

Action Research in Professional Development Schools: Does it Make a Difference?

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Abstract: This study focuses on teacher inquiry (including action research and inquiry groups) in the context of professional development schools (PDS). The purpose of this study was to examine the role of teacher inquiry in professional development schools and to compare the experiences of PDS teachers, teacher candidates in PDS sites and non-PDS teachers. Surveys, consisting of both qualitative and quantitative questions, were distributed to 147 respondents, including teachers in professional development schools (PDS) (n=54), teachers in non-PDS sites (n= 56) and PDS preservice teacher candidates (n=37). To further examine the results of this survey, in-depth interviews were conducted with teachers who had experienced teacher inquiry in both PDS sites and non-PDS sites. The results show that PDS teachers and teacher candidates in PDSs experience action research and inquiry groups in similar ways. There were not significant differences in their answers. There were two areas that did yield interesting results for PDS research. PDS teachers experienced more support from their principals as they conducted action research and inquiry groups and non-PDS teachers were more likely to seek promotions and leadership opportunities, both within and outside of their schools.

KEYWORDS: teacher inquiry, professional development schools, PDS, teacher candidates, PDS teachers, action research, inquiry groups, interviews, surveys, career paths, administrative support

NAPDS NINE ESSENTIALS ADDRESSED:

1. A comprehensive mission that is broader in its outreach and scope than the mission of any partner and that furthers the education profession and its responsibility to advance equity within schools and, by potential extension, the broader community;
2. A school–university culture committed to the preparation of future educators that embraces their active engagement in the school community;
3. Ongoing and 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;
7. A structure that allows all participants a forum for ongoing governance, reflection, and collaboration;

Introduction

Teacher inquiry is suggested as one approach to impact student learning in professional development schools. In his writings, Lee Teitel (2001) gives national recognition to the impact of teacher inquiry on student achievement:

The ultimate goal of any professional development school partnership is enhanced learning for P-12 students. In PDSs, this may be a result of the increased numbers of adults in classrooms, the blending of expertise of school and university participants in the school, classroom teaching teams, and/or other forms of school or classroom restructuring. It may also come about as a direct result of changes related to the improved initial and continuing professional development of educators and inquiry focused on improved student learning. (p. 3)

Others call for teacher inquiry to be an important component of professional development schools. The Holmes Report (1998) states that professional development schools “provide superior opportunities for teachers and administrators to influence the development of their profession, and for university faculty to increase the professional relevance of their work, through collaborative research on the problems of educational practice” (p. 63). Somekh and Zeichner (2009) refer to action research as a university-led reform movement where universities work in partnership with schools to use action research as a strategy for educational reform. In some cases, this action research has been organized by teachers as a teacher-directed form of professional development. In the inaugural edition of the National Association for Professional Development Schools’ Journal, *School-University Partnerships*, Zeichner (2007) expounds on the concept of professional development for teachers in a PDS site:

PDSs provide a new kind of professional development to school staff. Instead of having staff leave their schools to participate in professional development activities, the PDS often integrates professional development into the life of schools. The goal is to embed a culture of inquiry into the school. (p.13)

Boyle-Basie and McIntyre (2008) describe action research as a centerpiece of PDS where “crucial teacher preparation, focused on student learning and grounded in teacher inquiry” (p. 326).

This study focuses on two types of teacher inquiry found in PDS, action research and inquiry groups. For this study, the definition of action research offered by Kemmis and McTaggart (1992; 2000) is used. This definition emphasizes an action research cycle that builds on teacher reflection and offers the opportunity to change, or amend, research questions; an important and often overlooked skill for teacher researchers.

Action research is a deliberate, solution-oriented investigation that is group or personally owned and conducted. It is characterized by spiraling cycles of problem identification, systematic data collection, reflection analysis, data-driven action taken and finally problem redefinition. (p. 14)

Action research is the most formal type of teacher research. Another, less formal, form of teacher research is inquiry groups. According to Cochran-Smith and Lytle, there are three types of knowledge gained from professional development: knowledge for practice, knowledge in practice, and knowledge gained from developing a professional development session (Yendol-Hoppey & Dana 2009, pp. 55-56). The third type, which is summarized as 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” (Yendol-Hoppey & Dana, 2009, p.56). The inquiry groups in this study are an example of professional development that focuses on knowledge of practice. Inquiry groups offer a more action derived opportunity than study groups, which Dana and Yendol-Silva (2003) name as collegial study groups. Inquiry groups also go far beyond the conversations that teachers engage in during school, grade level, or departmental meetings, and offer more formality than the collaborative and collegial conversations that normally exist in a professional development school.

Inquiry-based work is defined by the International Dictionary of Education as “studies beginning with investigation of particular topics or attempts at solving particular problems” (Page, 1977, p.122). Inquiry groups provide teachers with intellectual discourse and investigation tied to the particulars of teaching practices and new ways for teachers to interact. The subtle softening of the word “research” to “inquiry” often makes a difference in teacher perceptions (Garin & McBride, 2013). Teachers are choosing inquiry groups over action research or study groups as a form of research that embraces and enhances the learning that exists between educators working together for a common goal. Inquiry groups offer the collegiality of study groups with the less complex components of action research.

This study focuses action research and inquiry groups as ways for teachers and teacher candidates to document changes in their teaching and student learning. Furthermore, the study examines the experiences with teacher inquiry in both PDS and non-PDS settings. Action research and inquiry groups are the focus of both a survey administered to PDS teachers, non-PDS teachers, PDS teacher candidates, and the subsequent individual and group interviews.

Objectives

The purpose of this study was to examine the role of action research and inquiry groups and how PDS teachers, non-PDS teachers, and teacher candidates in PDS sites report their experiences. Specifically, this study reports the results of surveys, consisting of both qualitative and quantitative questions, distributed to PDS teachers (n=54), non-PDS teachers (n= 56) and teacher candidates (n=37), as well as follow-up interviews with a principal, teacher and teacher candidate to gather additional insights into the results of this survey and focus groups.

The survey and interviews addressed two forms of teacher inquiry: 1) action research and 2) inquiry groups. The purpose of this study was to learn more about the role that both forms of teacher inquiry play in the professional development of teachers and teacher candidates. Additionally, by distributing the survey to both PDS and non-PDS teachers, this study was able to examine how PDS partners view their participation in teacher inquiry as part of their PDS partnership. Also of interest was what role the structure of PDS played in the process and outcome of teacher inquiry. The study also examined the responses by teacher candidates and their reactions to participating in two forms of teacher inquiry during their extensive teaching internship. This study was designed to answer the following questions:

- What do PDS teachers and teacher candidates say about their participation in action research and inquiry groups?
- How do the three groups (PDS teachers, non-PDS teachers, and teacher candidates) experience action research and inquiry groups?

Methodology

This is a mixed methods study as described by Johnson, Onwuegbuzie, and Turner (2007) as a “type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches (e.g., use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the purpose of breadth and depth of understanding and corroboration” (p. 123). Several characteristics of mixed methods research (MMR) are important to this study. According to Teddie and Tashakkori (2011) MMR encourages methodological eclecticism, the freedom to choose what the researcher believes to be the best tools for answering their questions while confirming and exploring questions through diverse range of lenses. MMR also offers a cyclical approach to research and includes both deductive and inductive logic in the same study. In MMR studies, both qualitative and quantitative findings are incorporated toward broader understandings of the data.

Data Collection

Surveys. A survey was developed, piloted and distributed to teachers (PDS and non-PDS) and PDS teacher candidates (see Appendix A for data collection instruments). For Part One of the survey, respondents provided their demographic information such as level of school, years teaching, years involved in teacher research, and focus of research. For Part Two of the survey, respondents provided their perspectives and attitudes on a list of 20 questions using three approaches. Six of the questions used a 5-point Likert Scale. In two questions, respondents ranked items from most important to least important. For the remaining questions, respondents placed a check next to each statement that they had observed or experienced. In order to obtain qualitative data, respondents answered 15 questions (i.e., “Please explain your answer.”) to provide additional information.

The survey was pretested with a small sampling of teachers both in PDS and in non-PDS schools. The pretest form of the survey provided space for the respondents to make comments about the specific questions as well as the survey itself. The survey was also pretested with a small sampling of teacher candidates using the same process.

Interviews. Because a more thorough understanding of the experiences of PDS and non-PDS teachers was desired, the quantitative survey results and the analysis of the qualitative survey data were used to create protocols for a Three-Step interview series as proposed by Seidman (2013). Each interview was recorded and transcribed. After the transcriptions were analyzed findings were presented to a focus group to bring more clarity to the results.

Seidman (2013) proposes a *Three-Step Interview Series* for in-depth phenomenological interviewing (pp. 20-23). The first interview, focused life history, requires that the interviewer put the participant’s teaching experience in context by asking as much as possible about the topic. For the first interview, questions focused on the experience of conducting action research and participating in inquiry groups in both PDS and non-PDS settings. The second interview in Seidman’s (2013) *Three-Step Interview Series* calls for probing for the details of the experience (p. 21). The transcripts from the first interview were used to probe for more information. The goal of this second interview was to learn more about the areas of teacher promotion and principal support for teacher inquiry. The third interview in this series used a more in-depth reflection on the meaning of participant

experiences. The third interview was conducted as a group interview/focus group to bring more clarity to the results. During this group interview, we focused on the themes that emerged during the analysis of interview transcripts and open-ended survey responses.

Setting. The participating PDS sites, in this study, had several opportunities offered by the university to participate in teacher inquiry. The first teacher inquiry opportunity was for mentor teachers and teacher candidates. Mentor teachers and teacher candidates participated in inquiry groups for which they chose a book to frame their examination of research and instructional practices in their classrooms. The second opportunity, action research, was also for mentor teachers and teacher candidates. During their extensive teaching internship, each teacher candidate conducts action research, based on the classroom and student learning objectives of their respective mentor teacher. While the primary responsibility for this action research is on the teacher candidate, mentor teachers assist with the creation of the topic, research question, and data collection. The third opportunity is in the form of action research mini-grants. Each PDS site had the opportunity to apply for an action research mini-grant, offered through the university, which funded the materials needed to conduct the study. The recipients of these mini-grants were asked to involve the teacher candidates in their study.

The non-PDS teachers also had opportunities to participate in action research and inquiry groups offered through the local school district. One opportunity included inquiry groups where two teachers from a school would meet with pairs from other schools. These groups focused on challenges of working with English Language Learners (ELLs), or students who were identified as struggling readers. The other opportunity the school district offered was action research grants to groups of teachers from one school. These grants were competitive in nature and had to focus on strategies for increasing student learning on both school-based assessments and state assessments.

Participants. Purposeful sampling, as evidenced from Bogdan and Biklen (2007), was used to identify the interviewees. Three educators were selected to interview for this study. All three of these educators had the experience of conducting teacher inquiry in both a PDS site and a non-PDS site. These teachers were not chosen randomly, but rather were chosen because they had participated in action research or inquiry groups both within the PDS context and in non-PDS schools. “You chose particular subjects to include because they are believed to facilitate the expansion of the developing theory” (Bogdan & Biklen, 2007, p. 73).

Jenny (pseudonym) participated in both PDS and non-PDS action research and inquiry groups. She recently retired from a PDS site where she was an ELL teacher and served as the site-based PDS Coordinator who facilitated the inquiry groups for mentor teachers and teacher candidates. Jenny was also the recipient of several of the PDS mini-grants awarded by the university. Prior to her coming to this PDS site, Jenny was an ELL teacher in a non-PDS site, and prior to that, a reading specialist in a non-PDS site where she participated in the school district sponsored inquiry groups.

Rose (pseudonym) is currently a 5th grade teacher at a PDS site, her third PDS site in our PDS Network. She is an adjunct faculty member and teaches the science methods course to early childhood/special education and elementary education majors. Rose is also one of the facilitators for the PDS Network’s mentoring courses. Rose was a former teacher candidate who was hired at the school where she did her extensive teaching internship. Rose transferred to another PDS site where she served as the site-based PDS coordinator. Rose participated in inquiry groups as a teacher

candidate, mentor teacher and site-based PDS Coordinator. As a mentor teacher and site-based PDS coordinator she has mentored teacher candidates through their action research.

Mike (pseudonym) is the principal of an elementary PDS site where, each year, several inquiry groups are formed based on teacher and teacher candidate interests. Prior to becoming a PDS principal, Mike was a high school mathematics teacher. During that time, Mike was the recipient of a school district action research grant for non-PDS schools.

Data Analysis

For the quantitative items in the survey, descriptive statistics were used to see how the three groups responded. The mean differences between PDS teachers, non-PDS teachers, and teacher candidates were examined. Percentage trends, by group, are presented when there were no statistical differences.

The qualitative survey responses and interview transcripts were analyzed using 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). The interview transcripts and qualitative survey responses were read and reread, and recurring statements were marked and emerging regularities and patterns, topics, chunks, and classifications were identified. These categories were then used to create codes about the experiences of teachers and teacher candidates as they participated in action research and inquiry groups. Member checking occurred during the focus groups. Additionally, themes from the qualitative data sources were triangulated with the survey data and interview data.

Findings

The data obtained from this survey offered rich information about the role of teacher inquiry in our professional development schools and university classes. The first research question posed was: *What do PDS teachers and PDS teacher candidates say about their participation in action research and inquiry groups?*

PDS teachers and PDS teacher candidates had much to say about their participation in both of these forms of teacher inquiry. The results of the survey indicated that PDS teachers and teacher candidates experienced action research and inquiry groups in similar ways. There were no significant differences in their answers and in most cases, the selection of their answers on Likert scale questions was the same. When asked to identify the top two items that facilitated action research, both PDS teachers and teacher candidates identified in the same order: *time to conduct action research and knowing how to conduct action research*. When asked to identify the biggest hindrances, both PDS teachers and teacher candidates selected first *time to conduct action research* and second *knowing how to conduct action research*. In addition, PDS teachers and teacher candidates expressed similar views on action research and inquiry groups. Both groups identified them as being similar experiences. One of the teacher candidates commented, “Inquiry groups are just an informal approach to using an array of strategies and the action research is the implementation of the strategies.” This supported the open-ended question responses where PDS teachers commented that often the inquiry group readings and discussions led seamlessly into the teacher candidate’s action research. The

second research question posed was: *How do PDS teachers and non-PDS teachers experience action research and inquiry groups?*

Differences between these two groups of teachers began to emerge in the examination of the second research question. While PDS teachers identified *time to conduct my research* and *knowing how to conduct my research* as being the top two essential components, non-PDS teachers identified *time to conduct my research* and *being able to select my own research questions* as being essential. The difference between the experiences of PDS and non-PDS teachers continued to emerge as PDS teachers felt that what hindered the teacher inquiry process was *time to conduct the research* and *knowing how to conduct the research*. Non-PDS teachers identified *time to conduct the research* and *administrative support* as being the top hindrances in the teacher inquiry process. The theme of administrative support emerged in other areas of the survey and will be discussed later in this section.

One question on the survey that yielded statistical significance was, “*What influences has teacher inquiry had on your students’ learning, attitudes and performance?*” Respondents were given six choices to check, as outlined, below.

The number of checked choices was summed for each respondent, then averaged for each group (i.e., non-PDS and PDS). The six choices that could be checked were:

- Student attendance has improved in my classroom;
- Students are receiving higher grades on their report cards;
- Teacher made test scores are higher;
- Students reading levels have increased;
- Student interest and/or motivation has improved; and
- Student achievement on state or national tests has improved.

Non-PDS teachers checked, on average, more options than PDS (Mean = 1.96 for non-PDS and 1.39 for PDS). This difference was statistically significant at the $p < .05$ level $t = 2.9$; $df = 108$. While both groups reported increases in student learning, non-PDS teachers were more likely to identify changes in state and national tests scores. To further understand this survey data, interview analysis led to the discovery that the school system funded action research grants were designed to impact state test scores and those scores were one of the required data sources. For example, Mike reflected on his experience as a math teacher conducting action research through his school district: “Our action research took place at the time we were getting into the whole Maryland State Assessments and the High School Assessments, so our action research focused on *How do kids really respond to open-ended questions across content areas?*”

There were two areas on the survey that yielded interesting results for PDS research. These areas were teacher career paths and principal support. The answers to the survey question, *How has teacher inquiry influenced your career path?* were explored further in the qualitative survey answers and in the individual and group interviews. The data suggests that non-PDS teachers are more likely to seek new leadership roles and promotions both within and outside of their schools.

Table 1. Survey Response Percentages of Question 7

Question 7: How has teacher inquiry influenced your career path?	PDS (Yes)	Non-PDS (Yes)
Question Items		
1. I have taken on new leadership roles such as grade level chair, department chair, SIT member, etc.	13%	57%
2. I include my research in job interview and/or portfolios and/or my exit portfolio.	22.2%	55.4%
3. I have been promoted.	0%	1.8%

As shown in Table 1, 13% (i.e., 7 respondents) of the 54 PDS respondents indicated that they have taken on new leadership roles. In contrast, 57% (i.e., 32) of the 56 non-PDS respondents said that they have taken on new leadership roles. That is the non-PDS respondents are nearly four and half times more likely than PDS respondents to take on new leadership roles.

This survey question was followed by the open-ended prompt, “I have been promoted to ____.” Of the 54 PDS teachers who responded to this survey, only three completed this question.

Their responses included inquiry group leader, grade level chair and site-based PDS coordinator, which is consistent with Table 1. The non-PDS teacher responses included eleven teachers who were promoted to grade level chair, one teacher promoted to the position of Supervisor of Reading and eight other teachers responded with a variety of positions within their schools.

The interview discussions around the topic of promotion yielded three themes: 1) surprise at what this data revealed; 2) PDS as a leadership opportunity; and 3) questioning why teachers would leave the classroom (see Appendix B for themes for promotion). Mike, Jenny and Rose seemed surprised by these results. Jenny’s response, “That is interesting. I had no idea” was similar to Rose’s response to the data, “That is interesting. I wouldn’t have thought that.” The principal’s reaction was, “I am surprised but wonder if the PDS teachers are basically in a leadership role and I wonder if they are interpreting that as I am given the opportunity to show my leadership and my administrative skills and at the same time I am a 10-month teacher.”

Further exploration of the area of teacher inquiry and career path in both individual and group interviews was conducted. In further discussion, Jenny felt that PDS teachers probably didn’t seek promotion because, “Teachers who are choosing to be involved in PDS probably mostly love teaching. If you want to work with a teacher candidate, I think most mentor teachers truly do.... They are doing what they enjoy best already.” Rose thought about her own experiences as she confronted the dilemma of teacher promotion:

So, my initial thought is that being in the PDS allows us to have different leadership roles so we are already fulfilling that natural innate teacher desire to be a leader. I think that from early on in my career because I was a part of PDS I was able to have some leadership roles and that for me personally I don’t think teaching is a position I took because I wanted upward mobility.” “I think that everyone who truly becomes a part of PDS and embraces it wants to

stay with it. The teachers that I know who truly have taken on teacher candidates and really adopted being a part of the university and have completed the mentoring workshops – I think those who really take ownership of it feel connected to the university and the whole idea of PDS and don't want to lose it.

On some level, the teachers saw seeking promotion for teachers as not always being a positive thing. Jenny commented, "Sometimes people who were seeking promotion are just trying to get out of the classroom. They are not necessarily bad teachers, but they are not interested in the students and I feel like teachers who really love the children, and they love what they are doing, are more likely to want an intern and that is the satisfaction that they want."

During the group interview, participants revisited the idea of career path, and Jenny and Rose both wondered if PDS teachers were already in leadership roles in their schools. Jenny reminded the group that to become a mentor teacher there is a screening that occurs at the PDS site: "Principals tend to pick stronger teachers who may already have a leadership role in the school." Rose reiterated that many teachers do not seek promotion outside of the classroom:

"I came to teaching to educate children. I still go back to the time when everything in the classroom clicks and it is just you and the kids and learning is happening and that is why I do what I do, not for promotion. I feel promoted when my test scores improve or when students come back to me and say, 'You know I am getting all A's in middle school math, and it is because you helped me figure out fractions.'"

The second area on the survey that also yielded interesting results for PDS research was the question of principal support for teacher inquiry. Survey responses to the question, *What level of support do you receive from your principal (mentor teacher for teacher candidates) for your teacher inquiry?* are included in Table 2.

As shown in Table 2, 85% of the PDS respondents said that their principal was either *very supportive* or *supportive*. In contrast only 74.6% and 72.2% of the Non-PDS and Teacher candidate respondents (respectively) said that their principal was either *very supportive* or *supportive*. On the low end of support, 5% of PDS teachers said that they received *little or no support*. In contrast 9.1% and 11.1% of Non-PDS teachers and Teacher Candidates (respectively) said that they received *little or no support*.

This survey question about administrative support was followed by the open-ended prompt, "List some of the supportive or non-supportive actions that your principal has demonstrated." Of the 54 PDS respondents, there were 31 individual descriptions of types of support PDS teachers received from their principals. Of the 31 supportive behaviors described, 10 comments were made about the principal attending some of their meetings. Other areas of support included purchasing materials/professional books, providing time and space for meetings, and providing recognition and encouragement. Only one respondent indicated that the principal, "never approached me about the progress of my professional growth during my participation."

Table 2. Survey Response Percentages of Question 10

Question 10: What level of support do you receive from your principal (mentor teacher) for your teacher inquiry?	PDS	Non-PDS	Teacher Candidate
Ratings			
Very Supportive	60%	58.2%	58.3%
Supportive	25%	16.4%	13.9%
Somewhat Supportive	10%	16.4%	16.7%
Little Support	0%	7.3%	8.3%
No Support	5%	1.8%	2.8%

Note. The responses were rated on a scale of 0-4. The average level of PDS support was 3.35 (0 to 4 scale), and the average level of support for Non-PDS teachers was lower at 3.22. Teacher candidates had the lowest average at 3.17.

The supportive and non-supportive comments made by teacher candidates closely mirrored those of the PDS teachers. For teacher candidates, the survey focused on the support they received from their mentor teachers. Of the 37 teacher candidates, only two asked for more time for their research and more support from their mentor teachers. Teacher candidates identified the following mentor teacher behaviors as being supportive of their action research: assistance with materials, providing time for research, offering suggestions and ideas, and allowing the teacher candidates to implement the strategies they identified in their research.

The non-PDS teachers also described principal support in similar terms such as providing acknowledgement and encouragement. This was identified by nine of the respondents. Five respondents mentioned that the principal purchased materials. The non-PDS teachers expressed more examples of non-supportive actions by their principals. These areas included non-attendance at meetings, cancelling meetings, complaints about the frequency of meetings and lack of or a superficial interest in the teacher inquiry.

The interview discussions with Mike, Jenny and Rose around the topic of principal support yielded three themes: 1) a description of PDS principal support for teacher inquiry; 2) non-PDS principal support for teacher inquiry; and 3) a description of the kind of support PDS teachers would like to receive (see Appendix B for summary of themes for principal support). Jenny described high levels of support from her PDS principal including principal praise for what the teachers were doing, principal participation in the school's inquiry group, and principal sharing with the larger faculty short video clips of what teachers were doing in their classes relative to the strategies being discussed in inquiry group meetings. This PDS principal also provided opportunities for the teachers to share their inquiry work at faculty meetings. Jenny remarked that as a result of these, teachers would follow up with questions (i.e., "Now how did you do this kind of thing?"). Jenny felt that PDS principal support not only promoted teacher inquiry opportunities, but also helped people see these opportunities as contributing to the quality of teaching at the whole school.

Jenny described the support from the non-PDS Principal as being more tacit in nature. "I certainly offered to share and show her what we were doing and the response was more kind of 'Oh

that's nice'." The principal did support the teachers attending school district meetings by securing substitute coverage for classes, while the funding came from the school district.

Rose also described principal praise in her interview. For her, principal support for teacher inquiry often sounded like principals praising the teachers or letting teachers know that their work in inquiry group and action research was appreciated. Rose also commented that one of her principals is currently in her inquiry group.

Mike's perspective on principal support came from his experiences as a teacher and as a current PDS principal. Mike described non-PDS principal support as strong, in contrast to Jenny's experience. He felt the support because one of the principal's administrators served on their research team that focused on state mandated testing required for graduation from high school. Using school district funding, teachers were able to meet during the school day on occasions to discuss their research. As a current PDS principal, Mike reflected on what principal support for teacher inquiry would look like and was honest that he wanted to make some changes:

"You know once the action research is over with and it just sits on a shelf if the principal doesn't bring it to anyone's attention or insist that this be incorporated. If this isn't beneficial then what instructional strategy would be beneficial?"

Mike spoke enthusiastically about giving teachers the opportunity to figure out their own topic as a form of PDS principal support for teacher inquiry. "I also tell teachers don't be afraid to fail, you have your hypothesis of what you think the outcomes should be but if that outcome isn't there it is okay because that is beneficial knowledge right there." Mike asserted that PDS sites would benefit greatly if the inquiry group, teacher candidates' action research and action research mini-grant research agendas and findings would be shared with the entire school; he seemed to formulate some plans for doing so.

During the group interview after reviewing the data, Jenny commented, "The descriptions are very telling. It makes it clear how important principal support is and in a PDS that principal support is a given. You would not be a PDS unless you bought into the support for teacher inquiry. Focus group members felt that principals should value teacher inquiry and show an interest in the results and the impact on teaching and learning.

Discussion

This study focused on teacher inquiry (action research and inquiry groups) in a PDS context to examine the role of teacher inquiry in PDS and to compare the experiences of PDS teachers, teacher candidates and non-PDS teachers. Hence, did action research make a difference to PDS teachers and teacher candidates?

This study yielded two findings that are significant to teachers and teacher candidates conducting action research in their PDS sites. These findings included principal support and teacher career paths.

Principal Support

The first finding is that non-PDS teachers identified lack of principal support for their action research, both as a challenge and hindrance to their action research experience. In contrast, PDS teachers did not experience a lack of administrative support.

The findings indicated that principal support was imperative in fostering teacher inquiry in PDS. The question of why PDS teachers report a greater sense of principal support can also be explained by the nature of PDS and the role of teacher inquiry as an important and necessary component of the PDS structure. For example, the structures provided by the Maryland State Department of Education insure that teacher inquiry be a vital aspect of PDS partnerships in the state. The Maryland State Department of Education ([MSDE], 2012) created PDS State Standard included in a PDS Implementation Manual. Within these five PDS Standards, there is a component for teacher inquiry. MSDE (2012) defines 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 (2012) expands the scope of this type of research by recommending that inquiry groups “might include teachers, university faculty, 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).

The findings in this study for principal support for PDS teacher inquiry are similar to those of other studies. Tillford (2010), in a phenomenological study that explored principal leadership, identifies five assertions that characterize how principals make sense of their PDS roles. One of those assertions is, “When PDSs engage in inquiry into student learning, inquiry serves as a ‘tipping point’ that increases principal commitment to the partnership” (p. 70). Foster, Loving, and Shulman (2000) identified core characteristics of effective PDS principals as supportive of collaboration and teacher advocates. Bier, Foster, Bellamy and Clark (2008) discussed the role of PDS principals as supporting inquiry to improve practice and having a partnership focused on student learning.

Career Path

This study yielded a second finding of interest to PDS research in the question of teachers’ career paths. PDS teachers are less likely to seek new leadership role and promotion both within and outside of their schools. Non-PDS respondents were nearly four and a half times more likely than PDS respondents to take on new leadership roles. The results of this study indicate that PDS teachers experience teacher leadership roles as part of their PDS partnership including participation in their own action research, mentoring their teacher candidates through their action research, as well as participating in inquiry groups with other mentor teachers and teacher candidates. They reported that they remain in the classroom because these PDS opportunities provide the leadership experiences that they seek.

These findings are also consistent with the literature on teacher leadership. According to Danielson (2007) teacher leaders serve in two fundamental types of roles: formal and informal. Formal roles include department chair, master teacher or instructional coach all of which include a selection process. PDS teachers who serve as mentor teachers go through a selection process within

their school and often participate in mentoring workshops. These teacher leaders engage in action research and often lead teacher inquiry groups. Other more informal roles emerge as teachers interact with peers in a more grass roots manner. According to Harrison and Killion (2007), these teacher leaders “shape the culture of their schools, improve student learning, and influence practice among their peers” (p. 45).

Barry, Daughtrey, and Wieder (2010) maintain that “increased leadership opportunities for teachers lead to more control over the policies in their schools and greater degrees of autonomy in their jobs and these teachers are more likely to remain in teaching and feel invested in their careers and their schools” (p.1). Barry et al. (2010) report, “Teachers have few opportunities to lead and influence both policy and programs. In fact, teaching is a traditionally flat profession with few opportunities for teachers to advance professionally without leaving the classroom” (p.1). The PDS structure provides teachers with many teacher leadership opportunities including mentoring, facilitating mentoring workshops, meeting with other PDS teachers within a PDS network, serving as adjunct faculty, attending and presenting at PDS conferences, and co-authoring articles with university faculty (Garin, 2015; Garin et al., 2015).

This study adds to the literature by addressing the participation of teachers in teacher inquiry and its importance to the professional development of PDS partners. While many books and articles address how to conduct action research (Mills, 2003; Reason & Bradbury, 2008; Stringer, 2007;), little has been written from the viewpoint of those participating in action research. In addition, this study compares PDS and non-PDS participant experiences in teacher inquiry, gives voice to PDS teachers and teacher candidates as they participate in action research and inquiry groups in their PDS sites, and explains how teacher inquiry in PDS makes a difference.

References

- Barry, B., Daughtrey, A. & Wieder, A. (2010). Teacher leadership: Leading the way to effective teaching and learning. *Center for Teacher Quality*.
- Bier, M., Foster A. Bellamy, G.T. & Clark, R. (2008). Professional development school principals: Challenges, experiences and craft knowledge. *School-University Partnerships*, 2(2), 77-79.
- Bogdan, R.C., & Biklen, S.K. (2007). *Qualitative research for education: An introduction to theory and methods* (5th ed.). Boston, MA: Pearson.
- Boyle-Baise, M. & McIntyre, D.J. (2008). What kind of experience? Preparing teachers in PDS or community settings. In M. Cochran-Smith, S. Feiman-Nemser & D.J. McIntyre (Eds.), *Handbook of research on teacher education: Enduring questions in changing contexts* (3rd ed.). (pp. 307-329). New York: Routledge/Taylor & Francis Group and The Association of Teacher Educators.
- Dana, N. F., & Yendol-Silva, D. (2003). *The reflective educator's guide to classroom research*. Thousand Oaks, CA: Corwin.
- Danielson, C. (2007). The many faces of leadership. *Educational Leadership*, 65(1),14-19.
- Foster, E.S., Loving, C.C., & Shulman, A. (2000). Effective principals, effective professional development schools. *Teaching and Change*, 8(1), 76-91.
- Garin, E. (2015). PDS network signature programs: What we have learned. *PDS Partners*, 10(2).

- Garin, E. & McBride, S. (2013). Promoting equity and social justice in professional development schools through action research and inquiry groups. In K. Zenkov, D. Corrigan, and R. Beebe (Eds.), *Professional development schools and social justice: Schools and universities partnering to make a difference*. Lanham, MD: Lexington Books.
- Garin, E., Taylor T., Madden, M., Beiter, J., Davis, J., Farmer, C. & Nowlin, C. (2015). The Bowie State University Professional Development Schools Partnership. *School-University Partnerships*, 8(2).
- Harrison, C. & Killion, J. (2007). Ten roles for teacher leaders. *Educational Leadership*, 65(1), 74-77.
- Holmes Group (1986). *Tomorrow's Teachers*. East Lansing, MI: Holmes Group
- Johnson, R.B., Onwuegbuzie, A.J., & Turner, L.A. (2007). Toward a definition of mixed methods research. *Journal of Mixed Methods Research*, 1(2), 112-133.
- Kemmis, S., & McTaggart, R. (1992). *The action research reader*. Victoria, Australia: Deakin University Press.
- Kemmis, S., & McTaggart, R. (2000). Participatory action research. In N. Denzin and Y. Lincoln (Eds.), *The Handbook of Qualitative Research* (2nd ed.). London: Sage.
- Maryland State Department of Education (MSDE). (2012). *Professional development schools: An implementation manual*. Baltimore, MD: Maryland State Department of Education.
- Mills, G.E. (2003). *Action research: A guide for teacher research*. Upper Saddle River, NJ: Merrill Prentice Hall.
- Page, G.T. (1977). *International dictionary of education*. New York: Nicholas Publishing Company.
- Reason, P., & Bradbury, H. (2008). *The sage handbook of action research: Participative inquiry and practice*. Los Angeles: Sage.
- Seidman, I. (2013). *Interviewing as qualitative research: A guide for researchers in education and the social sciences*. New York: Teachers College Press.
- Somekh, B. & Zeichner, K. (2009). Action research for educational reform: Remodeling action research theories and practices in local contexts. *Educational Action Research*, 19(1), 5-21.
- Stringer, E.T. (2007). *Action research*. Thousand Oaks: Sage.
- Teddie, C. & Tashakkori, A. (2011). Mixed methods research: Contemporary issues in an emerging field. In Denzin, N. & Lincoln, Y. (Eds.) *The Sage handbook of qualitative research*. (pp. 285-299). Los Angeles, CA: Sage.
- Teitel, L. (2001). *How professional development schools make a difference: A review of research*. National Council for Accreditation of Teacher Education: Washington, DC.
- Tillford, K. (2010). A phenomenological study of professional development schools: How principals make sense of their role. *School-University Partnerships*, 4(2).
- Yendol-Hoppey, D., & Dana, N.F. (2009). Commingling action research and PLCs: An illustration of key components. In C.J. Craig & L.F. Deretchin (Eds.), *Teacher learning in small-group settings: Teacher education yearbook XVII* (pp. 54-65). Lanham, MD: Rowman & Littlefield Education.
- Zeichner, K. (2007). Professional development schools in a culture of evidence and accountability. *School-University Partnerships*, 1(1), 9-17.

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Appendix A: Data Collection Instruments

Survey Questions

1. What facilitates the process of action research for you? Rank the top three items in order of importance with 1 being the most important and 3 being the least important.
 - a. Time to conduct my research
 - b. Administrative support
 - c. Selecting my own research question
 - d. Conducting research with others
 - e. Know how to conduct research
 - f. Participating in data collection
 - g. Materials inducing professional texts on action research
 - h. Knowing that I can implement the outcomes of my inquiry
2. What hinders the process of teacher research for you? Rank the top three items in order of importance with 1 being the most hindering and 3 being the least hindering.
 - a. Time to conduct my research
 - b. Administrative support
 - c. Finding a good research question
 - d. Conducting research with others
 - e. Knowing how to conduct research
 - f. Participating in data collection
 - g. Materials inducing professional texts on action research
 - h. Knowing that I can implement the outcomes of my inquiry
3. What influences has teacher inquiry had on your teaching? Check those items that apply to you. Please explain your answers.
 - a. I leaned new teaching strategies
 - b. I am more willing to try new teaching approaches
 - c. I use reflection to make instructional decisions
 - d. I feel more able to justify instructional decisions
 - e. I enjoy teaching more than I did before I participated in teacher inquiry
 - f. Explain_____
4. What influences has your inquiry had on your students' learning, attitudes and performance? Check those items that apply to you and explain your answer.
 - a. Student attendance has improved in my classes
 - b. Students are receiving higher grades on their report cards.
 - c. Teacher made test scores are higher
 - d. Student reading levels have increased
 - e. Student interest and/or motivation has improved
 - f. Student achievement on state or national tests has improved
5. How has teacher inquiry influenced your career path? Place a check beside those items that apply to you?
 - a. I have taken on new leadership roles such as grade level chair, department chair, etc.
Please Specify_____

- b. I have made presentations at conferences
 - c. I include research in job interview and/or portfolios
 - d. I have received an award or recognition
 - e. I have been promoted to _____
 - f. I have written an article for a journal or newspaper
6. What level of support do you receive from your principal for your teacher inquiry? Check the best answer.
- a. very supportive
 - b. supportive
 - c. somewhat supportive
 - d. little support
 - e. no support
7. Describe some of the supportive or non-supportive actions that your principal has demonstrated.

Sample Tier One Interview Questions:

1. What was it like to do action research or be in an inquiry group as a teacher candidate?
2. What was it like to be a teacher candidate in an inquiry group? What do you observe about intern participation in inquiry groups now that you are a mentor teacher?
3. What is it like being on the other end of mentoring the action research process for teacher candidates?
4. Talk about the role of principal support in inquiry groups and action research.
5. How would you describe PDS principal support for teacher inquiry?
6. Describe your experience participating in teacher inquiry in a non-PDS setting.

Sample Tier Two Interview Questions:

1. I went through the transcript and one of the comments that you made is *this is the first time I saw teachers learning from each other and learning from interns*. Can you tell me more about what you saw in teachers learning from each other and learning from the interns?
2. Tell me more about how it works when the principal routinely comes into the inquiry group or just drops in. How do teachers feel about that?
3. You talked about praise, principal praising the work that you do in teacher inquiry. What would that praise look like?
4. What does promotion look like to you? Throughout the interview you mentioned the term moves on.
5. What would the behaviors look like in a principal who was supportive of teacher inquiry?

Sample Tier Three: Group Interview

The purpose of this focus group is to gather feedback on the survey results and the themes identified in the interview transcripts.

Getting Started: Introductions, purpose of the focus group

Shared Ground Rules: Each participant will have the opportunity to speak. Each person's viewpoints may differ from others in the group. We will listen intently to one another's viewpoints and feel comfortable developing ideas viewpoints based on what we hear

Question 1: What are the first three words that come to mind when you think about principal support for teacher inquiry?

Question 2: What is your overall perception of the survey results about what supports and hinders the action research process?

Question 3: After seeing a chart that summarizes PDS and non-PDS teachers career paths, what are your reactions to the numbers? What is your reaction to the themes identified?

Question 4: After seeing a chart that summarized PDS and non-PDS teachers' perceptions of administrative support for teacher inquiry, what are your reactions to the numbers? What is your reaction to the themes identified?

Appendix B: Themes for Teacher Career Paths and Principal Support

There were three informants and each was interviewed twice individually and then the three informants met in a focus group. Interviews were recorded and transcribed. Themes were identified for the interviews. Themes were also identified for the open-ended qualitative data survey results.

	PDS Teachers 54 respondents	Non-PDS Teachers 56 respondents
I. Career Paths		
Themes Identified:	-13% (7 teachers) have taken on new leadership roles	-57% (32 teachers) have taken on new leadership roles
-Surprise at what the data revealed	-Only 3 teachers identified areas of promotion (inquiry group leader, grade level chair, site-based PDS Coordinator)	-11 teachers promoted to grade level chair, 1 promoted to Supervisor of Reading, 8 others with variety of positions within their school
-PDS provides a leadership opportunity		
-Why would teachers leave the classroom?	-13% (7 teachers) have taken on new leadership roles	
II. Principal Support for Teacher Inquiry		
Themes identified:	-31 examples of supportive principal behaviors identified	-9 examples of supportive principal behaviors identified
-Description of PDS Principal Support	-10 principals attended meetings	-4 allowed to attend meetings
-Description of Non-PDS Principal Support	-21 other areas such as purchasing materials, providing time and space, and providing recognition mentioned	-5 purchased materials
-Description of type of support PDS teachers would like to receive	-1 teacher responded s/he did not receive principal support	- Principal non-support for teacher inquiry described as non-attendance at meetings, cancelling meetings, complaining about frequency of meetings, and lack of or superficial interest in the teacher inquiry