Can a Professional Development School Have a Lasting Impact on Teachers' Beliefs and Practices?

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Professional development schools (PDS) represent a critical part of the educational reform movement of the last two decades. These schools, which embrace many organizational structures, have been formed primarily to enhance student learning, promote the professional growth of preservice teachers, encourage inquiry and research into educational practice, and induct novices into the teaching profession (Holmes Group, 1990).

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Organizational structures of professional development schools may differ across the country, but the literature reveals certain common characteristics. (Richardson, 1996; Abdal-Hagq, 1998). The major focus of most PDS programs is to alter preservice programs in shaping the professional development of neophyte teachers. There appears to be a generally accepted assumption that improvement in practice will occur from activity generated by those practicing in the field and therefore the practice should occur at a school site. It is also common to find

professional development schools serving as support systems for the experienced teachers at the sites.

Collaboration is the keystone of the professional development model (Ball & Rundquist, 1993; Lieberman, 1995). For example, partnerships that are formed between universities and schools provide opportunities for redesigning roles and responsibilities and for fashioning new ways of shaping teacher professional growth. Both teachers and university faculty are resources for information. Both share the responsibility for improving schools and preparing future teachers. These collaborations are based on mutual trust, willingness to communicate, flexibility, and a dedication to renewal in the pursuit of excellence in teaching. Collaboration in the PDS is also the means by which new and practicing teachers are encouraged to shift from old traditions to new ones; from differentiated expectations for students to the belief that all students can learn; and from isolation to cooperation. Collaboration between universities and schools is enriching and challenging because it "seeks to reshape fundamental values, beliefs and paradigms for schools and school change while negotiating two worlds and inventing new programs" (Darling-Hammond, 1994, p. 137). The intent of these programs is to challenge beliefs about teaching and learning so that changes in practice may occur. In professional development settings educators examine, implement and re-examine a variety of educational practices. In this milieu, as individuals try different instructional models, beliefs about learning and learners are brought into question and what constitutes good practice is examined from different angles.

The picture painted by this background suggests that professional development schools alter the organizational structures of what has been, redefine relationships and modify the practices of participating members. While studies have focused on the impact of a PDS on the participants (see, for example, Grisham, et al, 1999), little information exists about the belief systems of program graduates as their teaching careers proceed. This study investigates whether four core beliefs that form the frame of reference for a professional development school are reflected in the graduates of that school and whether the presence of that belief system is sustained over time. Specifically, we examine evidence of (1) reflective thinking, (2) risk taking, (3) collaboration, and (4) continuous learning in teachers who graduated from a PDS called the Model Education Center (MEC).

The MEC is a K-8 professional development school program formed in 1984 by San Diego State University and the Cajon Valley School District initially for the purpose of developing a field-based training center focusing on the preparation of new teachers (Berg, 1995). The university sought to create an exemplary field setting where effective teaching strategies would be modeled for preservice teachers as well as for veterans. The district wanted to develop a center where the focal point would be a commitment to on-going innovation in curriculum and instruction. Goals were collaboratively formed around the constructs of (1) collaboration, (2) reflective thinking, (3) risk taking, and (4) continuous learning to make the Center

both learner centered and learning centered. To the MEC partners, these core beliefs were grounded in the literature that defined their meaning and guided their development into informed practice. Research on various components of the MEC has been ongoing (Berg, 1999; Berg & Curry, 1996; Berg, 1995, Berg & Murphy, 1994; Berg & Koelln, 1993; Berg & Murphy, 1992; and Berg & Ahern-Lehmann, 1992).

Most educators agree that neither schools nor universities alone can accomplish the goals of professional development schools (Hall, 1993; Lieberman & Miller, 1990; Ruchcamp & Roehler, 1992). Working together in *collaborative groups*, school and university faculty encourages one another to rethink and redesign currently accepted roles and responsibilities. Morris and Nunnery (1996) found that teachers who engaged in professional development school activity became more willing to share and work with their peers to improve the teaching and learning process. Hall (1993) found that collaborative partners are concerned with concepts of reflection, cooperative relationships, and equity. At the MEC, collaboration involved ongoing discussions and planning around issues in teacher preparation and professional development for practicing teachers. An important component of the program's emphasis on collaboration also involved teachers working together to share ideas and perspectives about teaching and to solve problems of practice.

The importance of *reflective thinking* in teaching has long been noted. Dewey (1933) believed that such reflection involved open-mindedness, responsibility, and wholeheartedness. In the early 1980s Schon distinguished between reflection-in-action and reflection-on-action, and discussed the importance of framing and reframing problems for greater insight. Numerous educators have used Schon's (1983) ideas as catalysts for further exploration into the purposes and processes of reflective thinking in teaching (Britzman, 1991; Calderhead, 1989; Connelly & Clandinin, 1988; Cruickshank, 1987; Darling-Hammond, 1994; Valli, 1993). Of great interest is the work of Osterman and Kottkamp (1993), who point out the interdependent relationships among reflection and risk-taking, collaboration, and continuous learning.

Risk taking has been highlighted as an essential ingredient for successful teacher growth (Darling-Hammond & McLaughlin, 1996). Fullan and Miles (1992) suggest that change without uncertainty or difficulty is superficial. Consequently, teachers need to be willing to take risks in order to enter that environment of uncertainty. In short, substantial teacher learning must, almost by definition, involve risk taking (Cohen & Barnes, 1993; Fullan, 1995).

While teaching has been characterized as the learning profession (Darling-Hammond & Sykes, 1999), the intellectual nature of teaching has traditionally been disparaged. Recently, researchers have focused on the impact of the community of learners (Ball &Cohen, 1999; Lord, 1994), in which the teacher is a *continuous learner* and more knowledgeable other (Vygotsky, 1978). Teachers are expected to acquire a deep knowledge base which must be continuously expanded through professional development (Hawley & Valli, 1999) and, in an era of educational accountability,

they are also expected to possess pedagogical content knowledge (Shulman, 1987) and to know how to situate that knowledge in varying classroom contexts. The notion of continuous learning, then, is essential to the development of teachers who have a positive impact on the learning of their students (Lampert & Ball, 1999).

The literature on collaboration, reflective thinking, risk taking, and continuous learning strongly suggests that these characteristics are core to the development of a capable classroom professional. These are also the constructs that have formed the bedrock of the MEC partnership for fifteen years. Is there evidence that these beliefs and behaviors can have a long-lasting influence on the graduates of this professional development school? Data on the impression of professional development schools' frames of reference over time are sparse. As we look to creating effective models for the preparation of new teachers, it is vital that we examine existing structures beyond their immediate environs and gather data that will help inform our decision making.

Methods and Data Sources

Participants

The Model Education Center Professional Development School has been in existence for over 15 years. Of the 480 teachers prepared under the auspices, 38 were identified as MEC graduates teaching at three PDS schools in the district. Participants in the study consisted of 34 of the 38 teachers who had received their teacher preparation at the MEC and who were teaching at one of the three targeted schools. These 34 teachers, all female, participated in a series of three focus group interviews. Participants' teaching experience ranged from one to 15 years. Of the 34 teachers participating in the study, 20 had been teaching one to five years, 11 had been teaching six to 10 years, and three had been teaching for 11 to 15 years. Initially, the research team sought to differentiate between teachers' responses based upon the number of years of their teaching experience. However, the researchers found this was not an effective distinction between the teachers, and subsequently treated the group as a single cohort.

Research Team

Four professors from San Diego State University, each of whom was involved in teaching at the Model Education Center, planned the study around the research question, "Do the core beliefs that provide the frame of reference for a Professional Development School have a lasting effect on the teachers it graduates?"

Data Collection

Data were collected from multiple sources during this study. All data were collected during the 1998-99 academic year.

Data from a written survey assisted the research team in forming interview

protocols for three focus group interviews. Three focus group interviews were conducted, one at each of the target PDS schools. The research team interviewed the focus groups in pairs, conducting the interview and taking field notes. Audiotapes were transcribed for data analysis.

Researchers took care to formulate and ask questions of the focus group that were general and did not lead the interviewees to provide answers that they might suppose the researchers wanted them to provide. Thus, we did not ask directly about the MEC, but asked questions that addressed their practice. The general nature of the questions and the unstructured format of the focus group interviews thus provided unsolicited evidence for MEC constructs. The interview protocol is shown in Table 1 below.

Prior to the focus group interview, participants were asked to prepare for the interviews by writing responses to questions that would be discussed during the interview. These written documents were collected and formed part of the data set.

Members of the research team conducted individual interviews of principals that were audiotaped and transcribed verbatim. The interview protocols for the principals followed the same unstructured approach.

Data Analysis

All data were analyzed collaboratively by the research team. Data analysis occurred during an ongoing series of intensive sessions in which the research team utilized a constant-comparative method (Strauss & Corbin, 1990).

Table 1
Focus Group Questions

1. Think about the MEC and your teacher preparation program. What stands out about this experience? (Link to MEC program)
    ◆ What did you feel most prepared to do?
    ◆ What did you feel least prepared to do? (What was the hardest thing to do?)
2. Name one way that your teaching has changed over the past few years? (LLL)
    ◆ What has helped you to change?
    ◆ How do you find new ideas to try in your teaching?
3. Think of the colleague who has influenced your teaching the most. Why has this person had such an influence? (T)
    ◆Why are good colleagues valuable?
4. Think of a lesson that went poorly (we all have them!). What would you do to make sure that it didn't happen again? (R)
    ◆ In general, what do you consider when you plan your lessons?
5. Name one risk you have taken in teaching. (RT)
    ◆ Why did you consider it a risk?
    ◆ What makes something a risk in teaching?
Concluding Question:
    Name your single most important piece of advice for new teachers.

Interviews were audiotaped and transcribed verbatim for data analysis. Each member of the research team read the interview transcripts independently and purposively, searching for and indicating instances of the four constructs by highlighting them in various colors. The team then met to collaboratively compare and verify their individual codings. Discussion of data points supporting each of the four constructs led to group consensus on the coding of all focus interview data. For example, if one researcher coded a statement as "continuous learning" and another coded it as "collaboration," a discussion ensued that resulted in researcher consensus of the appropriate coding category.

Focus group participants also provided written data about key constructs under investigation. Researchers coded these documents in the same manner and met to confirm the categories. All data were triangulated by the collection of multiple sources of data and multiple methods to confirm the emergent findings (Merriam, 1988).

Initial codings in the four areas of collaboration, reflective practice, risk-taking, and continuous learning were further discussed and statements of relationships among the data were noted. Concepts emerging from the data were used to capture recurring patterns that cut across a preponderance of the evidence. Assertions and arguments were put forth and analyzed through deliberate and systematic critical reflection by the research team. A search for disconfirming evidence was also made. Reviewers combed the data for comments that reflected a negative experience or point of view on the part of the participants.

Across 34 respondents in group interviews, we chose not to try to identify individual teachers. In the findings section, we refer to "some" and "several" teachers where we found more than four instances of the same or similar comments on a particular topic, and provide quotations that are representative of the body of data. Where less than four comments were confirmed, we use the precise number.

Findings

In the following sections of this paper we discuss both (a) school climate and (b) focus group findings.

School Climate Findings

Principals in this study had been affiliated with the MEC program since its inception and had participated as K-12 stakeholders in partnership activities. Principal interviews thus reflect many similarities across the three MEC sites. All three principals view the missions of their individual schools as rigorous academic preparation. Their priorities include making their campuses safe and promoting collaborative endeavors. When ask about the MEC, principals used words/phrases like "lifelong learning," "teaming," "collaboration," and "cohesiveness" to describe their sites. One principal spoke of enjoying collaborative activities with university faculty as part of the PDS program. Another principal stated, "I think

ongoing staff development is really important . . . so that they [teachers] know what's expected of kids and they can use the correct instructional strategies instead of just one strategy for every single thing." When asked, principals identified important teacher qualities as strong knowledge, organizational skills, problem-solving abilities and being a team player. Thus principals' interviews directly and indirectly emphasized reflection, collaboration, and continuous learning. No specific or indirect references were made to risk-taking by the principals.

With regard to school climate, teachers' abilities to collaborate are evidenced by the fact that many reported engaging in problem-solving with their colleagues about specific student needs, and were involved in special-interest collaborations (i.e., technology, subject-matter groups), curriculum planning in grade level teams, and some form of team-teaching.

In finding professional development activities valuable, teachers also reflect a commitment to building their professional knowledge/skills. While we cannot say with complete conviction that this is due to MEC influence, we find it compelling that three-fourths of the participants in the study have completed or were in pursuit of their Master's Degrees. The MEC PDS Master's Degree (a site-based program) is highly valued by principals because of its emphasis on state of the art instruction, teaming approaches and university/school linkages.

Generally speaking, both teachers and principals experience time constraints. While principals felt that engaging in reflection was crucial for teachers, they reported that time for reflection was often minimal. Teachers stated that they, too, valued reflection. Teachers reported that they made or found time to reflect upon their instruction, but few kept journals and often were unable to find time to read professional journals.

From the data collected, collaboration, professional growth, academic rigor, and safety are identified as primary factors within these three MEC school environments. Has the MEC itself played a role in the establishment and maintenance of this type of school environment? As one of the principals stated, "I think having the university with more research-based ideas . . . has a lot of benefit with students teachers bringing in more state-of-the art [ideas]."

Focus Group Findings

Researchers examined data from the focus group interviews in terms of the core beliefs (collaboration, reflective teaching, risk taking, and continuous learning) underlying the MEC program. We found evidence of all four beliefs in teachers' comments.

Collaboration

Comments revealed a deep appreciation for the value of collaboration. When asked to identify the *single* most important piece of advice they would give to new

teachers, several suggested collaboration with other teachers. One teacher offered: "Don't do it by yourself. Ask for help. Find good people and ask them to help you because good people will always help you. And don't block yourself off and think you have to be perfect."

Collaboration for teachers came in many forms and offered multiple benefits. The most often cited benefits were emotional support and opportunities to gather new ideas. Teachers also identified three main categories of opportunities for collaboration with colleagues: (a) long-term collaborations with individuals, (b) multiple informal interactions in a generally collaborative school environment, and (c) continued collaborations with MEC graduates.

Long-term collaborations. Some teachers underscored the importance of long-term collaborations such as those that result from team teaching, mentoring, sharing contracts, and others. One teacher described her team teaching as "really easy and supportive and helpful and we feel really secure to throw ideas off of each other and try things at just a moment's notice." Another teacher recognized that she and her team-teaching partner of 5 years were a good pair because they complemented each other's strengths and weaknesses. She lamented that her partner was taking a leave of absence:

> She's the very reserved, quiet one. I'm the outgoing, obnoxious one. She's the ultimately -professionally – everything on time. I'm always the one running in at the last second. She's always the one who just looks at me and just gives me the most confidence, as a partner. . . . We teach totally different subject areas, so it's like we just complement each other in a lot of ways and I know that it's going to be very difficult to find another person that complements me in the same ways. I'm going to really have to start bringing up those parts of my personality that I have now put aside because I always counted on her to take care of.

Teachers valued long-term collaborations because they provided constant sources of emotional support and professional ideas.

Collaborative school environments. Several teachers underscored the importance of a school environment that was collaborative. This environment allowed teachers to learn constantly from each other:

> I just walk down the halls — the door's open — I go in there. "What are you doing? What does this mean? What are you doing with this? How are the kids? How did you put that together? You know, that's really good — how did the kid do it? Are the students enthusiastic about it?" . . . And bringing that back to my classroom and modifying it according to my style of teaching and my personality, and just using people's good ideas from good teaching.

Another teacher recalled that when she first began, she would visit other teachers' classrooms three or four afternoons a week. "I would look in their room. I would talk their ear off, poor things. And that's how I really learned a lot." She recalled the

importance of these informal collaborations after struggling during her first year of teaching: "I was reassured by others, and by being fortunate enough to work here. We're surrounded by so many other teachers that say 'Oh, here, this will work,' or 'Here, give this a shot.'" Our questions about their collaborative school environments elicited some stories about powerful collaborative experiences that sometimes involved a single observation or discussion:

> I got this K-1 class that was so hard, and I just thought "I can't teach them. I can't teach them." And then I went to observe her (a resource specialist) and my whole light went on. It was the best teaching I have ever seen in my life. She's just amazing, and I was just like, "I could do that. I could do that." And so I just started going.

Teachers credited principals with setting this tone of collaboration and for encouraging teaming. It has already been noted that such emphases by school principals were consistent with the core constructs of MEC and that the principals of these schools were active participants in MEC from its inception.

MEC Collaborations. Several teachers mentioned that they felt lucky that many of the teachers at their schools are MEC graduates. They described their MEC cohorts as families, and because a large number of the MEC student teachers are hired in this district, many of the collaborations developed during the credential program extend into the first (and later) years of teaching. One teacher who began teaching at a school with three other colleagues from her MEC cohort described the benefits of this continued collaboration:

> That couldn't have been a better set-up because we were all in the MEC together. We got our credentials at the same time, then we all started teaching together.... And so we were constantly helping each other and crying on each other's shoulders. And there were other people there, but we all knew where we had come from and we all had similar backgrounds. It just helped knowing we were all taught the same stuff.

Teachers also recognized that this core belief of collaboration was promoted early and throughout their credential program. One teacher elaborated on the collaborative nature of the MEC program by stating:

> I was so ready to team. That is so much of the MEC things. You do projects and you're working together and everything's group work and... the minute I got to [the school] ... I was ready. That's the way I wanted to do it from the very beginning. It was never, "I want to go to my room and try to do this." It was, "Let me find who I'm going to work with type of thing." I think I got that from the MEC.

Reflective Thinking

Teachers demonstrated their belief in the value of reflection to help them teach more effectively, and provided evidence of engaging in reflective thinking consistent with Schon's ideas of reflection-on-action and reflection-in-action. One of the most critical components of productive reflection is the asking of good questions.

Teachers identified questions that they considered before, during, and after lessons. They also acknowledged that they did not (and should not) expect lessons to run perfectly, and thus, reflection and subsequent revision are natural parts of teaching. For example, when asked to identify the most important piece of advice they would give to novices, several of them advised that teachers should expect revision and improvement. One teacher explained, "It's OK not to get it right the first time." Another teacher reminded, "It's not all going to happen in your first year. It's OK it's not all going to happen."

Reflection-on-action. Teachers described their reflections "on action" both during planning (before a lesson) and during evaluation (after a lesson). For example, this teacher highlighted questions that she posed to herself when planning a lesson:

> I know I try to look at a lesson like: "OK, if I give them this, what could go wrong? Could they misunderstand this? Could they misunderstand that?" And I also try to think how many different ways can I explain this just in case child A, B, and C doesn't get it. And sometimes you need twenty different ways for twenty different children. What if I bring in colored pencils? What if I did it on the board? What if I gave them some manipulatives? What if they got to work on scratch paper? What if they got to work with a partner instead? How many different avenues do I have to go down if they get lost?

While these types of questions are intended to identify problems before they occur, teachers also recognized that this process was not foolproof. It was also essential to reflect after a lesson, especially after a lesson that was problematic:

> You have to reflect on what went wrong and why. Were you not prepared? Did you not have the materials out, and while you had your back turned digging in the cupboard, were the kids swinging from the chandeliers? Was it your fault? Was the material over their heads? Was the way you presented it wrong? Was the worksheet too overwhelming? What was it about the lesson that went wrong? Was it a management thing or was it a curriculum thing? And once you pinpoint that, then it's easy to fix.

Consistent with the collaborative school environments described above, these post-lesson reflections were also done in collaboration with other teachers, both informally and during problem-solving curriculum meetings.

> When you go in and have lunch or something like that, you don't always just come in and go, "Oh, my class was so wonderful and this and this and this." You can go, "Oh, my gosh, I just taught the worst lesson," and everyone will go, "Oh, what happened?" And you can snicker about it and feel OK about it. People will say, "Why don't you try this?" or "Why don't you try that?" You know, problem-solving curriculum meetings are that – where we bring good ideas and flopped ideas to try to help each other out. A few flops? So what? You know, tomorrow's another day.

Reflection-in-action. Several teachers also talked persuasively about their abilities to reflect "in action" (i.e., in the middle of a lesson). One teacher described

the importance of constantly asking, "Is it working?" and "Is this really where I want to be?" She recognized the need to be willing to "say when it's not and we need to do something." This last point is critical. Many teachers told stories about specific lessons in which they recognized — in the middle of the lesson — that things were not going well, and they then had the confidence to stop the lesson and regroup at a later time. For example, one teacher described a place value lesson that went awry, and she said to the students: "OK, we need to stop now. You know what? It's not your fault. I did not prepare you. We're stopping right here. Let's do something else." This teacher continued her story by explaining that two months later, she re-taught the lesson successfully when the students were better prepared.

Teachers reported that this core belief of reflective thinking was encouraged throughout their credential program: "When you're a student teacher, you're constantly asked to reflect on everything that you do. That's a favorite of Marlowe's (the PDS Director). Reflect on everything." One teacher even recalled that she initially got the idea of reflecting during a lesson (and potentially stopping it) during her credential program in a class discussion about what you do when a lesson flops:

> And when the kids are all going off thirty different directions and you've totally lost control, that's when it's OK — and we were told it's OK— to stop and go, "OK, let's not go any further." And I remember it being presented as, "Why torture yourself? Why torture the kids? So what if it didn't work. Just be sure to, at the end of the day, figure out why it didn't work. And then redo it. Just don't do the same thing again." So, I felt like I was given permission to stop in the middle of a lesson.

Risk-Taking

Teachers described a variety of instructional decisions that could be considered risk-taking because they were uncertain and perhaps a little apprehensive about the outcome. Without exception, the teachers said that they took these risks to improve their teaching and better support student learning. Decisions were considered risks for a variety of reasons, such as challenging policy, the norm (i.e., what everyone else was doing), and/or personally comfortable teaching habits. In addition, the processes of collaboration and reflection described above both have inherent risks. For example, in order to ask for help and/or be willing to critically examine their own teaching, teachers must admit that they do not have all the answers and thus risk feeling and looking incompetent.

Challenging policy. Teachers talked about the challenge of using their own professional judgment to make decisions that were in conflict with district policy. Sometimes teachers had the support of their principal when making these decisions, while other times they did not. For example, one teacher took a risk in her curriculum, choosing to challenge a district-wide policy that prohibited student work with incorrect spelling from being displayed on classroom walls. This teacher had participated in a professional development program in which she had been

encouraged to help children focus on creativity rather than spelling and grammar. Thus she discussed the issue with her principal and was supported in her efforts to try a different approach:

> I can put up what is considered "messy work" because I label it "Our Work in Progress"— so it doesn't have to be spelled correctly. And I'm kind of pushing that envelope a little bit, and I think it's OK because I believe I'm getting more creative work out of my students and that's kind of the focus.

Another teacher took a professional risk in her curriculum without strong principal support. While the district encouraged a whole language approach that did not include any phonics instruction, this teacher argued and eventually gained district (but not principal) support for integrating phonics into her teaching. She acknowledged that she feels that "it's helped everybody. But it was not fun to go against the principal, or to make a demand that was not well accepted."

Challenging the norm. Teachers talked about taking risks by making decisions that went against what their colleagues were doing and/or textbook guidelines. One teacher explained: "I didn't buy into the same math program as all the other third-grade teachers. . . . I think it's a risk not to go with what everyone else is doing when you're comfortable with what you have for yourself." Teachers talked about the difficulty of making decisions that were different from those of their teammates. Another teacher described how her increased confidence and willingness to take risks allowed her to change *how* she uses curriculum materials:

> I don't feel really strong in math. I never really have – as a child and now as a teacher, the way I teach it. But I don't feel the need to go by the book, chapter by chapter by chapter. I feel more like I go by what they need and when. . . . I use my own judgment rather than the textbook author. And it's going better every year for me trying that.

Challenging personally comfortable teaching habits. While some activities or decisions would be considered risky by all teachers (e.g., challenging a principal), other risks are more personal. A teacher who liked things "really neat and clean" felt it was risky to use lots of math manipulatives:

> I find taking [risks] for me is using a lot of manipulatives that need monitoring, and to allow the students to be able to manage themselves. And I think I've gotten it down . . . so I can have all these manipulatives all over the room for students to handle and actually have them do some learning and not be focused on all this stuff to manage. And to me, that's taking a risk because sometimes I want things really neat and clean and easy to do and it's a nice little box. You cover it up and "Here you go. Here's your lesson.

Although other teachers may not see the risk in manipulative use, manipulatives are a risk for *this* teacher because risk-taking depends on the perception of the individual involved. And, in fact, the ceding of control over classroom events as young students participate in inquiry learning is risky for many teachers.

Some of the teachers credited their principal with creating an environment that encouraged risk-taking and decision-making. For example, they compared the latitude they enjoyed at their site to make their own decisions and use professional judgment about how to use a mathematics curriculum while teachers they knew at other schools were required to follow the curriculum exactly as it was written. In addition to being given permission to be flexible, these teachers felt well supported by their principal:

> We feel so confident to make these decisions because we have . . . this most amazing principal who comes in and finds a million good things to tell you about what you're doing, about how you're teaching and maybe one thing to maybe work on: "Here's an idea."

Continuous Learning

Teachers in this study revealed dispositions that supported continuous learning by describing examples of how they had changed throughout their teaching careers. Some of the stories reflected growth in their comfort level with the job:

> I'm so much more relaxed. It just flows. And my first year, I remember everything was planned out so much. The kids would be sitting there and I'd be like, "OK, hold on." And I'd go check and see what I'd written down and I'd send a note to [another teacher] just to make sure that everything was perfect, and now it's just that I have so much fun during the day and . . . it feels just natural now.

This increased comfort level allowed teachers to try new things without worrying about whether the lesson would be perfect: "I'm learning to be more creative and confident in my teaching. And taking risks. I'm feeling like, 'Hey, I'll give this a try. OK, so what if it flops? They [the students] don't know. I'll just move on.'"

Other stories reflected specific changes in instructional practices such as more small group work or more direct teaching for particular topics. This growth in instructional strategies allowed teachers to be more effective during reflection:

> When I reflect back, being a newer teacher, I may know something didn't go right. I may not have the solutions of how to fix it. I just know it wasn't right. Where now, with more experience, you know it wasn't right and you have more ideas of how to fix it, so just with experience — it's not that you didn't know it was wrong in the beginning, it's just that now we just know more solutions of how to fix it.

Finally, teachers also shared how their conception of their role in the classroom had evolved:

> I think my first year of teaching I wanted to be the one like, "Ask me all the questions. I'm in charge, blah blah blah." Now I'm like, "OK, as much as you can do without me ever having to" . . . or "Be a problem solver," or "Do it yourself," or "Talk among your friends."

As teachers described how they had changed over time, they identified many

types of experiences that helped them grow. Collaboration, reflection, and risk taking provided learning opportunities for these teachers. However, teachers also felt that they learned from other experiences such as exploring resources, having student teachers, and listening to their students. Many credited their principals for creating environments in which continuous learning is valued.

Exploring Resources. Teachers explained that they often used various resources when they were struggling with issues. Most often, this resource was another person. However, teachers also mentioned resources such as books or the Internet. For example, as one teacher explained, "I've even been known to go to different books." She also described *how* she used these books. "Most of the time I don't like to copy a lesson plan that already exists, just because often I find them dull. But sometimes they come at it in a way I wasn't expecting and that's enough." Another teacher described her success with the Internet, and she was particularly proud of this success because she was a novice in using this tool:

> I've gotten on the Internet and found some information on poetry. I'm really getting into writing because that's one area there's not a real manual for, or teacher edition book. And as wonderful as my kids are doing, it shocks me because I'm still feeling way out in left field when I'm trying to teach it. And so I got on the Internet — I like poetry a lot — and I'm finding poetry. . . . It's incredible. And so I found on the Internet, there was a teacher who had some poetry stuff, and I went "Oooh click" and downloaded it and put it right into my lessons.

Having Student Teachers. Several of the teachers had served as master teachers and felt that they had benefited from the experience:

> I constantly feel that my cup is being refilled by having the student teachers in there, because they bring all the new stuff in that maybe I haven't noticed or I don't know how to use, and I steal just as much from them as they steal from me going through the class And I love that.

Two of the teachers recently became master teachers and both were surprised to find that student teachers pushed them to reflect more: "We are really watching what we're doing, thinking things through again a lot more . . . and [the student teachers] are very questioning." Student teachers also helped these master teachers recognize what they already knew:

> I'm always surprised . . . that I can be in the middle of a lesson like [my master teacher] used to do and look up and explain what I'm doing — that I really do know the reason why I'm doing this at the moment. And I don't think I really did know that I knew what I was doing as well as I do — which is good.

Listening to Children. Several of the teachers pointed to their students as a source for continued learning. One teacher underscored the importance of changing her skills, techniques, and presentation "based on the make-up of your class."

Another teacher advised that teachers learn the most when they *really* listen to their children.

> Listen to the children . . . They teach you every day to be a better teacher. . . . You have to step aside from the position of "I am in charge, I know it all, I'm the one who knows," and listen to what they say because very often what they say is better — or at least a different way of thinking about it. And they're expressing their needs and maybe you need to adjust your teaching to fit their needs. And if you just go in thinking that I've go it all planned out and it's going to be this way and don't bother me, well, then you're going to fail. But if you are willing to step back and say, "I'm learning too," the students will teach you and it will be better for everybody.

In all of these examples, teachers have shown both a disposition to continue learning and the knowledge of how to do so. Several of the teachers directly linked this capability to their experiences at the MEC. They identified several ways that they felt teachers who have graduated from the MEC are more professional than those graduating from other programs. Perhaps one of the most important differences is that these graduates felt that they have the tools to continue learning throughout their careers:

> We don't gripe and complain as much because we know where to go for the answers, and the answers aren't in whining and griping and complaining. We say, "Oh, this didn't go right. Can you believe this?" And, you know, you move on and we go on. We have this bag of tricks with us.

Discussion

Data supporting the long-range effects of professional development schools are sparse, and this study provides information about a professional development school in continuous operation for fifteen years. Our study has limitations that reflect the nature of small scale qualitative studies, but our research does provide insights that are useful to teacher educators, particularly in attempting to identify important preservice teacher education factors that persist beyond the initial years of teaching (Grisham, 2000).

The MEC was designed to promote the core beliefs of collaboration, reflective thinking, risk taking, and continuous learning, and these core beliefs were collaboratively determined by San Diego State University and the Cajon Valley School District. This study found that, fifteen years later, the core beliefs were reflected in the school climates of the schools that are affiliated with the MEC. Interview data collected from the MEC site principals revealed a commitment to the constructs that support the program. Interview data we collected also revealed that a cross-section of MEC graduates teaching in these Cajon Valley schools showed evidence of these core beliefs.

Interview and written data suggest that these core beliefs are an important part of their professional teaching lives as much as 15 years after their teacher education

program. Findings from this study suggest that there may be long-term advantages to having professional development schools based on beliefs or principles rather than tied to a dynamic individual(s). Our findings also provide preliminary evidence that the core beliefs underlying professional development schools can have an effect on its graduates.

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