The Portfolio Question:
A Powerful Synthesis of the Personal and Professional

By Grace E. Grant & Tracy A. Huebner

It is possible for a teacher's portfolio, constructed around inquiry into a self-designed question, to have significant impact on the development of teacher knowledge and professional practice. Such a portfolio engenders powerful learning in prospective teachers, particularly when it reframes and incorporates preservice teachers' personal beliefs into professional practice. Drawn from classroom experience, or from classroom incidents which trigger recollections of prior learning, student teachers in a graduate teacher education program first framed this portfolio question and then refined and clarified its meaning. Later, they used this question to focus a twelve-week inquiry into their own classroom practice. Our purpose here is to document the sustaining influence of this particular portfolio design on teachers' professional knowledge and to outline its curricular and structural implications.

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Powerful Learning for Teachers

Powerful learning is active and relevant. In teacher education, as in all educational settings, powerful

learning happens when what is learned and how it is learned are organized to build on the strengths of the learner. Prospective teachers experience powerful learning as we involve them in choosing what they will learn, and as we create a social context surrounding this learning which establishes important patterns of thinking, talking, and knowing about teaching. Within this learning community, prospective teachers are able to discover new information and, through dialogue and discourse, integrate it into their existing knowledge structures. What they learn and the ways in which they learn it engage them intellectually and socially.

Powerful learning is a self-regulated process. It assumes the notion of agency—that is, of the mind taking more control of its own mental activity (Bruner, 1994)—which is a view of mind that is proactive, problem-oriented, attentionally focused, selective, constructive, and directed toward ends. What becomes integrated into the mind is more a function of the hypotheses an individual harbors than of information present in the learning context at any given moment. Constructivist theory, beginning with Piaget (1950), poses learning as the result of observation and experiences with novel stimuli; students learn by incorporating new information into their world view, thereby constructing new knowledge and a new world view. Learning, Piaget notes, "*forms* the mind, rather than *furnishing* it." In this constructivist environment, learning experiences are empowering because they provide learners with both raw materials and a situation in which to construct knowledge. Moreover, learners have a high degree of responsibility for this process of discovery. They must resolve the inner cognitive conflicts that often become apparent through concrete experience and reflection on that experience (Brooks & Brooks, 1993).

To promote self-regulated learning for teachers, we structure the curriculum around primary concepts. Brooks and Brooks (1993) advocate a curriculum of problems organized by "big ideas" that provide a context within which students can learn the component skills, gather information, and build knowledge. "When concepts are presented as wholes...students seek to make meaning by breaking the wholes into parts that *they* can see and understand. Students initiate this process to make sense of the information; they construct the process and the understanding rather than having it done *for* them" (p. 47). Others promote learning through question posing and problem seeking. For Wiggins (1987), education for thoughtfulness is centered on "essential questions" which tap into core beliefs of a discipline, have no one obvious answer, require higher order thinking in response, and generate a personalized interest in the subject. Essential questions provide a provocative or generative entry point, a manageable introduction to intriguing human problems. Cochran-Smith (1991) highlights the posing of questions, and the pursuit of problems contained within them, as a critical feature in learning the complexities of teaching. "The ability to pose questions, struggle with uncertainty and build evidence for reasoning...is an indispensable resource in the education of teachers" (p. 280-281).

In the last decade we have also come to know a great deal more about the significance of collaborative learning, for many now believe that how we come principally to know ourselves is in interaction with each other. Beginning with the work of Vygotsky (1978), we have come to the view that thinking is a social activity, initially shared between people but gradually internalized to reappear again as an individual achievement. The conception of mind inherent in the constructivist view is not only active in nature, but it also seeks out dialogue and discourse with other minds. For it is in the sharing of resources among all individuals involved in teaching and learning that mind becomes both what is in the head and what is with others (Bruner, 1994). These social settings provide an audience for an individual's attitudes, opinions, and beliefs, where audiences request clarification, justification, and elaboration. Brown and Palincsar (1989) note that the persistent claim of group settings is that they force learning with understanding and are therefore likely to foster conceptual change. Learning with understanding is more likely when one is required to explain, elaborate, or defend one's position to others, as well as oneself; striving for an explanation often makes a learner integrate and structure knowledge in new ways. They note that environments that encourage questioning, evaluating, criticizing, and generally worrying about knowledge as an object of thought—that is, taking what we know and how we come to know it as a part of the curriculum—are believed to be precisely the kind of learning environments in which knowledge is restructured.

Further, as Cochran-Smith (1991) adds, it is the posing of questions within a learning community that links theory and practice through the process of self-critical and systematic inquiry about teaching and learning. For it is a teacher's ability to frame and re-frame questions in discourse—elaborating explanations which repeatedly direct teachers to return to observations of student learning, which direct them to uncover prior unanswered questions embedded in present ones—that develops the generative structures of inquiry. Thus, opportunities to pose questions within a supportive social environment provide occasions for prospective teachers to discover and build what we know as teacher knowledge and professional practice.

A teacher education program dedicated to fostering powerful learning, therefore, structures regular and on-going discourse about classroom practice among teachers involved in that classroom practice. These learning communities encourage the asking of questions, the clarification of ideas, the posing of explanation, and the justification of action as teacher knowledge is constructed and integrated into professional practice. These team structures, supplemented by academic study and clinical practice, form the core focus of professional study in teacher education.

Constructing a Portfolio Question

In the 1990-1991 academic year, we instituted portfolio development as an integral part of the cohort-based, graduate teacher education program at Stanford

University (Grant, 1990; Lichtenstein, Rubin & Grant, 1992). Our purpose was to use the portfolio process to develop two professional habits of mind: (1) the habit of mind that views teaching as a process of inquiry; and (2) the habit of mind that views collaborative learning as the way to come to know teaching. The construction of this portfolio entry was sustained in a seminar which accompanied a nine-month period of supervised teaching.[1]

While it is possible for a teacher-constructed portfolio to take a variety of shapes, we wish to argue that one promising form is the inquiry-based component: a professional portfolio entry framed by a self-designed pedagogical question that guides inquiry. A portfolio question, in our view, exhibits five characteristics: it is based in classroom practice; it is personally relevant to its author; it is "essential," to use Wiggins' term; it is honest; and it is well-crafted (Grant, 1995; Grant & Huebner, forthcoming). While designing and crafting this personally meaningful question, teacher education students met in small group "question sessions," where an audience of their peers requested clarification, justification, and elaboration on the meaning of their questions. Their elaborated explanations directed them to further observations of student learning, thus structuring and integrating what they know about teaching. Later, they were able to direct inquiry into their own classroom practice, helping them to further integrate and restructure those understandings in new ways.

The portfolio question will be, by its very nature, both selective and generative; it can encompass only a small portion of what is to be known of classroom realities, but through its relation to core understandings, this pedagogical inquiry generates powerful learning. Our work has been greatly influenced by Lee Shulman (1992, 1994) and his colleagues (Barton & Collins, 1993; Bird, 1990; Wolf, 1991; Wolf, Whinery, & Hagerty, 1995). It uses a definition of "portfolio" first stated by Shulman (1992) and later clarified by Kenneth Wolf (1994):

> A portfolio is the structured documentary history of a [carefully selected] set of coached or mentored accomplishments substantiated by samples of work and fully realized only through reflective writing, deliberation, and serious conversation. (p. 111 [bracketed changes in original])

Three years after their preservice training at Stanford, we interviewed six of the 54 individuals from this class (Mishler, 1986), and we report here on three of them—Lucy Brooks, Bruce Dodd, and Michico Yamamoto.[2] We selected these three individuals specifically to demonstrate how teachers continue to use their portfolio question in professional capacities, and to illustrate how the personal and professional are intertwined in this inquiry. Elsewhere (Grant & Huebner, forthcoming) we have reported on how previously learned conceptual understandings shaped these questions.

At the time of our interviews, Bruce and Michico had completed three years of teaching, and Lucy taught for two years before beginning law school. Lucy came

to teacher education after teaching French for a year in an independent alternative high school. Following graduation, she taught English as a second language to immigrant students in an urban middle school for two years. Bruce entered teacher education directly following his graduation as a political science major. He taught seventh and eighth grade social studies in a parochial school for one year before transferring to the social studies department of a suburban high school. He continues to teach there. Michico trained as a biologist but, before entering teacher education, worked for a year in a curriculum development project that used the garden as the science laboratory for student learning. Since graduation, she has taught general science and sheltered science to seventh and eighth grade students at an urban middle school. In Table 1 we list the questions which Lucy, Bruce, and Michico constructed.

Table 1
Three Portfolio Questions

Teacher	*Subject*
◆ Lucy Brooks	Spanish
What is proficiency testing, how does it differ from evaluation of achievement, and how can I develop it in my foreign language classroom?	
◆ Bruce Dodd	Social Studies
What is the most advantageous way to tear down barriers between student groups in my social studies classroom in order for students to work cohesively with one another?	
◆ Michico Yamamoto	Science
How can I motivate students in my science classroom who are traditionally unmotivated because of institutional and social discrimination?	

Our interviews focused upon understanding the relationship between an individual's personal pedagogical inquiry and teaching practices. We were also interested in how the portfolio question continues to weave its way through a new teacher's professional repertoire and how it continues to evolve as a part of on-going professional development (see Grant &Huebner, forthcoming, for a more complete description of this study).[3]

Inquiry as a Habit of Mind

Three years after completing the portfolio project, Lucy, Bruce, and Michico continue to incorporate the cognitive strategies of inquiry and collaborative learning in their professional work. Our conversations reveal that the most powerful

patterns of thinking taken from the portfolio project were the habits of mind which view teaching as inquiry and which incorporate talk about practice as a regular occurrence. All three acknowledge the persistent use of their portfolio question in everyday planning and assessment. They continue to integrate and structure their professional understandings.

When Lucy accepted her first public school teaching position, her assignment changed to second language teaching from foreign language teaching. She expanded her teaching repertoire to apply what she knew about the second language learning of English speakers to the second language learning of non-English speaking students.

> And my focus really changed from how do I teach a kid to use the appropriate word in French, because it has the appropriate cultural meaning, to how do I help these native language minority speakers to understand culturally what they're doing when they're moving in and out of East LA, dealing with the world.

After completing her teacher education year, Lucy expanded her portfolio question—"What is proficiency evaluation, how does it differ from evaluation of achievement, and how can I develop it in my foreign language classroom?"—to apply to a larger student universe. For her it became a "portfolio in the mind": she speaks of "carrying it around with me" at both a conscious and unconscious level. "In the two years that followed [teacher education] I ceased to think about [my portfolio] formally, but I had developed the habit of being a risk taker and feeling good about it and feeling sanctioned professionally to do that and to continue to go deeper and broader on all kinds of issues that came out of this question."

Bruce has persisted with his original question—"What is the most advantageous way to tear down barriers between student groups in my social studies classroom in order for students to work cohesively with one another?"—now translated into a concern for community in his high school social studies classroom: "I view my portfolio as more than just that one piece of research. I think of it as something that is still in progress." He added: "It is helpful to me today because I think about those things [classroom collaboration] and I still refer to a specific piece of data from what I collected [for my portfolio]."

Michico continues to use her question—"How can I motivate students in my science classroom who are traditionally unmotivated because of institutional and social discrimination?"—as a template for designing a curriculum in which her science students can be successful. "It was a very big, complicated question. I understand it better now, now that I've had more teaching experience. It gave me a good basis for thinking about what I'm really trying to do—by shaping my curriculum." She went on to describe the "curriculum shaping" that has occurred in her classroom:

> It changes the things I do and how I grade. I mean, all sorts of things can come into it. A lot of it is doing a lot of hands-on things—and I know that that's a big buzz

> word in science, but it's really true.... So they do experiments. We took kids yesterday to the tide pool. We were studying invertebrates and a lot of these kids who grew up all their lives in California but they've never seen a tide pool, and it's along the California coast. So it's bringing them to it, to see that.... It's kind of extending their view, their world view of possibilities. So, it's a lot of different things. And also giving kids a chance to be successful is how I structure my class. So the kids get to make up work: if they did poorly on something, they can always make it up. I give kids time to do that so it doesn't put so much pressure on them.

To assess this engaging, relevant, and student-centered curriculum, Michico spoke of keeping samples of student work as assessment of her instruction. With colleagues, she compares individual and group performance to notions of multiple access to the curriculum for all students. She acknowledges the practical usefulness of inquiry and her increased learning through professional dialogue but finds limited opportunity for written reflection. "[My portfolio question] is always on my mind so I haven't completely abandoned it, but in terms of it being a formal project research kind of tool, I don't use it at all like that." She realistically views her limits.

Each of these teachers used the portfolio question to direct inquiry into one of the complexities of teaching. That experience established the professional habit of inquiry as a way of coming to know teaching and learning. Three years later, all three continued to view classroom events as starting points for dialogue and deliberation.

Blending the Personal and Professional

All three teachers crafted portfolio questions which focus on central dilemmas in classroom instruction. The question came to light during these teachers' first quarter of student teaching; they typically arose from a specific puzzling event. But what made these particular events stand out from all others is their power to evoke memory of an earlier experience. It is this blending of the personal with the professional that guarantees Lucy's, Bruce's, and Michico's passionate commitment to the question.

Lucy, for example, who taught the prior year in an independent alternative high school, remembered her own ineffective language learning and resolved to teach differently.

> Instinctively, during my first year of teaching [before teacher education], I knew that I did not want to teach foreign language the way I had been taught foreign language. Which is to say out of a textbook, you do exercises, you repeat some things over and over again—then, there, you've learned high school Spanish which you're going to forget immediately upon graduation. So I was real concerned about creating a context for kids and helping kids become comfortable with doing things spontaneously instead of always using a prepared response to give in certain situations. How can you get a kid to learn a foreign language and leave high school and not forget? How to do it in a brain-friendly way, or in a more

> natural way? Something that more approximates the way a human brain wants to learn language as opposed to the ways it's easy to teach a language.

She was able to frame her question toward academic and content-specific issues of foreign language instruction. Since her priority was to develop language acquisition among her students in a holistic manner, she realized almost immediately that to teach in this manner required new ways of testing and of measuring student performance.

Bruce puzzled over the troubling environment in his preservice seventh grade classroom:

> This student group I was teaching was very polarized—particularly with the females in the classroom—and I noticed that every day I had to deal with a girl that was crying or deal with hateful notes that were being passed around. That led me to ask the questions "What can I do about this?" and "How can I create a better environment for my students?"

Like Lucy, Bruce searched his prior experiences for models which could help him answer his questions:

> I thought back to what I wanted as a student when I was a student. What kind of things created a positive learning environment for me?... I thought back to those teachers whose specific activities that I enjoyed when I was a student and back to things I observed when I observed other teachers and their students.... I want [my students] to enjoy my subject matter. I want them to feel safe in the classroom. And for that to happen they have to feel comfortable and they have to feel like they can work with other students.

Bruce realized that in order for his students to learn in his classroom, he had to create a trusting community.

Michico's motivation was more socio-political in nature, arising from her concern about equal educational opportunity for all students: "I guess a lot of the reason why I went into teaching is to affect the kids who weren't making it through the system. A lot of Asian kids and kids of color weren't doing well or were unprepared. That's really why I wanted to focus on those kinds of students." This early commitment to equal opportunity and equal access for Asian American students was later broadened to include students with all kinds of differences: ethnic, linguistic, cognitive, and socioeconomic. "But then it became more like language issues, and special education issues as well, which can cross racial lines and cross class lines, which are very important, too. So the big thing was how to get those kids who were unsuccessful to be successful. That's basically part of the reason I wanted to go into teaching." She added that because she entered teacher education with these convictions, the portfolio question "was useful because it made me think about what I was doing."

For Bruce, Lucy, and Michico, classroom inquiry emanates from puzzling classroom events which trigger recollection of prior experience and powerful

commitments. As they framed and reframed their portfolio questions, they restructured and integrated these prior beliefs into professional practice.

Some Cautionary Conclusions

The constructivist view of mind is particularly appropriate for learning complex constructs like learning to teach, where the number of critical variables is substantial and constantly changing. For learning to teach is recognizing that all learning is the result of instruction which is individually designed to teach a particular concept to a particular group of students in a particular context. Thus, at least one of the constructivist patterns of thinking—posing a meaningful question for a particular setting and subject, collecting data in response to that question, reflecting on the relationship between data and question, and re-framing the question—is extraordinarily powerful in coming to understand the complexities of teaching.

By this habit of mind, Lucy, Bruce, and Michico have become researchers of their own practice; they have carried into their professional lives the two habits of mind learned during their teacher education experience. They have adapted their questions to inquire in new classroom settings and seek to build learning communities with professional colleagues in those school contexts. They are teachers who assume, without question, that inquiry is part of their professional work as teachers.

The questions Lucy, Bruce, and Michico continue to follow are ones they were predisposed to seek by prior experiences or remembrances of teaching and learning—ineffective language learning, unequal access to educational opportunity, or effective history teaching. In structuring a powerful question, they embedded their values in sound pedagogy in order to develop and explain strategies to answer their questions. The collaborative process of elaborating explanations and justifying actions created opportunities for integrating and restructuring belief and professional knowledge. The result is a powerful synthesis of the personal and professional.

But the work of developing these habits of mind is difficult work, both for teacher educators and for their students. A teacher's portfolio constructed around a self-designed question requires significant curricular and structural support. It cannot be accomplished in a single fourteen-week student teaching assignment. It cannot be accomplished as an assignment in a single course. It cannot be accomplished as a culminating activity added to other assignments. Instead, it requires the programmatic commitment that views these habits of mind as central to teaching and the programmatic structuring that sustains dialogue about knowledge and practice over a year-long period. It requires that, as teacher educators, we attend to the important habits of thinking for teachers and to those habits' contribution to the ways teachers come to know teaching.

Notes

1. We are indebted to Gary Lichtenstein, the other co-instructor in this seminar, for his extensive contributions in the design of this portfolio entry and in coaching students' development of portfolio questions.
2. All names are pseudonyms to protect the confidentiality of these individuals and their schools.
3. For easier readability, we removed pauses and filler words from any quotations drawn from these statements.

References

Barton, J. & Collins, A (1993). Portfolios in teacher education. *Journal of Teacher Education*, 44(3), 200-212.

Bird, T. (1990). The schoolteacher's portfolio: An essay on possibilities. In J. Milman & L. Darling-Hammond (Eds.), *The new handbook of teacher evaluation: Assessing elementary and secondary schoolteachers*, 2nd ed., (pp. 241-256). Newbury Park, CA: Sage.

Brown, A.L. & Palincsar, A.S. (1989). Guided, cooperative learning and individual knowledge acquisition. In L.B. Resnick (Ed.), *Knowledge, learning and instruction: Essays in honor of Robert Glaser*. Hillsdale, NJ: Lawrence Erlbaum.

Brooks, J.G. & Brooks, M.G. (1993) *In search of understanding: The case for constructivist classrooms.* Washington, DC: Association for Supervision and Curriculum Development.

Bruner, J. (1994, April). The human and interpretively possible. Invited address at the Annual Meeting of the American Educational Research Association, New Orleans, LA.

Cochran-Smith, M. (1991). Learning to teach against the grain. *Harvard Educational Review*, 61(3), 279-310.

Grant, G.E. (1990). A STEP teacher's portfolio. Unpublished manuscript. Stanford, CA: School of Education, Stanford University.

Grant, G.E. (1995). Interpreting text as pedagogy and pedagogy as text. *Teachers and Teaching*, 1(1).

Grant, G.E. & Huebner, T.A. (forthcoming). The portfolio question: The power of self-directed inquiry. In N. Lyons (Ed.), *With portfolio in hand: Portfolios in teaching and teacher education*. New York: Teachers College Press.

Lichtenstein, G., Rubin, T., & Grant, G.E. (1992, April). Teacher portfolios and professional development. A paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA.

Mishler, E.G. (1986). *Research interviewing: Context and narrative.* Cambridge, MA: Harvard University Press.

Piaget, J. (1950). *The language and thought of the child.* London, United Kingdom: Routeledge & Kegan Paul.

Shulman, L.S. (1992, April). Portfolios in teacher education: A component of reflective teacher education. A paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, CA.

Shulman, L.S. (1994, January). Portfolios in historical perspective: Why portfolios? A paper presented at Portfolios in Teacher Education Working Conference, Cambridge, MA.

Vygotsky, L.S. (1978). *Mind in society: The development of higher psychological processes.* M. Cole, V. John-Steiner, S. Scribner, & E. Souberman (Eds.). Cambridge, MA: Harvard University Press.

Wiggins, G. (1987). Creating a thought-provoking curriculum: Lessons from whodunits and others. *American Educator*, 11(4), 10-17.

Wolf, K. (1991). The schoolteacher's portfolio: Issues in design, implementation, and evaluation. *Phi Delta Kappan*, 73, 129-136.

Wolf, K. (1994). Teaching portfolios: Capturing the complexity of teaching. In L. Ingvarson & R. Chadbourne (Eds.), *Teacher appraisal: New directions* (pp. 108-132). Victoria, Australia: Australian Council for Educational Research.

Wolf, K., Whinery, B., & Hagerty, P. (1995). Teaching portfolios and portfolio conversations for teacher educators and teachers. *Action in Teacher Education*, 17(1), 30-39.

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