Locating Reflective Practices: Findings From a Self-Study

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Introduction

In the past 25 years, teacher education in the United States has been criticized for not producing quality teachers. A flurry of reports from the 1980s and 1990s called for fundamental changes to teacher preparation in pursuit of teachers who could meet the needs of all learners (NCEE, 1983; Holmes, 1986; TTP, 1986; Goodlad,1994; NCTAF, 1996). One response from stakeholders in policy has been to draw universities and school districts closer in true partnerships where pre-service teachers can work in environments dedicated to best practices and where both school and university personnel can learn from each other. The Professional Development School or PDS is an example. As described by Darling-Hammond, et al. (1995), PDS relationships are "collaborations between schools and universities that have been created to support the learning of prospective and experienced teachers while simultaneously restructuring schools and schools of education" (p. 87).

One important consideration is to determine the mutual goals pursued by the PDS personnel. Kennedy (1992) proposes that the formation of "deliberate action" skills among pre-service teachers (student teachers and interns) and in-service teachers (mentors and other licensed teachers) should be a key component of a PDS curriculum. "Deliberate action" is the ability to assess a situation in the classroom, deliberate upon past experience and knowledge and select an appropriate action. Kennedy's concept is similar to Schön's (1987) "reflection in action" where an actor uses reflective skills in the moment. Additionally, Schön's framework includes "reflection on action," which is a more careful process of understanding what has happened in recent events, considering one's own role in those events and thoughtfully examining other possibilities for the future. Both Kennedy and Schön consider reflective practices essential to effective professional work.

Researchers have tied growth in teachers' reflective practices with growth in learning opportunities for students (Glickman, 1995; Richards & Lockhart, 1997; Garmston & Lipton, 1998; Rogers & Tiffany, 1999). Glickman (1995) contends that teachers with higher conceptual development are more adaptive, flexible and successful than colleagues with lower conceptual levels. Glickman uses the work of Hunt, (1966) to define "conceptual development". Hunt defines conceptual levels as the ability to deal with increasing conceptual complexity by discrimination, differentiation, and integration and by increasing interpersonal maturity, as indicated by self-definition and self-other relations. Hunt placed individuals on a continuum from concrete (the lowest level) to abstract (the highest level). Further, Garmston and Lipton (1998) write that teachers' developmental levels have direct correlation to their classroom performance. Rogers and Tiffany (1999) report that "a disciplined reflective process in a supportive community leads to shifts in how teachers frame their experience" (p. 248). A growing consensus asserts that reflection is a key to good teaching.

This article reports the findings of an action research project conducted by a group of teachers and professors at a PDS in suburban New Jersey. The study's purpose was 1) to

examine whether participation in the PDS activities increased in-service teachers' reflective practices and 2) to provide the PDS leadership with data on how reflection might be increased throughout the district. Although student learning is the ultimate goal of the PDS partnership, the focus of the study is on teacher reflection as a first step towards improving students' achievement. The findings speak to the need for teachers to participate in co-mentoring (Kochan & Trimble, 2000) within an environment that addresses both novice and experienced teachers' development (Kardos, et al., 2001).

The PDS Setting and Context

This PDS was established in 2001 for the purpose of renewal and growth for teachers. The leadership believed that changing practices would impact student learning and provide exemplary opportunities for pre-service teachers. The partnership began with a Goals 2000 grant that provided seed money for initial implementation, and three years later, the PDS leadership continued the relationship with local resources and support. The PDS leadership decided that reflective practice should be the central goal of PDS activities because district administration was concerned that professional development activities were not translating into classroom practice. Additionally, university faculty believed that the teaching style of mentor teachers, including the level of reflective practice, would strongly influence the development of pre-service teachers (Stanulis, 1994; Nagel & Smith, 1997; Golland, 1998; Veal & Rikard, 1998).

PDS activities were based on the assumption that in order to examine teaching, both in-service and pre-service teachers must be involved in extensive activities about teaching and learning through self-inquiry and critical reflection. Reflection draws on a constructivist view of knowledge whereby teachers thoughtfully review their experiences in order to fully understand and value their professional routine (Collier, 1999; Thomas & Montgomery, 1998). In addition to benefiting the individuals who have the opportunity to reflect on their experiences, reflection shared among teachers

can bring new understandings and helpful suggestions to fellow practitioners (Grimmet, 1998). Reflection is an important means of assisting teachers to articulate their thoughts and to provide feedback to the pre-service teachers who should, in theory, also gain reflective skills.

During PDS activities, in-service and pre-service teachers frequently worked in teams to solve problems of practice. The supposition was that new knowledge is stimulated by the exchange of ideas among pre-service teachers, in-service teachers, university faculty and other professionals working on-site. Mentoring of pre-service teachers served as a merging point for implementation of new practices for both experienced and pre-service teachers. PDS personnel worked to offer a rich context within which to nurture and assess teacher development at all levels.

Background for Study

The central concept of the study was to treat the research design as an "iterative" process (Dudley, Katz & Mitchel, 2004), meaning that, just as PDS leadership had identified issues for growth and development through the process of collaboration, the action research design had to be able to grow in new directions as new evidence was uncovered. After implementing a series of PDS activities as shown in Figure 1, Reflective Practice Activities, the PDS leadership wanted to study what activities, if any, influenced reflective practice. As part of the PDS activities, the University offered an on-site master's program in professional development to the district's teachers. Teachers were allowed to select courses as needed and instructors were encouraged to integrate district goals and teacher needs wherever possible. For example, teachers were concerned with student achievement in mathematics, and the instructor teaching a course on models of teaching used lesson study and mathematics as the vehicle for assignments.

The two course sequence associated with this study focused on "teacher as leader" in the context of supervision and school leadership. Two professors and the master's cohort of 20

teachers designed and conducted the action research on reflection as part of the course requirements, including a review of the reflective practice literature and creating a definition of reflection from that literature. According to the cohort's research, reflection is "an ongoing process to examine, challenge and change core beliefs and practices about teaching and learning, aimed at helping all students learn."

The team then designed a survey instrument to determine the level of teacher engagement within the PDS. They explored definitions of reflection and planned and implemented a structured interview to identify which PDS activities contributed to teachers' skills in reflective practice. Figure 2, Levels of Participation and corresponding PDS Activities, details the variety of activities that teachers at different levels engaged in as part of their PDS work. Throughout this collaboration, the teachers and professors were actively engaged in the process of revising and executing the research plan.

Methodology

The original research plan was centered on addressing three main questions:

1. At what levels do in-service teachers participate in PDS activities?

2. Has their involvement in the PDS deepened their ability to reflect?

3. What aspects of PDS participation, if any, most influence reflective practice?

To answer the first question, the team needed to examine in-service teachers' different levels of participation, so a survey was designed and administered to gauge how deeply different teachers had engaged in the PDS activities. The survey was administered (N= 40) and returned by all participants. Teachers who had participated in at least 80% or more of the activities were identified as high participators, 50% or more of the activities as moderate and 25 % or more of the activities as low. The survey results showed that 26 teachers had participated more than 25% of the time. Figure 2 shows levels of participation and

corresponding activities in which they participated.

In order to answer questions two and three, twelve in-service teachers, four from each range of participation were selected at random for a structured interview. The interview consisted of one general question asking teachers to read the definition of reflective practice, review the list of PDS activities (see Figure 1) and discuss the PDS activities most influential upon their ability to reflect. Interviewers also followed up on those nominations, asking the interviewees to explain specific examples of reflection that resulted from participation in PDS activities. The interviews were then coded using QSR-NUDIST to align participants' responses and demonstrate what, if any, PDS activities were nominated as most influential.

Figure 3, Data Collection Methods, details the variety of data gathering tools utilized as the study grew and evolved.

Initial Findings – Mentoring and Being Mentored

Survey data showed a wide range of participation levels across all in-service teachers, ranging from periodic attendance at PDS meetings and workshops to ongoing mentoring of pre-service teachers. Teachers spent a significant amount of time working in activities that required them to engage in what Schön (1987) describes as reflection-on-action and reflection-in-action to achieve reflection-for-action. Reflection-on-action pertains to thinking back over practice, deliberately and systematically. Reflection-in-action refers to the active engagement of revising the teaching as they are involved in actual practice. In-service teachers reported increases in their reflection skills due to participation in the PDS and were able to articulate specific instances where they used reflection either to improve their teaching or to gain new perspectives on their situations as classroom teachers. As the interview data was coded and organized the researchers began to see a clear pattern emerge

Figure 1. Reflective Practice Activities

Critical Friends Study Group: After school sessions with school and university PDS coordinators to debrief weekly experiences and to discuss concerns and problems encountered.
Reflective sessions: Teachers reflect on teaching and learning and in a study group discuss recommendations for meeting student needs. Sessions generated needs assessment for professional development.
Lesson Study Research lessons: Teams of in-service teachers and pre-service teachers selected a content topic or skill that presented some difficulty for their students, and then collaboratively planned, taught, and observed student learning. After planning the lesson, one teacher taught while the others observed how students responded. During debriefing, the team analyzed the implementation of the lesson, making revisions where they saw student misunderstandings or problems. The lesson, with modifications, was then taught to another group of students by another teacher and another debriefing session was conducted.
Clinical sessions: Pre-service teachers and their cooperating teacher agreed to teach and coach each other with PDS coordinator as a facilitator. Facilitator provided feedback on the coaching process.
Teaching seminars: In-service teachers attend senior seminar , and methods classes with their pre-service teachers. Classes are taught on-site at the PDS with teachers all learning together.

Figure 2. Levels of Teacher Participation and corresponding PDS Activities

Levels of Participation	Activities in Which All Participated
High Participation (N=5)	• Masters Cohort • Lesson Study • Partnership Governance • Mentoring • Retreats • Reflective Sessions • PDS meetings • Workshops
Mid Participation (N=10)	• Mentoring • Reflective Sessions • PDS meetings • Workshops
Low Participation= (N=11)	• Workshops • Mentoring • PDS Meetings

Figure 3. Data Collection Methods

Data/Concept Type	Collaboration and Method
Definition of Reflection	Masters cohort study group reviewed literature and collaborated on standard definition.
Survey of Participation (N=26)	Masters cohort study group designed and deployed survey. Results weighted to identify high, middle and low participants in PDS activities
Structured Interview of (N=12)	Interview instrument deployed by masters cohort study group and qualitative data coded by PDS activity type across all participant groups.

across all levels of participation; in-service teachers consistently rated both mentoring activities and work which brought them into sustained contact with their peers as salient influences upon reflective skills. In order to better understand why those activities influenced reflective practice, this analysis examined findings along two themes: mentoring and being mentored within the PDS.

In-service teachers reported that when serving as mentors they had to self-reflect to have meaningful discussions with the novices in their charge. Without the added responsibility of examining and explaining practice to pre-service teachers, they would have had less insight into how to explain the myriad of choices they made daily. Working with peers offered them not merely solace, but also allowed them to gain perspective on the challenges of teaching and to receive ideas from peers with whom they had developed bonds of trust. In this section, we detail some of the findings about these activities and what they offered to teachers learning to reflect.

Mentoring Via Reflection
All 12 participants selected for interview had volunteered to serve as mentors for the pre-service teachers. Before teachers were assigned mentoring roles they participated in a series of seminars to address their new roles and responsibilities and to practice skills of mentoring. Mentoring was defined as the process whereby in-service teachers provide direct and indirect assistance to pre-service teachers as they develop specific skills and reflective abilities. In-service teachers reported

that their roles as mentors increased their ability to reflect in an interesting way. As they sought to explain their planning and instructional delivery to the pre-service teachers, they had to reflect. They were accustomed to their own practice as veteran teachers and had a certain level of comfort with the way they approached instruction. The presence of a pre-service teacher changed that dynamic:

> As a teacher you just do what you do when you are used to doing it. You've done it before so you will do it again so you don't always give as much thought to what you are doing. So of course when I am doing it and explaining it to some one else who then has to implement it I am going to rethink the whole process and rethink what I do and kind of break it apart and think why I am doing what I am doing...This is what I do; let's see what you can bring to the classroom? Let's look at it another way.

This in-service teacher found that her pre-service teacher's presence required her not merely to teach while another observed, but also to examine her own teaching so she could explain it to another. The process does not merely make teaching visible: it also required the teacher to reexamine old assumptions and question choices that previously seemed unproblematic. As a reflective practice, such talk breaks the traditional norm of teaching that avoids discussion and self examination of instructional choices (Lortie, 1975; Jackson, 1990).

A second in-service teacher described the process of her self-examination this way: "It requires you to look at your experiences....You have to break down that task just as if you were teaching a child a problem solving task..." In this case, the teacher described how to make her teaching knowledge explicit to the pre-service teacher. Identifying the needs of a pre-service teacher is not dissimilar to identifying the needs of students in her classroom; both require the reflective examination of activities in order to be able to explain them to another with less experience. Not unlike her peer, this mentor discovered that working with novices within the PDS meant far more than simply providing a space within which the pre-service teacher could accidentally discover how to teach.

In-service teachers also reported that they could transfer this new reflection for the sake of their own students as well. Working with pre-service teachers not only required in-service teachers to examine their teaching choices regularly in order to discuss them it also became habitual, lasting even after the pre-service teacher had completed their semester. As one in-service teacher noted: "It forced me to think my thoughts aloud...That habit is there, that after I teach them, OK, how did it go? What would I change?" Although these teachers were confident in their practices prior to working with pre-service teachers, the work challenged them to adopt a reflective stance that stuck.

These examples reflect a significant departure from historic portrayals of novice/veteran teacher relationships. The typical "sink-or-swim" pre-service experience, characterized by little more than an available classroom and, if the pre-service teacher was lucky, a sympathetic ear, is replaced in the PDS by a dynamic relationship where in-service teachers are challenged to explain teaching. The process does not merely make teaching visible; it also requires reexamination of old assumptions and choices that previously seemed unproblematic. In essence, the in-service teachers reported that they became students of their own teaching in order to help students of teaching in general.

Peer to Peer: Reflection for Perspective

A second theme that emerged from the analysis centered on peer to peer communication. The first masters' cohort did far more than study issues of teaching and leadership in abstract terms. By bringing together in-service teachers and newcomers into a single cohort, the PDS activity brokered conversation around critical aspects of teaching and leadership within schools. This theme challenges traditional visions of teaching as a culture and a practice. According to the classic literature on teaching (Lortie, 1975; Jackson, 1990), teachers do not communicate with each other about their teaching or student learning, not even among veterans familiar with each other as colleagues. Teachers are hindered from such conversations by time restrictions, lack of a shared vocabulary about teaching and by social norms that keep individuals' practice a private affair.

One in-service teacher found her work with the cohort instrumental in her developing a sense of reflection. The teacher, with two years experience and moderate participation in all PDS activities, described her initial sense of nervousness about working with her peers and was concerned that such work would merely reinforce her already daunting self-doubts. Far from deepening her concerns about teaching, this newcomer found positive reinforcement. Although her initial impression of the work was that it was "overwhelming", she quickly realized that her peers, despite their apparent skill and confidence, were not much different from herself: "...it was intimidating, but in the back of my head, it was like they've been there, they've done that. They've done it too." Her first realization was that her fellow in-service teachers had faced the same concerns she had, that her teacher learning process was not unique.

This realization deepened with her continued participation in the cohort: "With the cohort you realize that you are not the only one who has x problem....I always thought that I could be doing better or something different and in fact I'm doing what I'm supposed to be doing." If this was the only revelation from her cohort work, it would hardly be enough for support of reflection, as it could have granted her

permission to be satisfied with her work as it was. However, the sense of perspective earned in contact with her peers also created a greater comfort with risk taking and with examining her own practice. In the end, she evaluated her experience within the cohort as responsible for a great amount of reflective improvement in her work.

Reflection and change of teaching practice require risk taking. In the typical school environment, however, risks are not always freely taken because admission of uncertainty is viewed as a sign of incompetence. In this case, a young teacher who was hesitant to participate in a cohort with veteran colleagues for the purpose of self-examination aimed at improving her teaching. She described her immediate response to this situation as not wanting to look again at what she "knew" she could not do in the classroom. Witnessing peers engaged with a similar set of questions and discovering that her doubts were not unique opened the process within a short period of time.

Co-Mentoring in Blended Integrated Professional Communities

Two concepts became apparent during analysis. The first is "co-mentoring" which arose among the in-service teachers mentoring pre-service teachers. According to Kochan and Trimble (2000), co-mentoring happens when both experienced practitioners and novices benefit from pro-active and reflective relationships over time. Far from the traditional impression of the protégé learning to precisely replicate a master's skills, co-mentoring acknowledges the professional development potential of collaboration across experience levels.

As mentioned previously, experienced in-service teachers in the PDS reported going into their work with pre-service teachers and realizing that, to effectively mentor, they had to reflect upon their own practices. This highlights an important possibility in establishing reflective practice among in-service teachers: instead of relying upon detached professional development activities,

carefully crafted mentoring experiences can enhance a teacher's reflective capacity.

Co-mentoring is related to another critical concept that we saw emerge from our PDS participants. Kardos et al. (2001) describes an "integrated" professional culture as one where both novice teachers and experienced teachers had their distinct needs attended to and where significant interaction across experience levels occurred. The in-service teachers described here worked diligently to not merely attend to their own development but also to the development of pre-service placed within their classrooms. Additionally, in-service teachers within the master's cohort also worked on problems of practice across experience levels, enabling risk-taking. Although this was not, itself, transformative of the entire school community, it offers an intriguing template for expanding PDS activities that were most often nominated as fostering reflective practice.

Critical Issues for Review

Although this study is small and limited in its generizabiliy, the narrative reveals several important messages about working in schools. In-service teachers who took on mentoring pre-service teachers and who participated in the master's cohort both described these activities as salient influences upon reflection. What the study showed is that cooperating teachers tend to improve their reflective practices as a result of the responsibilities of being a cooperating teacher and from engaging in learning experiences with colleagues. Although these activities are very different from each other, they both share a critical feature: they require significant time and resources. Mentoring pre-service teachers required a variety of training activities that include significant time spent with the pre-service teacher in support activities.

It is unlikely that mentors can provide pre-service with teachers much more than observation and occasional practice unless they are supported with significant time and resources. In the case of our teachers, activities such as a critical friends group, clinical sessions, and participation in master's level courses surrounded and supported their

development to work with pre-service teachers. Although no single in-service teacher could have participated in every opportunity, the overall environment within which they worked offered numerous opportunities to make the best use of their mentoring experiences.

Support from All Levels

After examining these data, it became clear that policy makers and district personnel need to attend to several matters of interest when fostering reflective practice. First, mentoring needs to be accompanied by a network of activities and support that develop mentors' abilities to articulate and reflect upon their own practice. Without such activities, it is less clear that they will be able to productively discuss teaching with novices. Further, policy needs to understand that no single element makes effective teacher development occur within a school. Among our in-service teachers, a confluence of enabling conditions was implemented. Teachers were willing to engage seriously with a variety of time-consuming, yet rewarding, activities. In addition, those activities were designed as deep explorations of serious issues that developed over time rather than a set of one-size-fits-all professional development activities. Finally, within a small but growing sub-community within the PDS schools, there must exist a supportive environment that values the difficult work of participants as they strive to become better teachers.

Ultimately, this research speaks to the importance of willing partners at all levels of a PDS in order for reflective practice to be fostered. Regardless of which activities most influence reflection, in-service teachers must be willing to participate in them, district administration must be willing to devote time and resources to accomplish change, and university partners must be willing to participate.

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