Teaching Portfolios: Purposes and Possibilities

By Kenneth Wolf & Mary Dietz

Introduction

Teaching portfolios—selective collections of information about a teacher's practice—have been become a regular feature in many educational programs and

Kenneth Wolf is an assistant professor in the Division of Educational Psychology, School of Education, University of Colorado at Denver; Mary Dietz ia a national consultant specializing in professional development, school redesign, managing major change, and implementing constructivist models for teaching and learning.

organizations at the national, state, district, school, and university level (Wolf, 1996). Across these different settings, teaching portfolios, not unexpectedly, serve a variety of purposes.

The National Board for Professional Teaching Standards (NBPTS) (1989), for example, includes portfolios as part of its rigorous assessment process to recognize and reward accomplished teachers across the nation. State departments of education are exploring the use of portfolios as a basis for educator relicensure in Colorado (Lichtenstein, Wolf, Pease, Ruckle, & Campbell, in press), while school districts are using teaching portfolios for purposes such as identifying outstanding teachers for pay-for-performance plans (Wolf, Lichtenstein, Hartman, & Bartlett, 1996) and hiring new teachers (Anthony & Roe, 1997).

In addition, a number of individual elementary and secondary schools have implemented their own versions of teaching portfolios for use in staff development and as part of an alternative assessment system for teachers (Dietz, 1995). Moreover, numerous university teacher education programs are incorporating teaching portfolios into their programs as a strategy to help preservice teachers become more reflective about their practice (Wade & Yarbrough, 1996; Diez, 1994).

In these many different contexts, teaching portfolios have taken a variety of forms. What is called a "portfolio" can range from a thick collection of personalized products to a slender set of standardized materials. While all of these versions fall under the label of "teaching portfolio," these collections of information vary considerably in what they contain, how they are constructed, and in the ways they are evaluated. However, even though they differ on many important dimensions, the various manifestations of portfolios are all shaped by the same consideration—the portfolio's purpose (Wolf & Siu-Runyan, 1996).

The purposes for keeping a portfolio ultimately determine the form that the portfolio will take. A portfolio whose primary purpose is to promote a teacher's exploration of a new teaching topic, for example, will look very different from a portfolio whose purpose is to provide a valid and reliable basis for a national evaluation of a teacher's effectiveness.

Given that teaching portfolios can take a variety of forms, how do educators decide which models are the most appropriate for their purposes? Should portfolios be structured or open-ended? Should they contain only teachers' self-selected work or a variety of information contributed from colleagues and supervisors as well? Should they reflect process as well as product? Who should evaluate them?

With these considerations in mind, we offer a definition and a framework that we believe can help educators distinguish among different kinds of portfolios and make informed decisions about the types of portfolios that best suit their purposes. We begin with an overview of the professional literature related to teaching portfolios and their purposes. We follow with our definition of a teaching portfolio, and then present three different portfolio models that we believe capture the essential differences among the many versions of portfolios that have unfolded in practice. In describing each of these models, we discuss how the purpose for the portfolio shapes crucial decisions about portfolio authorship and audience, and its structure, content, and process. We then consider the strengths and limitations of each of the models. We conclude by discussing the relationship between productive portfolios and professional development.

Literature Review

In this review, we first discuss recent trends in the preparation and professional development of teachers, then we follow by highlighting new practices in the assessment of teachers. We take the position that the movement to teaching

portfolios is grounded in both of these movements, and that teaching portfolios are a good fit with these new directions.

Teacher Preparation and Professional Development

The success of the many reform initiatives unfolding in the field of education depends in large part on the effectiveness of teachers, and the effectiveness of teachers depends in large part on the quality of their preparation and professional development opportunities (Darling-Hammond, 1997; Corcoran, 1995; Snowden, 1993). Traditional practices are under serious assault, however, for being too disconnected from practice and too fragmented in approach (Collinson, in review; Darling-Hammond, 1997).

More recent approaches to professional development take their lead from current research on learning, which points to the need for learners to take an active role in the construction and application of new knowledge and skills, and accepts the belief that learning is best facilitated when it occurs in authentic contexts in which learners work together over time to solve real world problems (Corcoran, 1995). This body of research suggests approaches to professional development such as action research (Hubbard & Power, 1993), in which teachers carry out extended investigations on their own teaching, cognitive coaching (Costa & Garmston, 1994), in which practicing teachers observe each other and provide feedback as a "critical friend," and teaching portfolios (Wolf, 1996), in which teachers systematically document and reflect on selected aspects of their practice, both individually and in concert with their colleagues, to promote continuous improvement and learning (Dietz, 1993).

Teacher Assessment

Teacher assessment has undergone significant changes in the last decade as well (Shulman, 1988; Darling-Hammond, Wise, & Klein, 1995). Traditional forms of assessment, either in the form of multiple-choice tests, or in the form of school-based evaluations characterized by one or two classroom observations each year, have been criticized as being misleading and inadequate. Multiple-choice tests given to teachers entering a teacher education program or applying for a teaching license have been seen as invalid measures of a teacher's performance or potential because, among other reasons, they bear little resemblance to the actual tasks of teaching. At the same time, classroom observations by the school principal have been criticized as inadequate for gaining an accurate view of teacher performance because the number of observations is typically insufficient for obtaining a clear view of a teacher's competence and also because school principals often lack the necessary content knowledge to assess a teacher's subject matter expertise (Stodolsky, 1988). Moreover, both of these forms of assessment have been challenged because they do little to promote a teacher's effectiveness.

These criticisms have sparked a search for teacher assessment approaches that

more effectively capture and advance what teachers know and can do. Lee Shulman (1988) has suggested that we create a "union of insufficiencies," in which various methods of assessment are combined in such a way that the strengths of one offset the limitations of the others. In this mix, he proposes performance assessments, teaching portfolios, along with the more conventional written examination and classroom observations. The NBPTS (1989), along with many educational organizations, university teacher education programs, and school districts have begun to move in this direction (Darling-Hammond, Wise, & Klein, 1995).

Teaching Portfolios

This shift in beliefs and practices about the preparation and professional development and the assessment of teachers has led educators and scholars to explore new approaches to both. One such approach has been teaching portfolios. Portfolios are attractive because they appear to be robust and flexible enough to capture the complexities of teaching as well as promote the professional development of teachers (Wolf, 1994). For these reasons, teaching portfolios have taken root in a variety of programs from the national level to individual schools, and in many university teacher education programs.

Most of the professional literature has focused on the use of teaching portfolios with preservice teachers. These reports suggest that portfolios help preservice teachers become more reflective and improve their classroom practices (Arrowsmith & Wolf, in review; Borko, Michaelec, Timmons, & Siddle, in review; Wade, 1996; Dietz, 1995; Loughran & Corrigan, 1995; Schram, 1995; Stroble, 1995; Diez, 1994; Barton & Collins, 1993).

The practice of using portfolios in job searches appears to be gaining popularity as well. While the practice is only beginning to be documented in the professional literature (Anthony & Roe, 1997; Lichtenstein, in review), it appears to be widespread. Anthony and Roe (1997), for example, in their national survey of school districts found that although few (5 percent) require portfolios in the application process, over half request them at the interview stage. Given the growing use of portfolios in the hiring and placement of teachers, this topic deserves further attention from researchers.

Other applications that have emerged include using teaching portfolios to determine if preservice teachers meet the state standards for beginning teachers (Lyons, 1996), to grantteacher education program approval (Snyder, Elliott, Bhavnagri, & Boyer, 1993), to identify and reward outstanding teachers in a school district (Wolf, Lichtenstein, Bartlett, & Hartman, 1996), for teacher relicensure (Lichtenstein, Wolf, Pease, Ruckle, & Campbell, 1997), to support and assess beginning teachers (Sanborn, 1996), and to award advanced national certification (Athanases, 1994; LaRussa, Dagley, & Capie, 1995). Moreover, the use of portfolios has become such a part of the landscape that a number of publishing companies have recently released handbooks to guide teachers in constructing their portfolios (Burke, 1997).

This review of the professional literature was intended to describe the conditions that have led to the recent popularity of teaching portfolios, as well as provide a rationale for the portfolio models described in this article.

Portfolios: A Definition

On one level, a teaching portfolio could be simply defined as a collection of information about a teacher's practice. This information could include a wide variety of materials, such as unit and lesson plans, tests and assessments, student work, photographs of classroom life, philosophical and goal statements, self-assessment and written commentaries, letters of recommendation, formal evaluations, certificates, transcripts, and the like.

From our perspective, however, a teaching portfolio is more than a collection of artifacts or the container in which they are placed. It is also a process for examining teaching and learning in a focused and structured fashion, for sharing these insights with others, and for improving what we do in schools. With these considerations in mind, we offer the following definition that describes features that we believe are essential to all teaching portfolios, regardless of their intended purpose (see Figure 1):

A teaching portfolio is a structured collection of teacher and student work created across diverse contexts over time, framed by reflection and enriched through collaboration, that has as its ultimate aim the advancement of teacher and student learning.

In the following paragraphs, we clarify and elaborate on the key features of this definition.

A portfolio contains teacher and student work. While resumes provide a description of one's accomplishments, a teaching portfolio should present actual evidence through artifacts such as unit overviews and videotapes of one's teaching. In addition, the information in a teaching portfolio should be substantiated by

Figure 1 Essential Features of a Teaching Portfolio

A portfolio is a collection of teacher work and records that is:

- ◆ purposeful;
- selective;
- ♦ diverse;
- ongoing;
- reflective;
- ◆ collaborative;

and that has as its aim the advancement of teacher and student learning.

samples of student work, for it is difficult to review teaching without examining the learning that took place. Not only are these artifacts critical for evaluating the quality of a teacher's performance, they are also a valuable vehicle for stimulating deep and focused conversations among teachers about their practice (Richert, 1990).

A portfolio is structured and purposeful. A portfolio is not a miscellaneous collection of teaching mementos, but a structured and selective set of information gathered for specific purposes. A portfolio should be structured around sound professional standards, such as those developed by the NBPTS, as well as around school and individual goals. A selective set of information (not everything available) that best represents a teacher's accomplishments for these goals should then be placed in the portfolio. As for purposes, these will vary depending upon the person creating the portfolio and the context in which it is constructed. However, all portfolios are assembled for one or more (if sometimes implicit) purposes. The purposes may be to stimulate self-assessment, to document professional development, to guide teaching, to communicate with parents about the classroom and school curriculum, or to provide administrators and policy makers with information about the impact of the school or district's instructional program. It is these purposes that give a portfolio its focus, as well as drive its design and implementation.

A portfolio shows teaching and learning across contexts and over time. One of the most attractive features of portfolios is that they allow us to see teaching and learning unfold over time and in a variety of contexts. For example, it can sometimes be difficult to consider the strengths and weaknesses in a particular lesson, unless we know what came before or will follow. Or it can be difficult to comment on the appropriateness of a particular strategy without knowing the context in which it was applied.

A portfolio is reflective. More than anything else, the portfolio process should inspire reflection—alone and in the company of others, in writing and in conversation, in planning and in documenting one's teaching. As John Dewey remarked, "We learn by doing only if we reflect on what we have done." Along these lines, the artifacts of teaching, such as lesson plans and student work, are necessary contents in a portfolio, but they are not sufficient. Reflective commentaries by the portfolio owner are essential companion pieces to artifacts. Writing reflections pushes teachers to more deeply examine their practice and allows others to examine the thinking behind the teaching documented in the portfolio. In addition to written comments, reflection in a portfolio can take a variety of forms such as a post-lesson topical net analyzing the collapse of a lesson or a series of photographs showing the unfolding of an art project. With reflection, the portfolio can become "an episode of learning" (D. Wolf, 1993); without reflection, the portfolio may be little more than an exercise in amassing papers.

A portfolio is collaborative. Learning is a social process (Vygotsky, 1978), and constructing a portfolio should be as well. Interactions with others—peers, stu-

dents, parents, administrators—should permeate the portfolio process as teachers set goals, carry out and document their work, and reflect on their accomplishments. In particular, through substantive conversations about our teaching, a "critical friend" (Costa & Kallick, 1993) can advance our learning in ways that we cannot do alone, though some caution against verbal feedback that is evaluative (Showers & Joyce, 1996; Garmston, 1997).

A portfolio should ultimately advance teacher and student learning. While this purpose may not be initially apparent or immediately realized, the process of constructing a portfolio—regardless of the purpose for doing so—should improve a teacher's practice and, as a result, the learning of his or her students.

In sum, a teaching portfolio should be more than a miscellaneous collection of artifacts or an extended list of professional activities. All portfolios (to be called a portfolio), we believe, share the characteristics we have described. Thus, no matter the particulars of any portfolio system, all portfolios should be constructed for clear and sound purposes, contain diverse collections of teacher and student work assembled over time, be framed by reflections and enriched through collaboration, and have as their ultimate aim the advancement of teacher and student learning.

Even when honoring these criteria, however, the specific form that a portfolio can take varies depending upon the purposes for which it is being used. In the following section, we describe three different portfolio models, each reflecting a different primary purpose.

Three Models

We have identified three distinct portfolio models that have emerged in practice. Our aim in this article is to clarify the different purposes that underlie each of these models and consider how these purposes affect the portfolio's design and use.

The three portfolio models are: *learning, assessment,* and *employment* portfolios (see Figure 2). While it is possible (but difficult) for a single portfolio to address all three purposes equally well, what distinguishes these portfolios from each other is that the *primary* purpose of each differs.

Figure 2 Three Purposes for Portfolios

Learning Portfolio	Assessment Portfolio	Employment Portfolio
Promotes teacher reflection and owner-ship over the learning process.	Presents educational organizations with information about a teacher's effectiveness.	Provides prospective employers with information about a teacher's suitability for a position.

In practice, most portfolios cannot be neatly categorized into one of these three models, but often are combinations of two or more. We have, however, drawn sharp contrasts between the various models to illustrate the key features of each, and to help practitioners and policy makers understand the trade-offs in the portfolio models they are considering or have implemented.

Learning portfolios are personalized collections of teacher work that emphasize ownership and self-assessment. With a portfolio whose primary purpose is to advance teacher learning, teachers typically collect a variety of information that illustrates their accomplishments and progress, reflect on the development of their work and their learning, and set goals for themselves as learners. In some instances, and especially when there are no significant assessment implications, teachers may even use the portfolio to highlight instructional dilemmas or identify areas of professional weakness. The main purpose of the learning portfolio is to provide teachers with an opportunity to explore, extend, showcase, and reflect on their own learning. Portfolios prepared in teacher education programs or for individual growth plans are examples of this category.

Assessment portfolios are selective collections of teacher work and standardized assessments that are submitted by teachers according to structured guidelines set by professional organizations, state agencies, or school districts. Assessment portfolios typically contain samples of teacher work created according to specific criteria, teacher responses to standardized performance assessments, and possibly information from others in the form of formal evaluations and letters of recommendation. The primary purpose of this type of portfolio is to evaluate teacher performance for certification, licensure, or professional advancement. The National Board for Professional Teaching Standards portfolios, in which teachers are applying for advanced certification, are representative of this category.

Employment portfolios are customized and attractive collections of information given by teachers to prospective employers that are intended to establish a teacher's suitability for a specific professional position. These portfolios generally contain a resume, certificates and letters of recommendations, a few eye-catching samples of teacher and student work, and brief reflective comments about the teacher's philosophy or practices. These portfolios are intended to present a teacher's qualifications to busy administrators or hiring committees in an accessible way.

As illustrated by the three definitions, each of these portfolio models—learning, assessment, and employment—is driven by a different *primary* purpose, and, as a consequence, has a different emphasis in terms of authorship and audience, and in its structure, content, and process. In the following section, we elaborate on how these three types of portfolios differ from each other on each of these dimensions, and then comment on the respective strengths and limitations of each model.

Author, Audience, and Purpose

Portfolios vary according to their purposes, and these different purposes determine the portfolio's authors and audiences (see Figure 3).

The *learning portfolio* is owned and authored by the teacher, and the main audience for the portfolio is the teacher him or herself. The purpose of learning portfolios is to advance a teacher's professional development. To do so, teachers must be given the authority for making decisions about what they want to learn and the responsibility for evaluating their own learning.

The assessment portfolio is usually designed by the organization requesting the portfolio (e.g., professional organizations, school districts), and then developed by the teacher according to these guidelines. Because the primary purpose of the portfolio is to provide a formal assessment of teacher performance, its primary audience is the organization conducting the evaluation.

The employment portfolio is authored by the teacher according to the position being sought and the materials requested by the prospective employer. The audience is the school or district personnel receiving the portfolio. The purpose of the employment portfolio is to help the teacher obtain a job.

Figure 3 Portfolio Authors and Audiences					
	Learning Portfolio	Assessment Portfolio	Employment Portfolio		
<u>Author</u>	Teacher	Teacher/ Educational Organization	Teacher/ Prospective Employer		
<u>Audience</u>	Teacher/ Colleagues	Educational Organization/ Public	Prospective Employer		

Structure, Content, and Process

Besides determining authorship and audience, the portfolio purpose is instrumental in shaping the form, content, and process of the portfolio. Depending upon the purpose, (1) portfolio structures can range from open-ended to highly organized, (2) portfolio contents can range from idiosyncratic collections to standardized sets of performances, and (3) the portfolio processes can range from ongoing self-assessments to formal evaluations of teacher performance (see Figure 4).

The learning portfolio is loosely structured and contains a variety of work

selected by the teacher to illustrate his or her accomplishments and progress towards self-chosen goals. Learning portfolios vary in contents from teacher to teacher, and reflect the personal style of the author. A learning portfolio typically contains teacher work, including student work samples, along with the teacher's periodic reflections on his or her professional development. A wide variety of additional materials such as photographs, letters from students, and other personally significant items are often added. This type of portfolio often focuses on a specific learner-centered goal or set of related goals in which the teacher charts his or her progress towards those goals over the course of one or two school years. Teachers often modify this portfolio to meet the needs of an assessment or employment portfolio.

The assessment portfolio is highly structured, with a significant portion of the contents usually externally mandated. However, even when the form of presentation or type of documentation is prescribed, teachers still have considerable freedom to select work samples that they believe best represent their teaching effectiveness. This type of portfolio is tightly constrained so that teacher performance can be more fairly, efficiently, and reliably evaluated on a large scale.

Figure 4 Portfolio Possibilities					
	Learning Portfolio	Assessment Portfolio	Employment Portfolio		
<u>Structure</u>	Open-ended, teacher determined.	Highly structured, Standardized.	Semi-structured.		
Content	Wide variety of teacher-selected work and records related to self- selected goals.	Clearly specified and selective set of teacher work and records, as well as standardized assessments.	Usual job search documents, such as resume, transcripts, recommendations, along with slender set of teacher work and records.		
Process	Teachers choose own goals and build portfolio that reflects these goals. Teachers self-assess with assistance of peers or mentors.	Teachers follow guidelines for building a portfolio according to instructions from the organization conducting the assessment. Assessment is formal and psychometrically sound.	Teachers customize their portfolio to match the job requirements. Prospective employer assesses teacher's qualifications based on school or district needs and criteria.		

Contents typically include teacher work created and collected under carefully specified conditions, along with teacher responses to performance assessments. Outside evaluations may be included as well. Teachers often complete these portfolio within limited time periods set by the organization conducting the evaluation.

The employment portfolio is semi-structured, with a portion of the contents sometimes determined by the organization conducting the job search, and with part of the contents selected by the teacher to match the position requirements. The contents typically include standard job search materials, such as a resume, letters of reference, previous evaluations, certificates, and the like, as well as materials prepared by the teacher, such as lesson plans and student work samples. The portfolio might also contain information requested by the organization conducting the job search. The employment portfolio has a slicker, more visually appealing appearance than either of the other two types of portfolios given that principals and hiring committees are likely to judge the appearance of a candidate's work along with its substance. The employment portfolio is more slender than either of the other two because busy administrators and teachers are not likely to spend hours reviewing these materials. Teachers often draw from their learning portfolios to prepare the portfolios that they submit for employment interviews.

Strengths and Limitations

The same features that make a portfolio attractive for one purpose often render it less helpful for other purposes. For example, the personalization of the learning portfolio is a virtue when the purpose is to allow teachers the opportunity to explore an area of their own choosing, but it can be a severe liability when the purpose is to assess teacher performance in a reliable and efficient manner. No portfolio approach can address all purposes equally well; there are always trade-offs to consider (see Figure 5).

The learning portfolio's strengths are its flexibility and its role in promoting independent learning. Its weaknesses are that it may not provide a broad view of a teacher's performance and is too cumbersome for employment purposes. The learning portfolio is the best choice when the goal is to stimulate and strengthen teachers' reflection and practice.

The assessment portfolio's main strengths are that it presents a comprehensive and standardized view of what teachers know and are able to do. Its weaknesses are that individual teacher learning goals can be sacrificed to some degree in order to achieve greater standardization, and it can be artificial in nature. The assessment portfolio is most appropriate when the goal is to obtain a comprehensive and authentic evaluation of a teacher's performance when making personnel or certification decisions.

The employment portfolio's strengths are that it can show prospective employers a more detailed and flattering view of a teacher's potential than a standard

Figure 5 Portfolio Tradeoffs					
	Learning Portfolio	Assessment Portfolio	Employment Portfolio		
Strengths	Is teacher driven and flexible, and offers a nonthreatening forum for analyzing one's own practice.	Provides valid and reliable assessment and a comprehensive view of a teacher's performance and potential.	Advertises a teachers talents and provides information to employers about a teacher's perspectives and practices.		
Limitations	Can be idiosyncratic and unconnected to professional standards. May not provide a broad view of a teacher's practice.	Reduces teacher ownership and can be time-consuming for teachers to construct.	Provides a view of teacher strengths rather than weaknesses. Emphasizes presentation as well as substance.		

resume, and possibly increase a teacher's opportunities for finding a job. Its weaknesses are that it tends to highlight accomplishments rather than thoughtfully explore teaching dilemmas, and its exclusive emphasis on a teacher's self-selected strengths make it less useful for assessment purposes. The employment portfolio is most useful when teachers want to showcase a few of their most significant accomplishments and talents in an attractive and accessible format.

Conclusion

In this article, we have emphasized that portfolios can serve a variety of purposes, and, as a result, can take many different forms. While no single portfolio approach can meet all needs, a careful consideration of the purposes for the portfolio can guide teachers, administrators, and policymakers in making informed decisions about the design and use of teaching portfolios.

It is important to keep in mind, however, that portfolios are a means, not an end (Wolf, 1994). That is, the goal is not to polish portfolios, but to advance teacher and student learning. We believe that carefully conceived teaching portfolios—constructed for any purpose—make the realization of these goals more possible.

Note

1. This article is modeled after Wolf and Sui-Runyan's (1996) description of the purposes of student portfolios.

References

- Arrowsmith, D. & Wolf, K. (in review). Teaching portfolios in preservice education: One program's experience.
- Athanases, S. (1994). Teachers' reports of the effects of preparing portfolios of literacy instruction. *The Elementary School Journal*, 94, 421-439.
- Anthony, R. & Roe, G. (1997). Selecting teachers for tomorrow's classrooms. Technical report. Madison, WI: Educational Placement Consortium.
- Barton, J. & Collins, A. (1993). Portfolios in teacher education. *Journal of Teacher Education*, 44, 200-210.
- Borko, H., Michaelec, P., Timmons, M., & Siddle, J. (in review). Student teaching portfolios. A tool for promoting reflective practice.
- Burke, K. (1997). Designing professional portfolios for change. Arlington, IL: IRI/Skylight. Collinson, V. (in review). What is in a name? The transition from workshops to staff development for sustained school improvement.
- Colorado Professional Standards for Educators. (1994). Standards for Colorado Educators. Denver, CO: Colorado Professional Standards for Educators.
- Corcoran, T. (1995a). Helping teachers teach well: Transforming professional development. CPRE Policy Briefs (RB-16). New Brunswick, NJ: Consortium for Policy Research in Education.
- Corcoran, T. (1995b). Transforming professional development for teachers: A guide for state policymakers. Technical report. Washington, DC: The National Governors Association.
- Costa, A. & Garmston, R. (1994). Cognitive coaching: A foundation for Renaissance schools. Norwood, MA: Christopher-Gordon Publishers.
- Costa, A. & Kallick, B. (1993). Through the lens of a critical friend. Educational Leadership, 51, 49-51.
- Darling-Hammond, L., Wise, A., & Klein, S. (1995). A license to teach: Building a profession for 21st century schools. Boulder, CO: Westview Press.
- Darling-Hammond, L. (1997). What matters most: Teaching for America's future. Washington, DC: The National Comission on Teaching & America's Future.
- Diez, M. (1994). The portfolio: Sonnet, mirror, and map. Paper presented at the Conference on Linking Liberal Arts and Teacher Education: Encouraging reflection through portfolios. San Diego, CA.
- Dietz, M. (1993). Learning cycles. Unpublished manuscript.
- Dietz, M. (1995). Using portfolios as a framework for professional development. *Journal of Staff Development*, 16, 40-43.
- Dollase, R. (1996). The Vermont experiment in state-mandated portfolio program approval. Journal of Teacher Education, 47(2), 85-98.
- Garmston, R. (1997). The teacher is within. Journal of Staff Development, 187(1), 62-64.
 Guskey, T. (1986). Staff development and the process of teacher change. Educational Researcher, 15(5), 5-12.
- Hawley, W. & Valli, L. (forthcoming). The essentials of effective professional development: A new consensus.
- Herman, J. & Winters, L. (1994). Portfolio research: A slim collection. *Educational Leadership*, 52, 48-55.
- Hubbard, R. S. & Power, B. M. (1993). The Art of Classroom Inquiry: A handbook for teacher researchers. Portsmouth, NH: Heinemann.

- LaRussa, A., Dagley, P., & Capie, W. (1995). The use of teacher constructed portfolios in a national teacher assessment system. Paper presented at the annual meeting of the American Educational Research Association. San Francisco, CA.
- Lichtenstein, G. (in review). Portfolios for hire.
- Lichtenstein, G., Wolf, K., Pease, P., Ruckle, C., & Campbell, G. (1997). In the hands of professionals: Teaching portfolios and relicensure in Colorado. *The Professional Educator*, 19(2), 43-50.
- Loughran, J. & Corrigan, D. (1995). Teaching portfolios: A strategy for developing learning and teaching in pre-service teacher education. Teaching and Teacher Education, 11, 565-577.
- Lyons, N. (1996). A grassroots experiment in performance assessment. *Educational Leadership*, 53, 64-67.
- National Board for Professional Teaching Standards. (1989). Toward high and rigorous standards for the teaching profession. Washington, DC: National Board for Professional Teaching Standards.
- Newman, F. (Spring, 1994). Schoolwide professional community. *Issues in restructuring schools*. Madison, WI: Center on Organization and Restructuring of Schools.
- Sanborn, J. (1996). Teacher Assessment Policy Project's Final Report to the SB 1422 Panel for the Comprehensive Review of Basic Teaching Requirements. Technical report. San Francisco, CA: WestEd.
- Schram, T. (1995). Using portfolios to mediate learning and inquiry among interns and teachers. *Teaching Education*, 7(2), 71-80.
- Shulman, L. (1988). A union of insufficiencies: Strategies for teacher assessment in a period of reform. Educational Leadership, 46, 36-41.
- Snowden, C. (1993). Preparing teachers for the demands of the 21st century: Professional development and the NBPTS vision. Technical report. Detroit, MI: National Board for Professional Teaching Standards.
- Snyder, J., Elliott, S., Bhavnagri, N., & Boyer, J. (1993). Beyond assessment: University/ School collaboration in portfolio review and the challenge to program improvement. *Action in Teacher Education*, 15, 55-60.
- Stodolsky, S. (1988). The subject matters. Chicago, IL: University of Chicago Press.
- Stroble, E. (1995). Portfolio pedagogy: Assembled evidence and unintended consequences. *Teaching Education*, 7(2), 97-102.
- Wade, R., & Yarbrough, D. (1996). Portfolios: A tool for reflective thinking in teacher education? Teaching and Teacher Education, 12, 63-79.
- Wolf, D. (1993). Assessment as an episode of learning. In R. Bennett & W. Ward (Eds.). Construction versus choice in cognitive measurement: Issues in constructed response, performance testing, and portfolio assessment (pp. 213-240). Hillsdale, NJ: Erlbaum.
- Wolf, K. (1991). The schoolteacher's portfolio: Issues in design, implementation, and evaluation. *Phi Delta Kappan*, 73, 129-136.
- Wolf, K., Hagerty, P., & Whinery, B. (1995). Teaching portfolios and portfolio conversations for teachers and teacher educators. Action in Teacher Education, 17, 30-39.
- Wolf, K. (1996). Developing an effective teaching portfolio. Educational Leadership, 53, 34-37.
- Wolf, K., Lichtenstein, G., Bartlett, E., & Hartman, D. (1996). Professional development and teaching portfolios: The Douglas County School District Outstanding Teacher Program. Journal of Personnel Evaluation in Education, 10, 279-286.
- Wolf, K. & Siu-Runyan. (1996). Portfolio purposes and possibilities. Journal of Adolescent and Adult Literacy, 40, 30-37.