proximal development and psychological comfort. ... Bringing the self-study process into the classroom means modeling it. We discovered that we needed to provide space and time, support the development of personal voice and group collaboration, give up traditional authority, and openly share our vulnerabilities balanced with our confidence in the process. ... Developing a narrative teaching portfolio with the goal of engaging in self-study brings the self into the process at the deepest level through sharing stories. But it is vital to balance the danger of narcissism with the potential learning. ... The great benefit of self-study narrative teaching portfolios ... lies in the potential for teacher transformation through creative expression.

Afterword (Lyons and Freidus)

This case most clearly and succinctly reveals teacher educators crafting a self-study portfolio process. By uncovering the actual process they modeled for their students as they created their own self-study portfolios, these authors bring a reader through the experience. Having witnessed their portfolio presentation at the Herstmonceaux conference, we attest to the power of their work, their creativity in engaging others, helping them think through some of the dilemmas and ethical issues likely to arise in this work, and making present the evidence of their own and their students' work.

Case #2: The Portfolio Process as Self Study: An Embedded Perspective – Post-tenure Review Portfolio

In this case, Larry Cuban's "Post-Tenure Review Portfolio: A Collaborative Venture," Cuban engages in a portfolio development process as a form of self-study, although it is not named as such. Indeed, Cuban came to a portfolio process for the first time because he desired a self-study of his own teaching and learning, especially a chance to have colleagues at Stanford University review and comment on his work. Although the case is quite different in purpose from that of Case #1, both indicate how a portfolio process may embed self-study. This case is a cautionary tale: a quite adventuresome undertaking – creating an unrequired post-tenure review – seemed to have little impact on the author's institution. The case raises sobering questions about the sustainability of self-study/portfolio inquiry. (for the full case see Lyons, 1998a)

All I ever wanted from my colleagues was a tough and fair post-tenure review.

I got that *and* a portfolio, something I had barely heard of previously. Therein lies a story.

Between November 1990 and May 1991 a committee of three colleagues appointed by Dean Mike Smith met with me five times, read at least 35 pages of memos and an additional 100 pages of articles and book excerpts that I had prepared and gathered, watched a videotape of one class that I had taught, and discussed at length with me particular facets of my teaching and research agendas. In January 1992, both the committee and I reported to our faculty what we had done and there was an hour-long discussion of my post-tenure review.

Rationale

No such process is authorized in Stanford University's Faculty Handbook, the document that includes the policies guiding faculty rights and responsibilities. So why did I want such a review, what did I want to be reviewed, how was it done, and of what worth was it to me? I will answer these questions in turn but I want to make clear that what I produced had been called a "portfolio" but it was not my intention to create one. Having done so, I am glad that I did and will know better what to put into one next time. I say this because the portfolio is not central to my experiences; what it did was permit me to examine in depth, with colleagues I trusted, selected activities that I had been doing as a professor.

Why Did I Want a Post-Tenured Review?

I had already been a teacher and administrator in urban public schools for a quarter-century before coming to Stanford in 1981 as an associate professor. In 1986, after failed attempts to return to being a superintendent, I decided to seek tenure and a promotion. In the process of the tenure review, I requested from the dean a review in 5 years. He spoke with the provost and found out that no condition – such as a future review – could be attached to acquiring tenure and if I wanted to have such a review, I would need to negotiate that with whomever was dean then. So it was that in 1990 I approached Dean Mike Smith and requested such a review. My reasons were familiar ones. Most of my career had been spent moving from post to post. So new challenges kept me dancing intellectually as fast as I could. Being a professor for almost a decade was the longest time in my adult life that I had spent in one position. Moreover, I had discovered that faculty colleagues of national and international repute were anxious to protect a precious autonomy that they had cultivated for themselves. In other words, being a member of such a distinguished group did not automatically or easily translate into sterling exchanges of ideas over lunch, coffee, or at the mailboxes in the main office. Isolation was the norm. I needed re-potting.

But why approach the dean? I could have just as well asked a few trusted friends on the faculty to help me. My reasons for making it an official request are laid out in a memo. ...:

> I have come to believe the rhetoric that we are a community of scholars in a professional school. I owe my community the full and best performance

> I am capable of in discharging the roles of teaching, research, and service that are expected of me. ... When I do well in these areas it reflects well on me and the institution that I serve. The flip side of my institutional obligation ... is the responsibility of my colleagues to help me improve in the performance of my central roles, especially when I seek their assistance. ... I want, simply put, a collegial dialogue about my work. To be tenured, in my judgment, does not relieve the institution of its obligation to me. Or I easily could have added, my responsibility to myself to examine what I do.

Dean Smith appointed Mike Atkins, John Baugh, and Lee Shulman.

What About my Work Did I Want to Have Reviewed?

Two areas in particular interested me: my teaching and my current and future research agenda. ... For my teaching, I figured that the committee would examine my syllabi since they are maps that would give the committee members ways of inquiring into both my pedagogy and how I organized content conceptually. I expected the committee to examine evaluations of my teaching, and especially, consider the pedagogical dilemmas that I have wrestled with continually over the years both in high school and graduate teaching.

For my research agenda, I wanted the committee to appraise my past publications, less for their content and more for their direction, and reflect on my proposed project of examining how professors have taught, which had grown out of earlier research on a history of how teachers taught. I also wanted their thoughts on the dilemmas that I faced as a researcher committed to impartial scholarship while actively trying to improve teaching and administrative practice.

How Was the Review Conducted?

The dean assigned one of his staff to collect my materials (evaluations of previous classes; articles and books that I had written in the previous 5 years), distribute them to committee members, and set dates for the meetings.

The staff person that the dean assigned kept notes and from those summaries, the flow of the hour-and-half meetings became clear. They were highly interactive and we worked as equals; there was no sense that heavy consequences loomed for me or for the committee in completing their deliberations. This was not a tenure or promotion committee meeting, by any means. On the contrary, I sensed a strong feeling that these discussions about my work were sincere probes into not only my teaching and research but opportunities for each member to consider for himself the points we lobbed back and forth about the details of my teaching and research. It was a chance to talk about things that we had never spoken about except, on occasion, to trusted friends. These discussions became, I believe, proxies for other members' self-examination as well as mine; at least two of them expressed this to me privately.

At the meetings themselves, I usually set the agenda; members also raised items as we met. ... At another meeting on January 31, 1991, we discussed what

I had already submitted and members asked for the following additional information from me: examples of student work, both exemplary and problematic; comments on my present and future use of case study methods; comments on the first time that I taught a social studies methods course and future plans with it; on how it helps or impedes in the areas of research and teaching; comments on institutional obligations to the professor; on this institution and my relationship with it; on how it helps or impedes my research and teaching. ... This discussion of agenda points and negations of another set of tasks became customary for subsequent meetings. These memos and other written tasks became the de facto portfolio.

The portfolio included memos on how I analyzed my teaching and research agendas; a videotape of an hour-and-a-half class with a nine page, single-spaced typed analysis of my teaching and student responses; an exploration of a new course I had created; a memo on the mutual obligations of a professor to a school of education and the faculty to each other; and a final memo on the process of review itself and its overall worth to me.

The Contents of the Portfolio: Teaching and Research

To give readers a flavor of items in the portfolio, let me offer excerpts. I begin with the course "History of School Reform" co-taught with David Tyack. This portfolio item contained the syllabus; a videotape of one class that I taught; a close analysis of the videotape, which I wrote with materials from the class itself (questions I handed out to students, a tally of students participating, etc.); and the readings that the class discussed.

[NOTE: This section of the portfolio contents can be read in full in *With Portfolio in Hand*, Lyons, 1998a. The headings for this section are: Teaching the "History of School Reform" Class; Objectives After Viewing the Videotape; and My Research Agenda.]

Of What Worth Was This Post-Tenure Review to Me?

I had promised the committee that I would prepare a memo for them to use in assessing what our deliberations and my work had meant to me. Let me quote. ...

> The most beneficial part of all the memos I produced ... has been how it forced me to rethink old ideas and open up new areas that I had not considered. ... If there is one over-riding benefit to such a review it is the requirement placed upon the person seeking the review to lay out for others the issues that puzzle the person, the conflicting values, unclarified questions, and the like.
>
> Another important benefit that I came to see was the opportunity to have colleagues take a step back to examine seriously a body of work that I had accumulated over time, from where it came and where it might be leading, and to ask the seldom explored "so what" question. The only time that had

> occurred was when I sought tenure in 1986 and a committee of peers examined my work and got opinions from outside the university.

Yet, even at that time, all one hears ... is what the outcome is: yes, you got tenure and a promotion; no, you got neither. You do not find out what others consider as strengths and limitations of your work and direction, since the letters and committee report are confidential. ... What made this review remarkably different from the usual tenure review was the clear focus on improving rather than judging and concentrating on issues raised by me or by others as we met together.

What about Shortcomings to the Process?

If there were any weakness. ... it would be around my lack of structuring the discussions during the four times that we met and the uncertainty I have about what a portfolio (focusing on a review of teaching and research) should contain. ...

The concept of the portfolio is most appealing to me. I am afraid, however, that I have yet to grasp its essence. I understand that it is both to document and to inquire into teaching and research. It is to be selective rather than overwhelming. The pieces that I have produced for this portfolio have the traditional items with a number of reflective pieces from me. What is still missing form the portfolio is what my students have learned or at least an attempt to get at that. What I still fail to see is a coherence, an underlying weave to the fabric. Perhaps that is what you are to see. And perhaps that will come in time.

What Happened After the Review Was Completed?

The faculty exchanges in the hour's discussion explored the worth of such voluntary reviews, whether such reviews should be made mandatory, and the time each one would take. I believe a fair summary of the faculty's discussion would be that there were strong reservations about any post-tenure review requirement being instituted.

Since then, nothing much has happened with post-tenure reviews in the School of Education. ... the fundamental reason may be close to what the colleague who reported to the faculty said in his closing paragraph:

> During our deliberations I observed that the gatherings were among my most enjoyable meetings, but they received low priority. I value the freedom that allows us to devote substantial blocks of time to teaching, researching, and writing. Even though I recognize the importance of committee assignments to our institutional welfare, I prefer to keep bureaucracy to a minimum.

The dilemma of professional autonomy and institutional obligations emerges from the colleague's words; it persists and no easy reconciliation is in sight for him or the rest of my peers.

Afterword (Lyons and Freidus)

Lee Shulman, a member of Cuban's post-tenure review committee, has commented on this experience and offers another perspective on the usefulness of the portfolio process to those who act as critical friends and why having such mentors is necessary to the process. Although Cuban comments that "nothing much has happened" at Stanford following his experience, Shulman points to how the collaborative nature of portfolio work and self-study has unexpected outcomes for all involved. Shulman (1998) says:

> What was clear was that it was not only Larry Cuban who profited ... each of us benefited. When do we get a chance to peer into the window of our colleagues' teaching?
>
> My insights were somewhat different. I realized that Larry and I both taught the same students. I came to see some aspects of my students through Larry's eyes and through Larry's course, and in ways I never saw them before because we were doing different things. The students were performing in different contexts, and, suddenly, a two-dimensional view of students became three-dimensional. I became much more sensitive to Larry's teaching and he to mine, and that is also very important.

But Shulman offers another and more sobering comment, this time on the fate of his own portfolio making – which he admits remains unfinished.

> One of the reasons that my own portfolio has remained incomplete, although I've got all the parts around, is that I am not part of an ad hoc community organized to discuss my portfolio. It was Larry who was thoughtful enough to make sure that we provided such a community, created a group to discuss his portfolio. I am left with the question: What would happen if we as teacher educators organized ourselves to review each other's work in this way? If we supported each other in this way, what would that do for us and our students? ... The argument for peer review and portfolios in teaching is that they contribute to making teaching community property in colleges and universities and, therefore, put teaching and research into the same orbit. We will see whether that argument or hypothesis works. (pp. 33–34)

Self-study and portfolio work can support peer review. But, as this case reveals, a self-study portfolio process needs a scaffold of which critical friends may in the end be a most crucial element. Such exchanges are not casual conversations. Rather they are critical to the intentional interrogation which is at the heart of the process. Lee Shulman's story turns out to be a cautionary tale as well.

#3 Case: The Bank Street Model: Portfolio as Nested Self-Study

In this case a teacher educator, Helen Freidus of Bank Street College of Education, describes the experience of two students who are involved in the creation of a

reflective portfolio. This case especially highlights not only the self-study aspects of the portfolio process for students but for faculty as well.

At Bank Street College of Education in New York City, students must complete an integrating project in order to fulfill the requirements for the Masters Degree. Those choosing portfolio for this requirement work independently with a faculty mentor, and with a peer group. They pull upon personal and professional knowledge landscapes (Clandinin & Connelly, 1995) to explore their beliefs and practices and to document their competency in the field.

Invariably students draw upon widely different experiences to document their understanding of a common area within the discipline. Their diverse points of reference provide an opportunity for students and faculty to engage in discussions of what is valid and why. Through this process, each participant has the opportunity to frame and reframe his or her understanding of teaching and learning. And, as students demonstrate their perceptions of meaningful practice, faculty have the opportunity to observe the meaning students have constructed from courses and field experiences and consider the implications of this meaning for their own practice.

Structure of the Portfolio at Bank Street

Becky and Alice are two students who chose the portfolio option. They began to study their own practice by:

1. identifying and representing teaching and learning experiences that have been meaningful to them both personally and professionally;
2. providing explanations grounded in theory to explain the success or failure of their experiences;
3. setting goals for future professional growth guided by their findings.

Becky and Alice had a range of portfolio options to choose among. These included traditional, multi media, and e-portfolios. Whichever structure they chose, it would include:

Artifacts

It must have six artifacts documenting their understanding of and competency in four domains (human development, curriculum, history and philosophy of education, and the social context of teaching). At least two of these artifacts must be in formats that are not text based, e.g., picture collages, charts, graphs, a variety of writing genres, videotapes and/or other digital technology. By moving beyond traditional text-based representations of learning, students and faculty revisit content, examine familiar concepts through new lenses, and frequently emerge with more complex understandings.

Captions

There need to be one to two page statements to clarify each artifact. These captions, informed by theory and personal reflection, provide a rationale for the

inclusion of the artifact in the portfolio and serve as a scaffold for self-study. In these captions, responses are provided to the following questions:

- What have I learned from the experience represented by this artifact?
- What implications does this experience have for my classroom practice?
- How has this artifact shaped and been shaped by my personal and professional vision of education?
- How does the artifact bring to life the theories I have studied?

Framing statements

There must be an introduction and conclusion to integrate artifacts and captions with an identified theme. With references to theory, these statements demarcate students' personal and professional journeys, identify ways in which they frame their vision of teaching and learning, examine the alignment of their beliefs and practices, and lead to the setting of goals for future professional development.

Process Requirements of the Bank Street Portfolio

In addition to these *product* requirements, Becky and Alice were required to fulfill *process* requirements. These process requirements provide additional feedback for students' own investigations and insight for the faculty members with whom they work.

Individual process

Becky and Alice each worked independently to identify benchmarks of professional growth and development and to identify future goals.

Dyadic Process

Becky and Alice met with their mentors on an ongoing basis. These meetings provided opportunities for looking at personal interpretations of practice through the eyes of another.

Group Process

Becky and Alice joined a monthly series of faculty-facilitated peer group meetings. Collaborative in nature, the dialogue engendered in these meetings served to support and extend the professional development of self and other. Becky and Alice also participated in a presentation celebrating the conclusion of the year of portfolio work. Here, they engaged in dialogue with and received feedback on their work from the greater community. These presentations provide an additional source of dialogue for students and help faculty to understand the ways in which course work has been internalized.

Becky's Portfolio: Understanding Culture (1999)

Becky is a Chinese American woman who was matriculating for a Masters Degree in Infant and Toddler Development. At the time she completed her

portfolio, she was an in-service teacher working with a mixed age group of babies and toddlers in a program that provided childcare for adolescent single mothers. The program, aimed at helping young women to complete their high school education, was housed in the public high school in which these women (ages 15–18) attended classes.

Becky chose the portfolio process because she wanted to meet the requirements for graduation by studying her own practice. She knew instinctively that her identity as a Chinese American/American Chinese woman had played a major role in determining who she was both personally and professionally, but she wanted to understand more about how this happened, what it meant for her students, and how her personal understandings could be informed by theory in the field. She used the portfolio process "to increase her imagination" in order to problematize her current beliefs and practices: "I realize it is a challenge to try to understand one's culture and upbringing. This is an essential ingredient in becoming an effective teacher."

Becky began her artifact selection by looking back on an autobiography she had written as part of her application for graduate study. She thought back to the person she was at that point in time and compared that person to the self who was now nearing graduation. Describing the immigrant stories of self sacrifice and hard work that her Chinese American parents told, Becky talked about how she, as a young American Chinese child, responded with disbelief, thinking that her parents' words were exaggerations told for the purposes of moral instruction. She writes:

> This all changed when my family went back to China for the first time. My eyes opened as we traveled back to the villages where my parents were born. There was physical evidence of poverty everywhere and yet the living conditions had improved since the time when my parents left. When my mother saw my facial expressions, she smiled at me realizing maybe for the very first time I would understand my parents a little better and my heritage.

Here, it is possible to see how Becky uses this biography as a basis for analyzing and reflecting upon the ways in which her family structure, family expectations, and her lived experiences fostered her own belief in the immigrant dream of hard work as a pathway to success. She begins to identify the ways in which the goals and expectations she set for herself as a student could influence the goals and expectations she sets not only for the young children with whom she works but for their mothers as well. In this analysis, one can see Becky's emerging understanding of the social construction of learning.

Subsequently, Becky extends her emerging insight by looking at her practice through the lens of human development. She sets the stage for this artifact by describing how cuts in her program budget had diminished the amount of support available to the teen mothers by the program social worker. Recognizing how badly the mothers needed the services that had been cut, Becky began to take on some of the roles previously played by the social worker.

In order to identify and prioritize needs, she conducted a survey among "the moms" with whom she was working. The information she elicited differed from what she had anticipated. She began to see that while these young women, like herself, were children of immigrants, their experiences had been very different from her own. Theirs was not the immigrant dream with which she had been raised. Moreover, these women were not only young adults but also teenage mothers struggling with the developmental issues that trouble many young people in today's urban culture.

Becky's caption, supported by her portfolio mentor's field notes, document her efforts to imagine and re-imagine herself as a professional. She recognizes her own tendency to "assume that the way 'we' do things is the right way, the only way," and begins to see the truth in Delpit's (1995) statement that, "When one 'we' gets to determine the standards of appropriateness for all 'we's', then some 'we's' are in trouble" (p. 28). She begins to understand not only cultural difference but also the intersection of cultural influence and developmental stages. She writes: "I need to continually remind myself that they (the moms) are developing themselves and maturing as they are trying to raise their own children."

Motivated by this awareness, Becky decided to follow her surveys with an in-depth interview with the mother of one of her students. In the caption accompanying the interview, she reexamines her own value system, demonstrates a new appreciation of the efforts of one teen mother to juggle being a mother and a high school student, and questions rather than condemns the apparent disinterest in school that seems so prevalent among many of the mothers with whom she works. She engages with such questions as: "Why do some immigrant groups hold on to the vision that hard work will enable them to attain the American dream? How do such dreams influence individuals? What is the role of environment? Of disposition?" Thus, she once again challenges her own more comfortable assumptions about teaching and learning. In her caption, Becky reflects:

> It was through her [the adolescent mother's] voice that I was able to hear my parent's voices speaking to me. ... I have had to reshape my own views and perceptions. I have reflected upon my own cultural history and background. I have been constantly sifting through my questions and the answers I provided.

Summing up her portfolio experience, Becky writes:

> Examining who I am and what I bring to others has been a vulnerable exercise. It has unveiled my strengths and weaknesses. I have learned and relearned what are my fears and insecurities . ... My thought process is different now than it was in September. I did not really understand the true influence of the decisions that I was making in the classroom.

Alice's Electronic Portfolio: The Universe Behind Each Face (2002)

Alice is a career changer coming to education with a background in child development, a graduate degree in social work, and training in laboratory research in the field of child development. She is a recent graduate of the Bank Street College program that prepares men and women for careers in the field of clinical literacy. At the time that she was completing her portfolio, Alice was just beginning to establish a clinical practice. She wanted to use her portfolio not only to fulfill requirements for her graduate degree but also as a way of exploring her new understanding of the field of literacy. She hoped to identify new and deeper connections between her past experiences, current theory in the field of literacy, and the application of these to the practice that she hoped to develop.

In her introduction, Alice writes: "I offer this portfolio as a reflection of my own exploration of what it means to learn to teach literacy." Believing strongly in a holistic approach to teaching and learning, Alice was moved by the images she had discovered in Rilke's poetry. She turns to these as a way of framing her understanding and creating a context for her self-study.

> My effort as a clinical teacher is to identify and build upon existing strengths in order to provide my young explorers of the universe of education with the ideas, skills, and strategies that they will need to experience success. I have chosen the theme of "the universe behind each face" because to me this phrase encompasses the notion of the uniqueness of and complexity within each individual. ... Acting as a guide in the exploration of the terrain of new concepts, information, and ideas, the role of the clinical teacher is to assess the skills of the children whom he or she will join on this "mindtrek", listen to the needs of the neophyte explorers, learn the culture of these child explorers, and prepare the new explorers for the differences they will encounter in each new realm of exploration.

As Alice set forth on this self-study through portfolio, she posed one additional goal for herself: "This portfolio is designed to be presented through two mediums: the first is that of printed text and the second that of an internet web page." By applying technology to the portfolio process, Alice believed that she would be better able to synthesize her experiences, develop new ways of thinking about her practice, and extend her repertoire of the technology skills that would support her work with children and colleagues.

Alice begins by revisiting a children's book she had written to fulfill a requirement in children's literature. The story Alice wrote captures a moment in the daily life of a family. Children eat their breakfast, listen to music, and practice their violins while their mother gets ready to go for an appointment with her oncologist. The story is based on a real life experience in which Alice, observer and participant, witnessed the children's responses to their mother's illness. She describes her growing awareness that individual children respond in very different ways to such moments. Drawing upon all of her past personal and professional

experience, she describes how the act of framing and reframing this event has led her to a deeper awareness of the ways in which children make sense of the world. In some cases, she writes, sense making is done in the cognitive domain, in others through motor responses, and – in some – understanding is grounded in the social-emotional context. An awareness of these possibilities, she reflects, has important implications for teaching and learning; scripted curriculum will not suffice if all children are to learn.

Building upon this insight, Alice selects as an artifact, the representation of an experience that emerged during a field trip to a local museum. Working with a child over time, Alice had seen her student's language skills develop in quantum leaps. Since the trip was the culmination and celebration of the semester's work, the child's father was invited to join in the visit. In his father's presence, the child's communication skills reverted to the form and language, he had used when Alice had first begun working with him. Alice was amazed. In her caption, she writes: "Until I had the opportunity to work together with both R and his father, I did not understand how R's style of communication was tied to his family culture." Having gained a powerful insight into the ways in which both ability and disability may be grounded in socio-cultural norms and values, she writes: "This experience helped me to realize that as a teacher I wish to find ways to enable children, teachers, and parents to experience a sense of inclusion, collaboration, and sharing."

These two artifacts, together with others drawing upon experiences in assessment and curriculum development, enable Alice to look at the intersection of home and school, teaching and learning, in increasingly complex ways. They provide her with an opportunity to stand back and look conjointly at the clinical skills she developed in her training in social work, the observational skills that she developed in her work as a laboratory researcher, and the instructional skills that she has learned as part of a teacher education experience.

For Alice, the construction of portfolio scaffolded the integration of past and current practice, the discovery and re-discovery of meaningful theory, and the importance of pursuing instructional practice that is congruent with this theory. She writes:

> My first re-discovery is the importance of play in learning. ... I have also reaffirmed through this [portfolio] the importance of creating activities that provide children and their families opportunities to share their unique family and cultural heritage ... and ways in which I might support each child's learning while respecting his or her culture and family values.

And how did Alice's goal of presenting portfolio in digital format influence her experience in this process? When asked to reflect upon her initial technology skills in an interview following portfolio completion, Alice responded:

> I came with relative facility in my ability to use the PC, but I didn't know how to use a digital camera, manage images, edit images, or use

> Dreamweaver (a program that lets you create html files and integrate words, images, media). I didn't know how to manipulate data.

She continues her discussion pointing out the tremendous learning with which she emerged, but noting that there was a struggle involved in mastering so many new skills in the midst of a process designed to facilitate reflection on and the synthesis of a course of study.

Nested Self-Study: Reflections of a Faculty Member Working with Becky and Alice

Becky and Alice's completed portfolios look very different. Personal interests, experiences and priorities, and strengths led them to construct their documentation of competency in ways that made sense to them. And yet, their reflections, their comments during the final presentation, and their discussions with faculty members and peers pointed out many similarities in the outcomes.

Each reported that the portfolio process had afforded her a fuller – visceral as well as cognitive – understanding of inquiry learning and authentic assessment tools and processes. Each saw great value in being able to meet requirements in ways that were personally meaningful. Each came to see how assessment could be used to extend learning as well as to document it. And, each described a growing sense of confidence emerging from having been protagonists in the debate around the questions: Whose knowledge counts? What counts as knowledge?

As a faculty member working with Becky and Alice, I found that, as always in the portfolio process, their portfolio process pushed me to critically review my own beliefs and practices (Freidus, 1998, 2000). My self-study was directly informed by their questions and concerns. Areas that were particularly impacted include inquiry learning, the cultural context of teaching and learning, and the application of technology to the portfolio process. First let me address the ways in which my work with portfolio students has helped me to reaffirm my belief in inquiry learning. Then I shall discuss the ways in which their portfolio experiences have helped me refocus my own teaching to emphasize the cultural context of teaching and learning. Finally I will discuss how the experiences of Alice and other students choosing to construct digital portfolios have influenced my understanding of the strengths and challenges posed by technology enhanced portfolio construction.

Inquiry learning

With ongoing pressure from legislatures and media to prepare teachers whose primary focus is preparing children to do well on standardized tests, it is very easy to begin to doubt the validity of one's own belief system. As I read article after article in professional and popular journals, I find myself beginning to wonder "Is an inquiry model of teaching and teacher education a luxury that cannot be afforded in today's classrooms? Should I substitute more direct instruction for the process-based pedagogy I so value? Are there more effective ways

to prepare teachers to meet the needs of today's children? Will the teachers we prepare be able to find meaningful work?"

My work with and observations of Becky, Alice, and their peers has enabled me to gather new evidence to support my belief in constructivist pedagogy. Left to pose their own questions and fashion their own evidence of competency, Becky and Alice – like most portfolio students – at first faltered. The responsibility of identifying what they knew and producing evidence to support their statements was daunting. Frustration replaced initial enthusiasm as they began to recognize the challenge of focusing their inquiry. But then, as they began to look closely at their practice, they posed important questions, and began to chart courses of action for themselves. Required to compile evidence of their competence in each domain, they were frequently surprised at how much they had learned. Proud of their accomplishments, they became quite articulate about the ways in which their practice embodied exemplary standards of practice. However, when the evidence suggested that their instructional practices were not aligned with their beliefs and/or when they were not in the best interests of the children, each of them was willing to acknowledge this reality and chart a new course of action. The inquiry honed their skill at and willingness to critically review and modify their practice on an ongoing basis.

Cultural context

This was particularly true in the area of the cultural context of teaching and learning. I doubt that a lecture about the impact of culture on classroom behavior could have had so powerful an impact on Becky's practice as did the survey and interview she conducted, analyzed, and reflected upon. Direct instruction about home/school relations could not have shown Alice how great an influence family expectations can have on school behavior. Constructivist theory (e.g., Dewey 1938, 1963; Moll, 1996; Putnam & Borko, 2000) purports that only when new learning is closely linked to prior knowledge, will the learning be fully internalized. Becky and Alice's inquiry portfolios grew out of their own needs and interests. The authenticity of the requirement enabled them to look critically at themselves as teachers and learners and motivated them to acquire new skills and information in response to identified needs. My own data collection as participant/observer in this process gave me new energy and evidence to advocate for the Bank Street approach to teacher education, an approach that is learner-centered, constructivist, experiential, and developmental (Darling-Hammond & MacDonald, 2000).

Moreover, I found that as my students' understanding of the field developed, my own understanding was extended as well. Not only did their writing and discussion offer me new examples to use in my classroom presentations, they alerted me to the importance of foregrounding this understanding across both the methods and the foundations courses I teach. As I saw these experiences through their eyes, I gained a new understanding of the complexity of helping students who were themselves from diverse cultures learn to teach children who come from worlds quite different from their own. And, rather than relying on

the power of the printed word to convey this information, I renewed my belief in the importance of embedding inquiry projects that support recognition of ties between culture and classroom performance.

There are courses in our teacher education curriculum with particular focus on these parent-school connections, culture and language, culture and literacy. However, separate courses are important but not sufficient. These portfolio experiences demonstrate how important it is to weave opportunities for exploration and discussion of these topics across the curriculum. Consequently, as we develop a new course for the Reading and Literacy Program in writing and interpreting case studies of children with reading and writing problems, we are looking at the ways in which we can help our students to identify cultural impact and work more closely with parents to develop common goals. As we revise our basic course in the teaching of reading and writing, we are exploring ways to help students use multi-cultural and bi-lingual children's literature to develop voice as well as decoding and comprehension skills. My commitment to clear communication of this information has been heightened by the discoveries of the portfolio students with whom I have worked.

Technology

Bank Street students have been constructing portfolios as a culminating project since 1991, years before technology was as ubiquitous and relatively user friendly as it is today. In 1998, Bank Street made an articulated commitment to increasing the use of technology in teaching and teacher education. As resources and support staff have grown, faculty have been debating the role technology should play in the portfolio process. Should all students construct digital portfolios? Should it be an option? Should hard text portfolios be digitalized?

The advantages of digital portfolios, e.g., opportunities to incorporate graphic representations, ways to document instructional competencies within actual classroom contexts, tools for readily accessing documents that support artifacts, portability, ease of revision for different audiences, and convenience of storage, are well documented (Barrett, 2001; Hatch, 2001; Mullen, Doty, & Rice, 2002; Kilbane & Milman, 2003). Moreover, there is no question but that by creating digital portfolios, teachers extend their own technology skills and become more likely to use these skills within their own classroom. However, the portfolio process at Bank Street was implemented as a way of allowing students to step back and integrate and reflect upon the learning they had experienced during their teacher education programs. How would requiring the acquisition of new technology skills affect the likelihood of students' achieving this goal?

The portfolio process has always been a highly demanding experience for all involved. Would we have the knowledge, staff, and resources to support students through an even more complex process? As Mullen, Doty, and Rice (2002) caution, "When caught in the morass of mechanical difficulties, reflection and self-study do not flourish" (p. 4). But, were our concerns examples of resistance to change, or was there a potential conflict between the process of digital portfolio and the specific goals underlying the Bank Street portfolio process?

Alice's portfolio experience provided an opportunity to reexamine the beliefs and practices we had put in place over the past decade.

Alice began the process with enthusiasm and a better than average knowledge base in the uses of technology. However, neither she nor the faculty and staff with whom she worked had any idea how sophisticated were her goals. The faculty understood the content she hoped to express but had limited understanding of the steps required for digital organization and presentation. The technology support staff understood the mechanical skills but had little understanding of the complexity of the content. At the point of completion, Alice saw her experience as overwhelming but worthwhile. Her high motivation and personal dedication coupled with an existing knowledge base made it all possible and worthwhile. There were indeed times during the portfolio construction when it looked as if the process of developing new skills might be diminishing the energy she had to devote to the reflective process. And, Alice was, at times, frustrated when left to figure out needed skills by herself. For despite the technology staff's commitment to supporting students through the process, the competition for their services was great.

In considering the implications of Alice's experience for our decision about the uses of digital portfolios at Bank Street, Dewey's (1938) words come to mind: "Does [the experience] ... create conditions for further growth, or does it set up conditions that shut off the person who has grown in this particular direction from the occasions, stimuli, and opportunities for continuing growth in new directions?" (p. 36). The value of digital portfolios is very clear. However, it is equally clear that the students, faculty, and support staff must all have greater understanding of what is involved and the time and skills to support students before they can be required.

Afterword (Lyons and Freidus)

In this final case several aspects of a portfolio process in support of self-study are important to note, especially the recursive nature of inquiry for all involved. Self-questioning can rebound to all participants, as it does here for students and faculty. We also know from previous research that cooperating teachers often comment on how witnessing a student teacher's portfolio presentation makes them more reflective in their own practice. The portfolio presentation can help participants understand how a portfolio is created out of the experiences and the puzzles of teaching and/or learning and how a reflective process works. In this case, we see too and can further imagine the possibilities and potential pitfalls of technology for the process.

Implications of the Portfolio Process for Advancing Self-study and the Knowledge of Practice

The cases and arguments we have presented here reveal a portfolio inquiry process that can be linked to the goals and purposes of self-study. Portfolio inquiry may be defined now more fully:

> A portfolio, as a mode of inquiry, engages teacher-practitioners and their students or other colleagues in an intentional and deliberate interrogation of some compelling or puzzling situation of teaching or learning in order to forge some understanding and meaning of it. It likely involves narrative for it is a story of meaning and it may hold ethical dimensions. (Lyons, 2002b, p. 117)

The cases point to how portfolio inquiry and self-study may serve each other but alert us as well to important considerations and implications, discussed below.

The Reflective Portfolio Process as a Scaffold for Self-Study

The portfolio inquiry process can provide an important structure to scaffold self-study. Through reflection, portfolio inquiry involves an interrogation of one's professional work as a teacher, including efforts to explore the alignment of one's beliefs and practices. Through its requirement of data for each entry, portfolio inquiry gathers together the body of evidence of professional investigations that explore the puzzles of teaching and learning. Through its emphasis on collaboration, it enables teacher educators to see their practices through the eyes of others. Through its suggestion to make a public presentation of one's learning, it brings to public view the results of inquiry and, importantly, the knowledge of practice. These processes can take place even when a portfolio-maker does not intend to engage specifically in self-study, or, for that matter, feels any special competence about portfolio making. However, we caution: not all portfolio practices include these requirements. But, if they are acted on, the reflective portfolio inquiry process can scaffold self-study investigations.

Privileging and Making Public Practitioner Inquiries

The portfolio inquiry process privileges practitioner investigations into teaching practice and underscores the importance of such investigations. It is clear from this small sample that there are important insights, knowledge, and understandings that are developed by the practitioner through the lengthy investigative process. It is also clear that this knowledge is possible because of the position the practitioner holds in relation to the teaching and learning process. The portfolio inquiry process makes that knowledge conscious to the practitioner yet open to public interrogation by other teachers or researchers (Lyons, 1998b).

Validity of Teacher Investigations Through Validation

The portfolio process can contribute to the validity of self-study. It makes public not only the specific ways in which practitioners go about their practice but the results of such inquiries. It opens that work to scrutiny by one's peers and to dialogue and discussion by members of a larger research and practice community

– characteristic features of a scholarly activity. Such self-studies can serve as exemplars of work that can be validated through a process Elliot Mishler (1990) calls validation, that is: Another researcher or practitioner deems a process worthwhile and is willing to try it in his or her own teaching or research (Lyons & LaBoskey, 2002). The purpose is not simply replication: it is the extension of the work to a new context. Such trials lay the foundation for evidence-based knowledge.

Sustaining Self-Study and Portfolio Inquiries: What Possibilities?

There are costs to portfolio making. As Lis Bass and Vicky Anderson-Patton realize, it is time consuming to engage in creating self-study portfolios and to learn how to be reflective. In addition, care is needed by mentors to attend to special vulnerabilities that may occur through the process: Some students have reported deep feelings of vulnerability when simply declaring their teaching philosophies. Thus, personal and professional identities can be at stake. And while it is clear that new technologies can support and facilitate portfolio self-study, it is also clear that technological skill must be in place or adequate resources available.

But perhaps it is most important to acknowledge what we would call a critical next step: that is, for systematic studies of all aspects of portfolio and self-study processes. The need is urgent. As Donald Schön (1995) warned, there is no guarantee that institutions hold a view of knowledge that can always sustain practitioner inquiries and acknowledge the value of the knowledge they assert. At a time of increased government scrutiny about educational research, when efforts to set national standards for research are underway that privilege traditional hypothesis testing, cause and effect methods, it is clear that threats exist to practitioner inquiries that use other modes for their investigations and employ such methods as narrative to communicate their findings (Shavelson, Phillips, Towne, & Feuer, 2003). Practitioners must be vigilant in their pursuits and rigorous in their claims (Anderson & Herr, 1999; Cochran-Smith & Lytle, 1999; Grossman, 2002; Lyons, 2002a).

For example, although portfolio uses in teacher education are acknowledged as wide-spread, nearly ubiquitous, to date no systematic studies have been undertaken to determine their consequences or long-term benefits (Lyons, 1998a; Zeichner & Wray, 2001). Claims of the value of self-reflection are asserted for portfolio processes, yet little research has been undertaken to validate them. It is also clear from the cases presented that different purposes for self-study or portfolio inquiries may prompt different emphases. How can or do they effect outcomes, such as reflective development? Our understanding of these differences is only in its infancy. We need to take up these investigations and extend to another level of evidence-based knowledge. Through portfolio processes, we clearly see the possibilities not only for teacher transformation but for advancing self-study and a new scholarship of teacher education practices.

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