A Self-Study Investigation of Using Inquiry Groups in a Professional Development School Context

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ABSTRACT: Inquiry Group participation for PDS teachers and teacher candidates is one of the signature programs of the Bowie State University PDS Network and provides PDS teachers and teacher candidates the opportunity to collaborate on teaching strategies and methodologies to use in their classrooms. This article uses self-study methodology to explore the process for developing and implementing inquiry groups and suggests a research-based guide for implementing inquiry groups in a PDS setting. It also describes the experiences of PDS teachers and teacher candidates as they participate in site-based inquiry groups and provides insight into the impact of inquiry groups on the partnerships. Inquiry groups are also explored as a developmentally appropriate form of teacher research for PDS teachers and teacher candidates to use before they engage in more formal collaborative action research. This article provides a rationale for the use of self-study research methodology to investigate PDS partnerships.

NAPDS Essentials Addressed: #3/Ongoing and reciprocal professional development for all participants guided by need; #4/A shared commitment to innovative and reflective practice by all participants; #5/Engagement in and public sharing of the results of deliberate investigations of practice by respective participants

Introduction

Years ago, when I first heard that all of Bowie State University PDS sites had agreed to hold an inquiry group, I thought, "Great—one more thing to add to an already full schedule." I didn't see the need or the value and didn't 'buy in' at first. My first year or two of hosting inquiry groups really fizzled out. Maybe I didn't select a meaningful enough book; maybe the participants, both intern and mentor, could tell I wasn't passionate or enthusiastic about it. Each summer at BSU's Summer Strategic Planning, I heard what other PDS sites were doing and thought, "We could do that, too." Fast-forward to today, and our school has multiple interest-based inquiry groups running simultaneously. (Jayne, Site-Based PDS Coordinator, personal communication, March 2014)

Jayne, a site-based Professional Development School (PDS) Coordinator who organized inquiry groups as a form of teacher research at her school, speaks of the challenges of conducting inquiry groups in PDSs. Despite initial challenges, her experience and the research described below document the tremendous benefits reported by teachers and teacher candidates using inquiry groups to improve teaching and learning for educators. This self-study explores how mentor teachers and teacher candidates work collaboratively within the PDS structure to learn about and implement new instructional approaches to support classroom instruction, and increase the achievement of the children they teach by participating in university and school district-sponsored inquiry groups. The inquiry groups under

study are held at early childhood and elementary PDS sites where teacher candidates are placed for their yearlong teaching internships as part of the PDS partnership between Bowie State University College of Education and its school partners.

According to Cochran-Smith and Lytle (2009), there are three types of knowledge gained from professional development: knowledge for practice, knowledge in practice, and knowledge of practice (as cited in Yendol-Hoppey & Dana, 2009, p. 55-56). Knowledge for practice is the knowledge gained from developing a professional development session. Knowledge in practice is the knowledge teachers construct when they deliberatively engage in strengthening their teaching practice. The third type, knowledge of practice, stresses systematic inquiry. "Teachers interested in constructing knowledge of practice receive support as they collaboratively inquire with colleagues about how their own teaching practices might inhibit the learning that takes place in their schools and classrooms" (p. 56). The inquiry group research in this article is an example of professional development that focuses on knowledge of practice. Action research is the most recognized type of teacher research. Other types of teacher research include inquiry groups and study groups, all of which are used as the basis for learning communities. In thinking of teacher research along a developmental continuum of increasing complexity, study groups would be at one end of the continuum and action research would appear at the other end (see Figure 1). While inquiry groups are less formal than action research groups, they offer more formality than the collaborative and collegial conversations that normally exist in schools (Garin, 2013), going far beyond the usual conversations between teachers and teacher candidates by focusing discourse around



Figure 1. Developmental Continuum

a commonly researched topic in order to enhance student progress.

Inquiry groups also offer a more action derived opportunity than study groups, which Dana and Yendol-Silva (2003) name as collegial study groups. "Collegial study groups serve to connect and network groups of professionals together to do just what their name suggests - study practice" (p. 8). The subtle moderating of the words describing teacher research from action research to inquiry groups often makes a difference to the perceptions teachers and teacher candidates hold about research, their interest in research, and their willingness to participate in inquiry groups (Garin, 2005). The formal requirements of inquiry group activities are less intensive than other types of research, requiring only the willingness of mentor teachers and teacher candidates to explore their interests in teaching and learning. Many PDS partnerships are choosing inquiry groups over action research or study groups as a form of research that embraces and enhances the learning community that exists between educators at a common school working together for a common goal. Inquiry groups offer the collegiality of the study group with the less complex attributes of action research.

From this view of professional development, two professional development models have emerged: action research and professional learning communities (PLCs). This research on inquiry groups falls in the spectrum of both. PLCs, like the inquiry groups in this study, are groups of six to 12 educators who meet on a regular basis and focus on discussions about teaching and learning. While the dialogue may focus on changing teaching strategies and supporting student learning, it is the addition of action research (or in the case of this study, inquiry groups) that provides a way for teachers to document changes in their teaching and student learning (Yendol-Hoppey & Dana, 2009, p. 56-57). It is the intersection of professional development that attends to knowledge of practice, PLCs, and inquiry groups in the context of PDS partnerships that is the focus of this study.

Defining Inquiry Groups

The definition of inquiry-based work offered by the *International Dictionary of Education* is "studies beginning with the investigation of particular topics or attempts at solving particular problems" (Page, Thomas, & Marshall, 1979, p. 122). This definition suggests that by focusing on problem solving, inquiry groups go a step further than study groups that focus on simply studying an educational topic of interest.

According to Lent (2007) the term "professional learning communities" is being cited as a way to create opportunities for collaborative inquiry and collective wisdom that emerge as

teachers, principals, and other staff members work together to apply the newly gained knowledge in authentic and relevant educational settings (p. 9). PDS partners have multiple opportunities to collaborate with one another to make each of their institutions more successful in promoting student learning and supporting teacher candidates to be reflective in their practices. Looking through the lens of PLCs, inquiry groups find their place in the world of teacher inquiry.

The Maryland State Department of Education (MSDE, 2012) created PDS State Standards, which they included in a PDS Implementation Manual. Within these five PDS standards, there is a component for teacher inquiry. They define an inquiry group as "a group of PDS stakeholders who collaboratively examine and assess their practices and the outcomes achieved," and who "raise specific questions related to teaching and learning, seek to systematically answer these questions, use their findings to inform practice, and relate their findings to others" (p. 20). MSDE expands the scope of this type of research by recommending that inquiry groups "might include teachers, university faculty, and teacher candidates and may be designed to affect practice in the classroom, in school-wide or system programs, and in teacher preparation programs" (p. 20).

Cochran-Smith and Lytle (2009) believe that communities of inquiry enable practitioners to take on roles as leaders and activists both within and beyond their schools and provide a forum for reflection that is more rigorous than typical individualized teacher reflection. Bush (2008) writes about inquiry groups used to promote information literacy instruction and maintains that the inquiry group model is "a healthy trend, but it requires much more professional ethic and effort than the traditional visit from the experts flown into the district to fix what is broken in an one-day workshop" (p. 39). Bush also describes typical inquiry group behavior as careful listening; questioning to clarify, probe thinking and provoke thoughtful response; and action planning. A focused inquiry group with a proven strategy and evidence to explore is a powerful change agent. The inquiry groups that Bush describes have similar components to those suggested in this study: six to 10 educators, an overarching question, evidence, rotating leadership, and a discussion protocol.

Hughes, Kerr, and Ooms (2005) adapted the inquiry group model to investigate technology integration using content-focused technology inquiry groups. The core of their model focuses on a professional development approach that involves small groups of teachers who collectively investigate pedagogical and content issues through discussion with peers, considering alternative practices and beliefs about their content and grade level, observing and discussing the impact these practices have on students' learning, and enacting practices over time (p. 367). They recommend establishing technology inquiry groups within K-12 school settings and in teacher education courses to connect their work to a type of PLC.

The British Columbia Association of Teachers of English as an Additional Language (BC TEAL, 2012) refers to teacher inquiry groups as a particular approach to teacher research and professional development in which small groups of teachers meet monthly or bi-weekly to explore together specific topics relevant to their teaching or professional practice. Their principles of teacher inquiry groups include: design that builds a community of practice, small groups of two to 10, voluntary participation, discrete period of committed meetings with a clear focus, and non-hierarchical but results-oriented focus.

In the Bowie State University PDS Network, inquiry groups are the work of teachers and teacher candidates (supported by their university faculty), who choose a topic of interest and meet regularly to discuss research literature and examine instructional practice, both theoretical and actual, as they implement new instructional strategies in their classrooms and collect qualitative data to analyze collaboratively. As an essential part of the research process, Bowie State University inquiry group members share their results with the larger education community.

Through documented research by one of the authors, inquiry groups have been additionally found to possess a motivational element for teachers and teacher candidates looking to improve practice. Sonia, a mentor teacher in an inquiry group under a previous study, attests to the eagerness of her inquiry group members to pursue research in the following quote taken from group discussion:

The inquiry groups were informal, exciting, motivating and thoughtful. Not only did teachers try new ideas, but also the Bowie State University students had opportunities to see, and be a part of, ongoing professional development and to hear discussions relevant to their university classwork. Teacher candidates reported a real carryover between what they were being taught in methods classes and what was being discussed in our inquiry group. (Garin, 2005, p. 8)

The experience of Sonia, and educators like her, informs the definition of inquiry groups in an exciting way: inquiry groups can provide a unique type of encouragement that stimulates teacher growth and creates enthusiasm for testing instructional change.

Methodology

In this section, we first provide an overview of self-study as a research methodology. Next, we present the specific study we conducted, describing the data collection and analysis procedures.

Self-Study Methodology

Self-study research is an empowering research methodology that holds promise for PDS study and reform by examining teacher practice in context, embracing ownership, and seeking transformation in the practice of the researcher. We adopted this methodology because it additionally mirrors the collaborative spirit of PDS and gives an equal voice to all PDS stakeholders.

While the terminology *self-study* suggests that this type of research is about oneself, research conducted through self-study is both individually and collectively owned and reliant on the research community (LaBoskey, 2004).

LaBoskey (2004) describes self-study as improvement-aimed, interactive, and multi-methodological. According to Loughran (2008) and LaBoskey (2004), self-study researchers use a variety of accepted research methods, and do so collaboratively and interactively with colleagues, students, and texts. In this research, we used self-study methodology consisting of multiple forms of qualitative data gathered during inquiry group development, implementation, and reporting through the Bowie State University PDS Network. The site-based teachers who served as PDS Coordinators, and the PDS teachers who served as inquiry group leaders, played the role of critical friends who validated and enhanced research findings by offering perspectives and critiques from their position as knowledgeable participants in inquiry groups. Samaras (2011) describes critical friends as prisms: "Critical friends, like the faces of a prism, are not parallel to each other, so the differing angle may unveil something that neither critical friend can see alone" (p. 214). We assert that critical friends provide the prism effect to allow one to alter his view through a different medium (i.e., a critical friend helps illuminate new ideas and shows something that may be present all along, but not obvious or visible to the individual alone).

According to LaBoskey (2004), the purpose of self-study research is to improve practice and maximize the benefits for stakeholders. In this case, the process and product of inquiry groups in PDS sites is examined to increase the benefits of professional development for participating educators and their students. This research explores the implementation of the inquiry group process in our PDS sites, focuses on the impact of the inquiry groups on the PDS partnership, and represents an approach to research that provides a built-in mechanism for identifying and dealing with issues related to practice as they arise during the study.

Our research design was framed and structured, yet also stayed flexible so that we could respond to our critical friends' perspectives. The research questions that guided this self-study are as follows:

- What is the process for developing and implementing inquiry groups?
- How do both PDS teachers and teacher candidates experience their inquiry group participation?

Data Collection

For this study, multiple data sources from multiple perspectives were desirable to ensure that a comprehensive picture of the self-study emerged through data analysis. Data were collected from observations of inquiry group activities, notes and agendas from inquiry group meetings, documentation and activities associated with the National Council for Accreditation of Teacher

Education (NCATE) and its accreditation process, regular communications between inquiry group participants and the authors, focus groups including participating teacher candidates, and the perspectives of inquiry group leaders who served as critical friends for this self-study.

Observations and meeting notes were a vital data source for this research. Watching inquiry group development, implementation, and planning provided data on successes and areas for improvement, both of process and product. Documenting these observations through journal entries, such as the following example from Eva's viewpoint, provided reflective texts that became a valuable resource for self-study:

In an after school meeting with teacher candidates and mentor teachers, we have the opportunity to see the planning for inquiry groups up close and in the initial stages. Mentor teachers and teacher candidates are meeting to decide the focus of this year's inquiry group. There are six mentor teachers and six teacher candidates. Five teachers who do not have teacher candidates also want to participate in the inquiry group. Two mentor teachers, Jennie and Dina, who also serve as PDS Coordinators lead the meeting. It is obvious from the onset that they will organize around more than one inquiry group because of the size of the group and the array of interests. (Eva Garin, PDS Coordinator and University Professor, September 2007)

In addition to observing inquiry groups at work, we met twice a year with inquiry group leaders, facilitated yearly summer strategic planning sessions for inquiry group implementation, and reviewed notes from the Bowie State University PDS Network meetings. As self-study researchers, reviewing data and assumptions became a routine part of our PDS meetings. Notes from these observations and meetings have helped the Bowie State University PDS Network guide the ongoing implementation of our inquiry groups.

A rich source of qualitative data for this study was the inquiry group participants themselves, who communicated their experiences and perspectives through ongoing conversations, focus groups, and critical response to the self-study. These participants added information on their processes, perceptions, and outcomes. Inquiry group leaders provided knowledgeable feedback and multiple perspectives, and their viewpoints informed this study and its resulting model of using inquiry groups in a PDS context.

Data Analysis

As Loughran (2004) indicates, data interpretation is best as a shared task to address the issues inherent in the researcher's close personal involvement in a self-study. Critical friends were utilized throughout the development and implementation of this

study to assist with the data analysis process and the development of the inquiry group steps reported below.

Triangulation of data was enabled by using coding techniques, as recommended by Samaras' (2011) work on selfstudy methods, to compare the wealth of information across data sources. We read and reread documents and notes, marking recurring statements and looking for emerging regularities and patterns, topics, chunks, and classifications. Each document was used as a source of reflection on what we were learning about inquiry groups from both teachers and teacher candidates. Additionally, we developed coding categories, or themes, described by Bogdan and Biklen (2007) as "terms and phrases developed to be used to sort and analyze qualitative data" (p. 271). We used these categories to create codes about the process and steps for developing inquiry groups, the impact of participating in inquiry groups on both teachers and teacher candidates, and the overall PDS Network. These coding categories also informed recommendations for others who want to develop inquiry groups in their PDS site.

The original lens of our research was to focus on the benefits of inquiry group participation and on the experiences of teacher candidates and PDS teachers. As we reread data and examined field notes from observations, the implementation steps emerged as another set of themes. We then reframed the self-study to view how PDS sites unrolled inquiry groups in their sites. We were able to observe these implementation steps during the network meetings and by observing on-site inquiry groups.

According to LaBoskey (2004), self-study is reported to the professional community for deliberation, testing, and evaluation. We brought the data and coding and reported our findings at PDS Network meetings, and we talked with teacher candidates about findings during the reading methods courses.

Findings

The first research question we posed (What is the process for developing and implementing inquiry groups?) was answered by reviewing coding categories that emerged during our initial analysis and reading of artifacts and by observing inquiry groups at PDS sites. As Bowie State University and its PDS partners build new school partnerships, both the university and PDS partners have reported that the distilled steps reported below (see Figure 2) support their successful implementation of inquiry groups.

Step One: Initiate Engagement Strategies

We found that usually one or two teachers in a school wanted to take the lead in initiating the inquiry group. These teachers talked to their colleagues informally and at faculty meetings about opportunities to participate in inquiry groups and the potential benefits for them as teachers and for their students. Since inquiry groups are part of our PDS partnership signature programs, each partner school has committed to having an inquiry group. Mentor teachers are urged to attend and

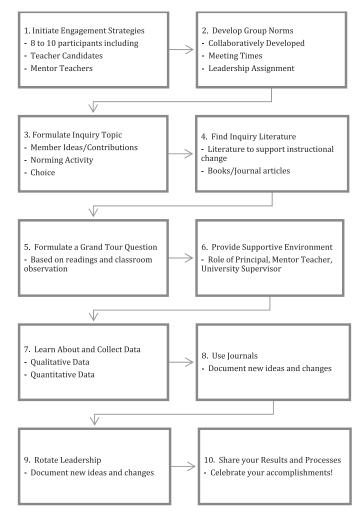


Figure 2. Inquiry Group Steps

participate with their teacher candidates, as teacher candidates are required to participate as part of their methods courses in reading and reading assessment. Inquiry group participation also extended beyond mentor teachers to include specialists and paraprofessionals.

Step Two: Develop Group Norms

After group members have been identified, teachers and teacher candidates developed group norms that supported how the inquiry group would function. Norms seemed to add a structural element to inquiry group meetings that was crucial to maintaining focus, maximizing time, and ensuring equal participation.

Step Three: Formulate a Topic for the Inquiry Group

Inquiry group members reported having an equal voice in the selection of the topic, which can make topic selection difficult. Beginning inquiry groups often struggled with formulating a

topic for their inquiry; therefore, the PDS Network developed a process to ease participants through this step. Prior to topic selection, each inquiry group reviewed the instructional goals of their school district and their individual school site so that their inquiry would support the framework that already existed. Inquiry often addressed some form of literacy, as teacher candidates participated in inquiry groups as part of their reading methods courses. Sample topics investigated included such areas as reading motivation, reading comprehension, writers' workshop, cooperative learning, working with parents, brain research, vocabulary development, and reading strategies.

Step Four: Find Informational Literature to Support the Inquiry

After the focus of the inquiry was selected, inquiry group members began identifying professional literature that supported their topic. Rather than beginning general conversations about their topic, our inquiry groups began by studying their topic to discover current thinking on the subject and to hypothesize on what theories would offer reasonable support for instructional changes. For some inquiry groups, this meant reading a book on the chosen topic; for others, it translated into collecting a group of journal articles. [Please contact the authors for a selected listing of literature that teachers and teacher candidates in the Bowie State University PDS Network have used for inquiry groups.]

Step Five: Formulate a Grand Tour Question

As inquiry group members met and began reading current literature on their topics of interest, they seemed to naturally begin the next step in growing their inquiry group—formulating a grand tour question. During this step of the inquiry group process, participants focused their research by formulating an open-ended question that allowed their inquiry to develop naturally in any direction. This question guided both inquiry group discussions and planning for the implementation of instructional strategies in their classrooms, whether new or adapted from existing strategies.

Most of our inquiry groups began by reading Harvey and Goudvis' (2007) Strategies That Work because it was recommended at district-level meetings, and some of the strategies were already being incorporated into curriculum guides. Grand tour questions for this book were open-ended and allowed for each member of the inquiry group to practice the reading strategies honoring differences in grade level, teaching experience, and content area. One group identified their grand tour question as, "What happens to my teaching and to my students' learning when I implement these reading strategies in my classroom?"

Step Six: Provide an Environment that Supports Implementing Innovations

The question of environment was complicated by the fact that the inquiry groups were co-sponsored by the school and the university, and included both teachers and teacher candidates. When asked to define what makes for a supportive environment for inquiry groups, classroom teachers mentioned the role of the principal, ability to alter classroom instruction, and support from other inquiry group members.

The role of the principal was essential for the success of the inquiry group. Principals showed their support and encouragement by providing a small budget for refreshments, providing materials such as journals, reading the inquiry literature, or publicly highlighting the work the inquiry groups were doing. As teachers and teacher candidates implemented new or different strategies, they needed to know that their principal understood that effective implementation might take time and practice. In one school, teachers and teacher candidates wanted to implement cooperative learning in reading/language arts classrooms throughout the school. The principal supported this group by acknowledging that classrooms might initially become loud and chaotic until teachers, teacher candidates, and students gained experience with the new strategies. This very same principal later spoke at a PDS Network meeting, reporting that teaching and learning had radically changed in her school because of the inquiry groups' leadership in studying and implementing cooperative learning in reading and language arts. The following year, this school decided to implement cooperative math strategies through inquiry group leadership.

In building support for teacher candidates, additional issues arose. University supervisors needed to be aware of, and understand the role of, inquiry groups in the lives of teacher candidates. During three-way conferences among the supervisor, teacher candidate, and mentor teacher, the conversations included the focus of the inquiry group, as well as what the teacher candidate was learning from this experience. Like the principal, the university supervisor needed to support the inquiry of both the teacher candidate and the mentor teacher. Methods faculty were also a vital support for the inquiry research as they initiated discussions about what each teacher candidate was experiencing and learning in their inquiry group, and answered questions about disciplinary and instructional strategies and effective methods of implementation.

Teacher candidates also needed to feel safe in expressing opinions and asking questions during inquiry group meetings with teachers. In focus groups, interns reported that one reason they did not feel like equal participants in their inquiry groups was because PDS teachers often used abbreviations and jargon for educational terms, leaving holes in the interns' understanding of inquiry group conversations. Some examples of this reported behavior were the use of such terms as IEP for Individual Education Plan, SIT for School Improvement Team, and Toolkit for Harvey and Goudvis' (2009) Comprehension Toolkit. Despite this, many interns reported feeling included and valued in their inquiry groups. One inquiry group participant reported, "I always have a chance to speak and state my opinion. I feel comfortable participating because we all support each other's ideas and encourage each other." Another intern added, "I feel comfortable because it is not a judgmental environment.

So we all feel welcome to speak." However, to achieve these positive feelings, both teacher candidates and teachers must work hard to follow the group norms they established to provide one another with a safe and supportive environment.

Step Seven: Learn About and Engage in Data Collection

In practice, data collection occurred throughout the inquiry process. Teacher candidates and teachers collected data from one another as they developed a focus for their inquiry groups, and continued to focus on data as they selected literature to support their inquiry groups. Data collection occurred as they read together and discussed their readings in relationship to their teaching and their students. A more formal data collection process began at the discretion of the group members.

Step Eight: Use Teacher and Teacher Candidate Journals

Many PDS inquiry group members kept a journal (e.g., composition or spiral notebook) for their reflections as they read professional literature and taught in their classrooms. These journals served as a repository for "our own ruminations, reflections and insights; provide[d] a place to record data and new ideas; and, in periodic rereading, help[ed] us make sense out of what in the moment seem[ed] a confusing array of complex issues" (Garmston & Wellman, 1994, pp. 107-108). Inquiry group meetings often began with teachers and teacher candidates sharing their journal entries.

Step Nine: Rotate Leadership of Inquiry Groups

As inquiry groups evolved into an important aspect of the PDS and an increasing number of teachers participated, experienced teachers and teacher candidates had the opportunity to lead. The comfort level of the participants grew over time and, as the leadership changed, so did the role of the leaders. At the beginning of the inquiry group process, group leaders provided discussion starters and kept conversation moving. Later, the leadership tasks become more administrative, as group members became more familiar with each other and discussions flowed readily.

Over time, leadership became the role of each member, teachers and teacher candidates alike. One participating teacher candidate reported feeling "included in my inquiry group because I have a chance to lead the discussions sometimes." An enhanced leadership skillset in participants was a positive outcome of inquiry groups that was supported by the democratic and collaborative process of shared inquiry.

Step Ten: Find Ways to Share Your Work and Celebrate Your Accomplishments

Steven Covey (2012) reminds us to begin with the end in mind; it was important for inquiry group members to know that what they

studied and learned mattered. For this reason, inquiry group members knew from the onset that many forums were in place for them to share their work beyond classroom walls. Teacher candidates graduating from Bowie State University present an electronic portfolio that supports the College of Education Conceptual Framework, in which they must provide evidence of becoming a reflective practitioner, a disposition supported by the inquiry group process. Teacher candidates include inquiry group findings and reflections in this portfolio that they present to public school faculty, and university faculty and supervisors.

To answer our second research question (How do both PDS teachers and teacher candidates experience their inquiry group participation?), several themes emerged after rereading our artifacts and interviewing PDS teachers and teacher candidates. We learned what was working well, as well as some of the challenges that PDS sites were experiencing. The themes that emerged included: inquiry group participation and benefits, logistical decisions, and choosing a topic. Below is a discussion of the key findings in each of these areas.

Inquiry Group Participation and Benefits

Teachers reported that initially encouraging staff to participate in the inquiry group was challenging. We learned that as participating teachers shared their experiences, other teachers became motivated to join the inquiry group. In many of the schools under study, the majority of the faculty participated after the first year, and inquiry groups showed up as an important component of professional development in the school goals and objectives included in the School Improvement Plan. Inquiry group leaders reported that their most valuable tool in recruiting new members was positive testimonials by teachers and teacher candidates. At the beginning of their participation, teacher candidates sometimes expressed doubt, but after the first few meetings these fears disappeared and teacher candidate comments about the experience became insightful and positive. One endorsement came from a teacher candidate assigned to a school that did not have a functioning inquiry group, who exclaimed at the conclusion of our yearly university PDS conference, "I think they should establish an inquiry group at Hill School, or the university should not place teacher candidates there." Inquiry group participation inspired the following testimonials from other teacher candidates:

- "Teacher candidates and mentor teachers are much more focused."
- "I enjoyed learning strategies and seeing the impact they had on my students. I used the information to design lessons and make better instructional activities."
- "By collaborating with my mentor teacher, I learned in the field and in the inquiry group meetings. This is the best of both worlds."

Similarly, mentor teachers reported positive outcomes as a top reason for the participation in inquiry groups at their schools:

- "I am glad to read research that supports what I am doing."
- "Inquiry groups have helped me to examine new practices that have helped to improve the quality of instruction in the classroom."

These opinions about the positive effects of inquiry group activities on teacher education, instructional practice, and teacher self-efficacy reinforced the motivation for schools to engage in inquiry groups as a form of professional development.

Participants reported that their participation in inquiry groups was encouraged through tangible benefits. Many of the inquiry groups based their inquiry on reading professional literature consisting of books and articles, and this was reported as yet another selling point for teachers who wanted to expand their professional book collections. Participating teacher candidates, likewise, graduated from our program with the beginnings of their own professional libraries. Further, if inquiry groups meet before or after teacher work hours, teachers received a small stipend from their school district, and teacher candidates received credit for completion of one methods assignment and were encouraged to include evidence of their inquiry group participation in their exit portfolios.

Logistical Decisions and Group Norms

Identifying a meeting time was the first decision inquiry groups had to make. Meetings could be scheduled before or after school, or during planning time. To include teacher candidates, we learned that meetings would need to be scheduled when teacher candidates were in their field placements. Some PDS sites chose morning meetings and others decided to meet after school. In addition, inquiry group participants reported that meetings were most effective when they were scheduled twice monthly for a duration of one hour.

The format of the inquiry group changed over time. Initially, one person led discussions and organized the meetings. Thereafter, group leadership seemed to either rotate or remain with one person. One PDS site offered interns the opportunity to co-lead sessions with their mentor teachers. During the development of group norms, teachers and teacher candidates worked side-by-side in agreeing upon other norms such as:

- 1. Everyone will have the opportunity to speak.
- 2. Members will maintain an inquiry journal and share their journal during meetings.
- 3. Members will listen to one another and offer support.
- 4. If a group member is having an issue in his/her classroom, members will offer suggestions without discussing them outside of the group.
- Members will commit to fully participating in the inquiry groups by completing readings and implementing strategies in their classrooms.
- 6. Teacher candidates and teachers are equal participants.
- 7. Mentors share sample student work whenever possible.

Inquiry group participants reported that these norms helped establish and maintain a democratic and educative environment. Additionally, groups that established norms early on reported that they were able to minimize distractions and focus more fully on their research goals.

Selecting an Inquiry Group Topic

For some PDS sites, selecting an inquiry group topic became a challenge because there were a variety of interests that often seemed either content or grade level specific. Inquiry groups began developing processes to address the variety of interests and needs. Some schools had teachers vote on the topics and focused on the topic of greatest interest. For other PDS sites, developing a process for identifying a topic became more challenging. This happened at one site when teachers had many ideas and were challenged to focus those ideas. The following process was developed and used quite successfully in other sites:

- Each member of the inquiry group was given three small sheets of paper in the form of an index card or a sticky note.
- 2. Participants wrote one topic of interest on each paper.
- 3. Using chart paper, the first volunteer placed one of his/her topics on the chart paper. Any group member who had a related topic placed it close by each posted topic. This exercise continued until all topics appeared on the chart paper and were clustered by theme.

On some occasions, it was obvious to the group that they all had a similar interest. Other times, two or three interests surfaced, and a group voted on the topic, agreeing to table other topics until later in the year. If it was a large group, two or three inquiry groups may have emerged.

We learned that in schools with established inquiry groups, the trend was that most of the staff began participating, and that they divided into smaller inquiry groups by interest. At one such school under study, the kindergarten teachers and teacher candidates wanted to base their inquiry on readers' and writers' workshop in kindergarten. Another group wanted to continue discussing motivating children to read. A third group wanted to discuss the book *Teach Like Your Hair's on Fire* by Rafe Esquith, and particularly encouraged beginning teachers to join. After a lively discussion, teacher candidates chose their inquiry groups, often opting to leave the company of their mentor teachers to follow their own interests. Over the years, our PDS Network teachers have become very experienced in identifying topics of interest and finding professional books and articles to support their inquiry.

The university supports the inquiry group process by ordering sample books for inquiry groups to preview in making their collaborative book selection. After the selection is made, a book is ordered for each of the inquiry group members. Funding for this endeavor is supported by the university, the school district, and grant funds. Each member of the inquiry group adds this book to his or her professional library, but in some

cases, inquiry groups within a school rotate books that are of particular interest. Sometimes, groups are unable to find one book that supports their inquiry and instead opt to use a selection of journals.

Discussion

Often, inquiry group participation began to sound like informal action research. We learned that in many cases these groups began moving along the continuum of research design discussed earlier in this article, and ended up conducting action research. However, that was not the goal of these inquiry groups. It took some schools participating in inquiry groups a full year before they felt ready to move to the next step of inquiry group development, and many groups went through multiple sessions of inquiry with a variety of professional literature before implementing innovations in the classroom. This indicated to us that the format of the inquiry group supported the professional development of participants as they decided when and if they were ready to move to the next step of teacher research.

Inquiry group members seemed to use derivatives of the following questions to reflect on their developmental readiness for a more formal process:

- When will the members of the inquiry group feel comfortable and ready to talk about their own teaching successes and areas for improvement related to the topic?
- When will the members of the inquiry group have done enough reading and research on their topic to feel ready to move to the next level?
- When will the members of the inquiry group have a thorough understanding of the strategies they want to implement in their classrooms?

When inquiry groups decided that they were ready to begin the data collection phase, they reported that they revisited their grand tour question(s) to identify data sources that would support their investigation. Teachers and teacher candidates collected data under two main categories: their own teaching and their students' learning.

Collecting reflective data occurred naturally throughout the school day as teachers and teacher candidates reflected on their teaching. Mentor teachers gave teacher candidates feedback on observed lessons, and together they reflected on successes and potential changes. These observations were sometimes conducted live, or reflection was extended through audio and video taping of lessons that mentor teacher and teacher candidate viewed and reflected on simultaneously, with a chosen focus for the observation. For example, if the reading strategy that the inquiry group focused on was prediction, the lesson they viewed together and their reflections would focus on prediction. The teacher candidate would bring data from the lesson back to the inquiry group, providing the basis for discussion and further reflection around the use of prediction as an instructional strategy that supports reading comprehension. Additional

conversations focused on how teachers could effectively use prediction in the classroom and what supports teachers and teacher candidates needed to improve this strategy. As a result, inquiry groups greatly focused and improved the descriptive feedback that participants generated in self-reflection and peer observation.

Conclusions

We found self-study methodology to be an effective way to view PDS and inquiry groups, specifically. Self-study facilitated continuous improvement, as did the inquiry group process, making the two mutually reinforcing. The role of critical friend was particularly useful for us as we researched our inquiry groups. We agree with Zeichner (1999) who wrote that "the birth of the self-study in teacher education movement around 1990 has been probably the single most significant development ever in the field of teacher education research" (p. 8). Although there have been numerous writings about self-study for teacher educators (Cole, Elijah, & Knowles, 1998; Hamilton, Pinnegar, Russell, Loughran, & LaBoskey, 1998; Kosnik, Beck, Freese, & Samaras, 2005), little attention has been given to what self-study can do to support new teachers, teacher candidates, and PDS partnerships. We will continue to advocate for the use of selfstudy as an effective methodology for studying PDS. In the future we plan to use self-study to explore the implementation of the NAPDS Nine Essentials.

Several pieces of advice have emerged from this self-study. First, begin with volunteers, teachers who are interested in participating in inquiry groups. Secondly, include teacher candidates in the initial planning stages. Teacher candidates who were not included in the initial planning stages reported that they did not feel part of the group. This presented a challenge for teacher candidates who began their internship in the spring after the inquiry groups were in full implementation. Some schools found ways to orient the new teacher candidates, and other schools decided to have them participate in the fall when they could be part of the initial planning stages.

Teachers felt that the size of the inquiry group was most beneficial with eight to 10 members. If there were more than 10 participants, teachers and teacher candidates met in smaller groups, and later shared their findings with the larger group. We also learned that it was vital to the success of participants to keep the membership heterogeneous, to include both mentor teachers and PDS candidates. When the groups met separately, participants felt that the process was compromised. In one school that separated participants, the mentor teachers stopped attending meetings. Additionally, we experimented with both weekly and monthly meetings and learned that bi-weekly meetings were most successful. Meeting weekly was too often for members to complete readings and test new strategies in classroom instruction; on the other hand, in meeting monthly, the energy of the group seemed to dissipate.

Participation in inquiry groups is voluntary for teachers and, no matter how successful, should remain so. In cases where principals saw how successful these groups were and required that the entire staff participate, they were met with resistance and the inquiry group process suffered. In one such school, mentor teachers formed a smaller inquiry group for themselves and their teacher candidates aside from the school-wide inquiry groups mandated by the principal.

Inquiry groups need the freedom to progress at their own level of comfort and skill. We learned that when either the university or school level administrators interfered with this process, the inquiry group members would not be influenced by outside suggestions or mandates; they were knowledgeable about the needs of their group and classrooms. Even when it became challenging and school level administrators attempted to select books for teachers to read, we continued to urge inquiry group members to collaborate on the selection and the focus of their inquiry. At our last meeting with PDS Principals, we talked about the philosophy of self-selection. Principals agreed that this was an important dynamic of the inquiry groups.

One of the ways that members reflected on their readings and brought discussion topics back to the group was to encourage the use of a journal and sticky notes. Participants used sticky notes as they read to identify important passages, questions, or areas for discussions. We modeled these reading strategies in our reading methods course so that teacher candidates felt comfortable with the process.

We will continue to support inquiry groups as a method of inquiry for PDS teachers that offers a more formal approach to teacher research than study groups and a less complex approach to teacher inquiry than action research, and we encourage other PDS partnerships to build on our learnings.

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