

Teacher Inquiry: A Catalyst for Professional Development

Divonna Stebick ~ Gettysburg College

Jonathan Hart ~ Readington Township Public School District

Lauren Glick ~ Readington Township Public School District

Jaime Kindervatter ~ Readington Township Public School District

Jenna Nagel ~ Readington Township Public School District

Cathy Patrick ~ Readington Township Public School District

Abstract

Teachers seek and require meaningful professional development opportunities to truly grow in the profession. Teacher inquiry, or teacher research, is one way to accomplish professional development goals. Teacher inquiry is thought of as individualized, personalized, and meaningful professional development (Cochran-Smith & Lytle, 1999). In this paper we articulate the learning of a cohort of certificated professionals engaged in a year-long project that included asking research questions, designing data collection tools, and developing an independent study to examine their questions. Nine certificated professionals participated in the year-long project representing various grade levels and experiences. Data was collected through teacher reflections and professional development evaluations. The findings indicated that a trusting, supportive environment is paramount in developing a culture of inquiry. Further learning shows us that peer collaboration promotes professional growth when exploring individual projects. This paper furnishes further evidence of the importance of teaching inquiry in schools and provides a sample structure for schools wishing to develop a practice of teacher inquiry.

Keywords: inquiry, reflection, teacher research, professional development

Introduction

The field of education has come to learn that teachers often seek meaningful, authentic professional learning, and traditional professional development scheduled by school district leadership may not always achieve this goal. That's not to say that there aren't some truly meaningful and purposeful professional activities that engage teachers. Many districts effectively schedule relevant, timely professional development days throughout the school year. However, adult learning theory suggests there are ways to make professional learning

exceptionally powerful for the adult learner. One of the most effective ways to engage staff in high-level professional development throughout the school year is to create a safe, trusting environment of inquiry (Cochran-Smith, & Lytle, 2015; Gillis & Mitton-Kükner, 2019). This paper considers the power of an organically-grown teacher inquiry project professional experience developed over the course of one year. This research used an exemplar text (Dana & Yendol-Hoppey, 2014) to design authentic teacher learning experiences and collected teacher reflections along with professional development evaluations as the process unfolded.

Theoretical Context

Adult Learning Theory and Inquiry

When adults learn, the andragogy theory of learning should be considered to plan, implement, and reflect upon the learning goals and outcomes. It makes sense then, that the professionals who plan pedagogically sound instructional opportunities for youth are given the opportunity to learn through the art and science of adult learning (Kearsley, 2010). Knowles (1984) made five assumptions to differentiate the characteristics of adult learners, andragogy, that are different from the assumptions about child learners, pedagogy.

- Self-Concept - As a person matures, their self-concept moves from one of being a dependent personality toward one of being a self-directed human being.
- Adult Learner Experience - As a person matures, they accumulate a growing reservoir of experience that becomes an increasing resource for learning.
- Readiness to Learn - As a person matures, their readiness to learn becomes oriented increasingly to the developmental tasks of their social roles.
- Orientation to Learning - As a person matures, their time perspective changes from one of postponed application of knowledge to immediacy of application. As a result, their

orientation toward learning shifts from one of subject- centeredness to one of problem centeredness.

- Motivation to Learn - As a person matures, the motivation to learn is internal.

Furthermore, Knowles (1984) recommends that adult learning should include the following principles:

1. Adults need to be involved in the planning and evaluation of their instruction.
2. Experience (including mistakes) provides the basis for the learning activities.
3. Adults are most interested in learning subjects that have immediate relevance and impact to their job or personal life.
4. Adult learning is problem-centered rather than content-oriented.

Knowles (1984) work provides a framework for districts wishing to seek alternatives to traditional professional development, namely teacher or practitioner inquiry. We believe that teacher inquiry allows the adult learner to plan their own professional growth, reflect on their practice, see both personal and professional growth, and solve real practitioner problems.

In order to ensure that the teacher inquiry professional development opportunity met the needs of the participating adult learners, the co-facilitators (suburban district superintendent and associate professor) considered Knowles's (1984) recommendations while distinguishing the andragogical assumptions from the typical pedagogical practices these educators were so familiar with so that each educator could actively engage, in a supportive and respectful environment. Further, this research sought to build upon previous research that explored the role of self-directed teacher learning (Cummings, 2011) to design a framework for teacher exploration.

Cochran-Smith and Lytle (2015) affirm that these foundational andragogical principles are necessary to create a professional learning community in which teachers develop an inquiry stance. Consequently, when this inquiry process is cultivated, the positions of teachers and teacher leaders become seamless as they collaborate in inquiry communities and propel their knowledge to practice (Dana & Yendol-Hoppey, 2020). Our research focused on andragogy as a fundamental principle in designing a year-long professional development opportunity that allowed teachers to self-explore and cultivate an inquiry stance while also promoting teacher reflection.

The importance of professional development is often tied directly to curriculum and its implementation. When curriculum and its implementation is the focus of teacher inquiry, inquiry shares all the same core features of the popular professional development strategy termed lesson study. Lesson study allows teachers to systematically and collaboratively examine and improve their teaching practice through studying lessons. Teachers create study lessons together by planning, teaching, observing, critiquing and revising the lessons as a group. This spiraling process is driven by an overarching goal and research question shaped by the group. The result is not only a better developed lesson, but typically teachers also develop a stronger understanding of the content, enhance observational skills, strengthen collegial networks, and tighten connections between daily practice and long-term goals (Lewis, Perry, & Hurd, 2004). In essence, lesson study becomes a specialized form of the inquiry process focused on the planning and teaching of one lesson and the ways that lesson plays out for multiple teachers and learners in a school or across multiple schools in a district (Dana & Yendol-Hoppey, 2020). The concept of lesson study examination is one example of how inquiry can be used as a tool to improve instruction. Inquiry is not limited to lesson study alone, as outlined in Dana and Yendol-Hoppey

(2020), rather teacher inquiry can take many forms including teacher-developed projects related to social justice, curricular content, content knowledge, and child case-study, among others. This choice in the inquiry project depends on the teacher's interest and students' needs.

This is a type of individualized, personalized, and meaningful professional development for educators (Cochran-Smith & Lytle, 1999). This notion of teacher inquiry is still true and critically important to the field of education. Our year-long exploration moves beyond this assumption about teacher inquiry and suggests teacher inquiry is now even more important for 21st century teachers because of the ever-changing landscape of the profession; a profession that requires problem-solving, creativity, and research-based decision making. If we are to expect teachers to use instructional strategies that are scientific, we must offer teachers professional development in the inquiry stance to promote curiosity, evaluation, collaboration, planning, and problem-solving. There is a natural intersection of andragogy and teacher inquiry and our district initiative explores and identifies the ways in which teacher inquiry connects with Knowles' (1984) principles for adult learning to be effective.

Teacher inquiry professional development must go beyond allowing teachers to select a wondering or a curiosity (Dana & Yendol-Hoppey, 2020) in which to develop a project; it must provide teachers with the necessary supports (e.g. financial, time, guidance), a safe learning environment (e.g. risk-taking is encouraged and failure is worked through, perseverance) and a sense of shared accountability (e.g. peer expectations, critical friends). Ultimately, the effective professional development of the teacher-participants resided in their individual desires to develop an inquisitive approach to the teaching and learning process through a self-driven, data informed, dynamic professional development opportunity. Our journey into teacher inquiry taught teachers how to be consumers of research and critical thinkers when it came to analyzing

data and reflecting on one's teaching practice. This approach is supported by current research that identifies teacher inquiry as a way to solve real-world problems of practice in the classroom (Mertler, 2021). This journey is told through reflection vignettes of the teacher participants themselves.

Teacher Reflection as a Tool of Inquiry

The research by Schön (1987) suggests that teacher reflection is a key element of professional practice and further promotes teacher growth. Therefore, this paper discusses and uses reflection as a tool allowing teachers to consider problems in their professional practice along with potential solutions. Along these lines, we also seek to use reflection in the process of inquiry, meaning teachers must also consider how they are moving through the inquiry process by reflecting on their own learning and progress. Much of the research revolving around teacher reflection can be found in training and development of pre-service teachers to expand their personal experiences (Furlong, 2013; Garmon, 2005), however, there is less research done on in-service teachers using reflection to expand their personal experiences, let alone in-teachers involved in an inquiry process.

First, it is necessary to understand self-efficacy as it relates to the inquiry process. Bandura (1977) includes self-efficacy as one's convictions to carry-out action. His theory identifies this as one's own judgment in his or her ability within a specific domain. In looking at this in terms of teacher inquiry, this project asked teachers to assess his or her abilities as they relate to their goals. The goals are specific to the desired outcome of their research question or specific to the process by which the teacher worked in order to achieve an answer to his or her research question. In other words, our research focused on using in-service teacher reflection to

promote teacher self-efficacy regarding personal experience in achieving a conclusion to an inquiry project.

Recent research by Stebick and Hart (2021) discussed how in-service teachers engaged in the research process in an effort to develop a reflective reading record tool to track student progress. Teacher reflections were recorded regarding the teachers' use of a reflective tool. These reflections allowed for adjustment of the tool to best serve student needs. The authors describe the findings as something that was, "...unanticipated but a welcome portion of the project. We found that the more important lessons for us as researchers was not how the tool was developed but by the climate that was created among professionals in trying to find a solution to a problem" (Stebick & Hart, 2021, p. 12). These lessons learned are directly linked to teacher self-efficacy. Teachers must see success in their efforts to recognize the progress made. Teacher reflection brings light to these successes allowing teachers to look retrospectively at progress made.

Research suggests that journal writing is an effective way to monitor one's thoughts for the purpose of reflection (Fry, Klages & Venneman, 2018). While this research used specific techniques (and evaluated those techniques) of written reflection in a context of textbook content, it was clear that these written reflections can be used as a way to inform instructional decision-making and improve teacher practice.

Focus of the Study

This paper focuses on the reflections of teachers who participated in a year-long inquiry project using the Dana and Yendol-Hoppey (2020) text as a framework for their investigation. Due to the fact that teacher inquiry is a highly engaging form of professional development (Zeichner, 2003; Jao & McDougall, 2015), the aim was to track teacher learning through

reflection as the process unfolded to ensure the school district was providing the necessary structures and support for an effective adult learning experience. The process was developed using a researcher-school partnership. Research conducted has demonstrated benefits of a college or university partnership with public school districts to promote teacher reflection (Grau, Calcagni, Preiss, Ortiz, 2017). Therefore, we sought a similar experience that used expertise in both higher education, who is the researcher in this study, and within educational administration to promote a teacher inquiry framework and enhance teacher experiences through reflection. The authors sought answers to the following research questions: Using the reflections of teacher-participants in an inquiry project, what were the most valued and powerful learning experiences? What commonalities were observed in teacher reflections as they engaged in the inquiry process?

Methods

Participants and Materials

A cohort of nine teachers in a suburban, small, Mid-Atlantic school district volunteered to engage in a teacher inquiry project in each of their classrooms. This cohort included both novice teachers and experienced teachers. It is important to note our use of the word “teachers” as certificated professionals engaged in this project. One of these professionals was a certificated staff member who did not have a teaching role but a student support role.

The teacher participants completed a two-day professional development session to “kick-off” their project in the summer of 2019 with the expectation they would continue to investigate their inquiries during the upcoming school year. This expectation allowed fluidity so that the teachers had the freedom and support to explore their inquiry, try various forms of data collection, and implement change with the support of colleagues. Collegial support is imperative for such professional development; teacher inquiry cannot occur in isolation if student learning

and acceleration is warranted (Dana & Yendol-Hoppey, 2020). Several collaborative meetings followed during the school year. The project meetings were facilitated by an administrator-researcher pair. Through these experiences, teacher inquiry was promoted with all participants achieving several key milestones and structures which in turn increased teacher curiosity and exploration through inquiry. Each participant was given a copy of the Dana and Yendol-Hoppey (2014) text titled *The Reflective Educator's Guide to Classroom Research: Learning to Teach and Teaching to Learn Through Practitioner Inquiry*. This text was also used to scaffold workshops outlined in Table 1.

Professional Development Content and Timeline

The participants attended a two-day workshop in the summer of 2019 where they were introduced to the topic of inquiry and developed a year-long project to investigate. The administrator-researcher partnership facilitated the summer workshop and the administrator alone facilitated each subsequent workshop. After the two-day workshop, participants volunteered to continue the inquiry into the school year and were paid a professional development stipend according to their local contract. Subsequent workshops, titled Teacher Academies, were held on October 30, 2019, December 11, 2019, January 15, 2020, and February 12, 2020 after school. The workshop topics and essential questions progressed by using the Dana & Yendol-Hoppey (2020) text as the resource for each session. The topics and chapter resources provided a framework in order for the teachers to prepare for each Teacher Academy. These workshops included an opportunity for progress updates via post-it notes, peer sharing using the essential questions, and post-workshop feedback forms (refer to Table 1 for topics and resources).

Participants returned in the summer of 2020 for a one-day reflection workshop with both the administrator and researcher who facilitated the previous summer’s workshop. At this time, summary reflections of a year’s worth of inquiry work were collected.

Table 1 Workshop Timeline, Essential Questions and Resources.

Date	Essential Question	Assigned Reading / Resource
October 30, 2019	How has your journey into your passion project gone thus far? Where are you in your data collection?	Chapter 4
December 11, 2019	Have you collected data to satisfy your wondering?	Chapter 6
January 15, 2020	What is one thing you need most assistance with regarding your passion project? How can you best share your learning?	Chapter 7
February 12, 2020	How can we best plan for sharing our learning?	Chapter 7 (<i>continued</i>)
March 2020	<i>A workshop was scheduled for participants to share their wonderings with colleagues within the district. Due to the COVID-19 pandemic this did not occur. In lieu of an in-person workshop a video was developed where teacher volunteers shared their learning in the month of June.</i>	

Data Collected

Data was collected from two sources during the course of this professional development series. First, teacher reflections were captured in handwritten journals during each meeting throughout the 2019-2020 school year. Second, professional development evaluations were

collected from workshop participants in order for the presenters to adjust and plan future workshops.

The following lists the journal questions asked during the first 5-10 minutes of each workshop meeting as a way to focus participants' thoughts and gather reflection:

- October 30, 2019: How has your journey into your passion project gone thus far? Where are you in data collection?
- December 11, 2019: How has your journey into your passion project gone thus far? Have you collected all the data and satisfied your wondering?
- January 15, 2020: What is one thing you now need most assistance with on your passion project?
- February 12, 2020: Have you satisfied your wondering? How might you present your project to others?

The answers to these questions were recorded in each teacher's handwritten journal. The journal was provided to each participant in the summer and was used throughout the year.

The professional development evaluations asked the following open-ended questions to garner feedback for future workshops (see Appendix 2). These questions were also designed to assist participants in their teacher inquiry journey. The questions appearing on each professional development evaluation are:

- What element of this course did you find most valuable?
- If you had to make a suggestion for improvement of this course, it would be...
- The overarching goal of courses provided by the district is to provide supportive, flexible, open, and practical environments that foster teacher experimentation, exploration, collaboration, teacher workshop time, and discussion of why continuously adjusting to

meet the needs and address participant inquiries. How well do you feel this course met these goals? Explain.

These combined data collection tools are used to report on teacher growth, teacher learning, and teacher satisfaction with inquiry as a professional development method. Teacher reflections were collected from four participants who are authors on this paper while the professional development evaluations were collected for all nine participants.

Role of the Authors

The administrator-researcher partnership consisted of the school district superintendent and an associate professor who teaches in an education/teacher preparation program at a liberal arts college and served as the researcher for this inquiry. The superintendent had a multi-faceted role in that he provided the funding, resources, and strategic initiative for teacher inquiry work. The researcher provided background research and expertise in the area of teacher inquiry and her role was crucial as a non-evaluative individual who could listen to reflection and hear concerns without any supervisory authority over the faculty who participated in the workshop. Both parties in this partnership sought to ask their own research questions as the project unfolded. This paper is the result of the research questions and the administrator-researcher investigation.

There are four authors listed on this publication who were part of the original nine participants in this year-long inquiry study. These individuals are certificated staff members in the same school district as the superintendent. One is a school psychologist, two are general education elementary teachers, and one is a special education elementary teacher. They began this project as participants, but showed long-term interest in continuing their inquiry journey. Therefore, they have entered into a multi-year inquiry study with the administrator-researcher partnership and contributed their learning and reflection in this paper.

Findings

Teacher Reflections

Overall, the trend in teacher reflections demonstrated how teachers saw inquiry as an opportunity to ask meaningful questions of one's own practice, collaborate with colleagues, promote self-reflection, discover self-growth, and cultivate a safe space among colleagues. Some key excerpts of teacher reflections include the following. First, teacher one showed her own growth, "From my first journal entry to my last I am able to conclude that as a teacher I am asking more meaningful questions." Teacher two discussed not only self-growth but also the safe space for collaboration, "I saw the Inquiry Workshop to be a place for authentic, meaningful self-development; a trusting environment to develop my practice with colleagues seeking a similar opportunity." Teachers three and four also talked about the importance of collaboration with these comments, "This was the chance to have in depth discussions with like-minded colleagues as well as give myself time to reflect." and "As I faltered on developing a tool to collect data, it helped to have feedback from other professionals on how to shape my process of collecting data." More detailed reflections are found in Appendix 1.

Professional Development Evaluations

The professional development evaluation documents were provided after each session; beginning with the July meeting and for each of the four meetings during the school year. A sample of the evaluation is found as Appendix 2. These evaluations were reviewed and trends related to the teacher reflections were noted. Those trends are listed below.

What element of this course did you find most valuable?

Overall, the trend answer to this question involved collaboration with colleagues as the primary thing teachers valued most. These statements revolved around the theme of

collaboration” “collaboration with colleagues,” “time for reflection and sharing,” “time to think, reflect, and engage with colleagues,” “discussions,” “I love that we talk about our wonderings with others to improve our teaching,” However, by the end of the sessions (February), the reflections changed slightly where teachers reported liking the feedback from colleagues, “The opportunity to reflect and receive peer feedback” “I have access to others who share my struggle and offer thoughts and feedback.” “I love that we can talk freely and bounce ideas off each other. I also like that I have access to others with similar issues/questions and successes to share.” Furthermore, there was cross-district collaboration, which was mentioned as unique to this experience - teachers from all grade levels and buildings within the district found value in talking to one another.

In addition to the robust finding of collaboration, other support provided was also mentioned in these evaluations. For example, it was stated at least twice that the participants valued the administrator-researcher pair: “[I] enjoyed the co-teaching” and “bringing the outside facilitator.” Finally, there was a comment made to how individualized this type of professional development is, “[I] love how individualized this is.” The professional development feedback also noted how teachers appreciated a schedule of multiple, on-going meetings throughout the year.

If you had to make a suggestion for improvement of this course, it would be...

Mention was made of a few suggestions that teachers believed would have improved the professional development. These suggestions follow similar themes as those things that were valued. Essentially, teachers made suggestions for improvement with requests for more collaboration. These included:

- Having a better understanding of what a final product may look like;

- A Google Classroom or online portal for more collaboration;
- Longer workshop times or more workshops during the school year for collaboration.

This was repeated a few times. As the collaboration became more valuable, the teachers wanted more time to collaborate.

The overarching goal of professional development [courses] provided by the district is to provide supportive, flexible, open, and practical environments that foster teacher experimentation, exploration, collaboration, teacher workshop time, and discussion of why continuously adjusting to meet the needs and address participant inquiries. How well do you feel this professional development [courses] met these goals? Explain.

There were three primary themes that emerged when teachers answered this question on the evaluation. First, was how this type of professional learning promoted exploration and experimentation. Second, there was a strong trend that identifies trust building and support as key parts of this workshop. Finally, the theme of collaborative learning among peers emerged in these comments.

- Meeting teachers' professional goals of exploration/experimentation: "Outstanding! I can't wait for more..." "I felt heard and validated when sharing ideas." "I appreciate the opportunity for self-guided professional development." "It's all about exploring and solving problems." "I'm motivated to use this as a platform to improve my craft." "I'm excited to talk more about my passions." "This course has fully met these goals...future work is already in place." "I appreciate the opportunity to choose my own topic..." "...it encourages teachers to question their teaching." "We are experimenting in our rolls and exploring our data." "Fosters my teacher curiosity." "I see myself progressing through my project."

- Building trust: “This is a safe place to ask all of my teacher questions...” “I feel like I have a strong support system moving forward...” “I feel at ease with the level of support and structures in place to hold us accountable.” “[This] created a safe space for exploration.” “The support I felt was immense.”
- Collaboration: “This has facilitated collaboration and I feel supported.” “This is ongoing work and helps to cultivate sharing...” “This course allows teachers to take responsibility for solving problems.”

The findings in both the teacher reflections as well as the course evaluations suggest that collaboration with colleagues is a key factor in the success of inquiry professional learning. Beyond collaboration, this structure of professional development allowed teachers to explore and experiment with a topic of his/her own interest. When doing this type of work, it’s clear that feedback and reflection are necessary and valued.

Discussion

When developing opportunities for staff members to design their own professional learning using an inquiry framework, it is critically important to allow participants to have conversation with one another and receive feedback in a non-evaluative way. The inquiry process, filled with collaborative conversations, allowed teachers to share experiences and enrich one another’s projects as critical friends and colleagues (Bambino, 2002). This was also the primary role of the researcher, the individual who was not an administrator in the district. A sense of community occurred as teachers from across the district shared experiences that they may not have otherwise felt comfortable sharing. The reflections demonstrate that teachers also found it important to pace inquiry milestones, from generating topics to sharing one’s learning; to allow teachers time to think and reflect by creating a forum of shared accountability. This

learning is critical to being an effective teacher in an era where we often react instead of reflect. The structures – collaboration, community, and peer accountability - allowed teachers to absorb instructional research and analyze data to better develop their teaching practices which in turn improved student learning. The process of building trust and collaboration between teacher and administrator can be time-consuming but is of great importance to this endeavor. Teachers reported a sense of support and understanding as they ventured into these projects knowing the administration recognized and understood they were taking risks in the teacher inquiry process. This particular learning is most robust. Administrators who wish to promote an endeavor where teachers become researchers must develop trust and allow the space for risk-taking. These findings suggest to us that the success of professional development hinges on our ability to promote this culture of shared inquiry within teaching staff. The inquiry process will continue to demand an inquisitive, reflective, and collaborative approach to best analyze and respond to data on student achievement. Administrators should be open to taking a stance in promoting communication, collaboration, friendly peer accountability, and trust in order to build a culture of inquiry.

As evidence for the support and engagement produced from the first year of this inquiry professional development, five of the original nine participants signed on for a second year of inquiry while the district also offered to repeat this initial inquiry model and created a cohort for new teacher participants. Furthermore, of those five who continued, four became authors on this paper, turning this work into a research study to promote inquiry. Included in their list of effective professional development elements were a sense of individualized instruction and a strong sense of shared accountability. Each participant had different reasons for joining the study or continuing the study. It is clear from the reflections that teachers joined this series of

professional development workshops as a way to engage in a different type of professional learning and to explore. This is consistent with Knowles (1984) principle of motivation to learn. Collaboration and shared responsibility with peers provided motivation, along with the ideal of exploring one's own practice. Conversations with peers during the inquiry processes were of critical significance. The process of conversation and informal sharing of ideas with colleagues promoted professional confidence and competence when exploring inquiry projects. Many of these thoughts were shared with the researcher before the administration. One teacher shared, through reflection, that the support of administration along with the guidance from an outside professional was a critical piece in feeling supported at each stage of the journey. Interestingly, another reflection came from a certificated professional who is not a classroom teacher. Her reflection clearly suggests that this type of professional learning is meaningful for those who do not teach in a classroom because of the uniqueness of those positions. Another participant shared that this format of professional development allowed her to individualize her practice by developing interventions that fostered the growth of her students. This is exactly what the goal of professional development should be - turning teacher work into demonstrable results for student growth and achievement.

One of the goals of this study was to use teacher reflections in learning how to promote a trusting, supportive environment for teachers to explore a topic of inquiry. The researchers wanted to demonstrate that the power of teacher-administrator collaboration is necessary but also shows vulnerability in the inquiry process. Both teachers and administrators alike had to set aside any displays of professional perfection for a true learning experience. Inquiry became powerful when the teachers, alongside administration, worked together to meet mutual learning outcomes. The use of an outside facilitator assisted in building the relationship between

administration and teachers, where teachers were able to seek guidance of the consultant prior to and / or after meeting with administration so that a safe, risk-free environment propelled the project. Through the inquiry process she facilitated the development of the skills necessary for her students to engage in the curriculum in a meaningful and effective way. The individuality that this inquiry process provided enabled her students to successfully engage in the curriculum in addition to developing critical interpersonal skills to facilitate their growth as individuals in society. Furthermore, she found the monthly meetings and progress reports to hold her accountable to the inquiry process in addition to being a great personal motivator. The opportunities that the meetings provided for collaboration and support helped her progress through her inquiry smoothly since these meetings acted as a security blanket. She knew that her questions would be validated and that she would receive support and resources from her fellow action researchers. The sharing of ideas, and the environment that was fostered through our monthly meetings, provided a forum for guidance and support, where questions were encouraged and camaraderie was fostered.

In conclusion, it became interesting to the administrator that, at a certain moment during the project the teachers used one another as collaborative, accountable counterparts to think through their projects. They provided self-guidance, reflection, and feedback unsolicited by the researcher-administrator facilitators. It was remarkable how, when the administrator stepped into the role of facilitator rather than that of supervisor, inquiry happened. Then the administrator was able to step out of the role and watch the inquiry occur as a natural self-governing process by the staff members. The teachers embraced and effectively implemented the inquiry process during these moments of research. It is not only possible, but likely, that administrator support can cultivate a natural culture of inquiry. One member of the project

reported that “the experience of the inquiry process has fostered confidence to take risks and to find solutions to obstacles. This is especially critical as we move through the current period of uncertainty and change in our world, and in our schools. As a result of the year spent working on this project, I have a new level of confidence and newfound comfort for future inquiry. This will be critical as we enter a period where flexibility and creativity of teaching practices will be crucial for student engagement and growth.”

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Appendix 1
Teacher Reflections

Participant One

What caught my attention and started my journey into teacher inquiry was the time and space to ask meaningful questions. As teachers we are asking questions consistently and reflecting on our teachings. Teacher inquiry gave me the time and place to work with colleagues and ask these questions. As a new teacher to the district I was eager to work on social emotional learning in the classroom and to better my student's well-being. Students will strive and work hard when a safe classroom environment is in place. That being said I decided on my wondering: How can I promote social emotional learning in the classroom? During our journey we would meet and reflect in journals and conversations with fellow colleagues. This helped me track how my students were doing and allowed me the opportunity to reflect on my wondering. As I reflect on my experience in teacher inquiry I am able to see that reflecting in my journal was the most beneficial part of this journey. From my first journal entry to my last I am able to conclude that as a teacher I am asking more meaningful questions. I also noticed that what I was trying to promote in my own classroom was exactly what teacher inquiry gave me. It gave me a safe place to share and ask questions with my colleagues.

Participant Two

My journey into inquiry was fostered by recognizing the need within myself to incorporate controversial and challenging topics into my teaching practice. I saw the Inquiry Workshop to be a place for authentic, meaningful self-development; a trusting environment to develop my practice with colleagues seeking a similar opportunity. Having held the same teaching position for several years, I found myself recognizing the student population's knowledge and exposure to social justice issues diminishing as time passed. With thoughtful reflection and extreme care to literature exposure in my classroom, would student empathy and acceptance of human differences be increased? I found myself starting the series of workshops unsure of many things. How could I measure any change of a seemingly intangible quality? How could I keep data as I taught my class? Was this even a reasonable goal to tackle? These and many other questions were resolved in the trusting and reflective sessions of the Inquiry workshop. Collaboration with our Superintendent, associate professor, and my teaching colleagues provided support and the opportunity to reflect on my inquiry at all points along the journey. Journal entries and reflections allowed me to track my progress, make adjustments as needed, and led me to further wonderings. As I look at the path that I have taken and re-read journal entries and notes of my journal, I am surprised to note how fluid my research was. For me, an integral part of the success of my inquiry is the knowledge that the environment is a safe place to question my practice and to wonder how to improve the practices that I implement in my classroom.

Teacher Inquiry has been a very fulfilling and gratifying Professional Opportunity for me. As I have recognized the richness of the learning process that goes hand in hand with teacher inquiry, my understanding of the importance of fostering inquiring minds in my students has

grown. The passion that is felt, when the questioning comes from within is powerful and cannot be ignored.

Participant Three

The idea of having time and resources dedicated to solving your own classroom questions is what attracted me to attending the first inquiry workshop. This was the chance to have in depth discussions with like-minded colleagues as well as give myself time to reflect. In September 2019, I was starting the Wilson Reading program for the first time. I had received three days of training, but still had questions that could not be answered by a manual. Many of my first entries were in passion number 4: the desire to improve or experiment with teaching strategies/ techniques. In my journal I have many wonderings that all have a similar theme of improving how students read and feel about reading. How can I create effective and challenging word lists? How can I improve a student's willingness to sound out words without the teacher nearby? How does students tracking their own success affect student engagement and confidence? I decided to stick with the last wondering, but I was unsure about if I wanted to track students' engagement or confidence. After thinking about my past students, I landed on neither. I wanted to track the students' motivation to read after they had recorded their own word list scores. They would see how many words they read correctly out of 15 words, graph it and then rate their motivation to read. Next, I had to develop a tool for tracking reading motivation. Given that I work with younger elementary students, I wanted a visual tool. The superintendent helped me come up with a visual smiley face scale that the students could point to in order to indicate their motivation to read after tracking their scores. Incorporating the data collecting into the Wilson reading daily instruction was a helpful way to make sure to consistently take data. Soon after I started to take data, many of my reflections are reflecting on when to stop taking data and being unsure if my data had any pattern at all. From a reflection in October, 2019 I say, "Right now, students are not fully challenged with the words. I want to collect data into 1.4 so I can see how motivation changes or stays the same when students are given more challenging words". In this entry, it is easy to see how I was still unsatisfied with my data and wanted to see if motivation levels would change once students were reading more difficult words and may have lower scores. When I finished my data collection, I reflected on how to display the data and whether individual graphs or a graph including all the students' motivation scores made sense. Although I was compelled to put all the data in one graph, it did not help me see any patterns. However, when I made a graph per student, it was easier to see how each student's reading score affected their motivation level. In January 2020, I wrote, "I started to graph the data for each individual student, but I think it would be nice to see multiple students' data on 1 graph to compare data.... I'm not sure there is a clear point to make from my data. I do think the data is best shown on a graph. The visual does make it easier to compare reading scores with motivation." Later on in the session, after discussing the best way to represent my data, I came to the conclusion that "maybe the takeaway is that every student reacts differently to charting and seeing their accomplishments and mistakes." This is an example of how what I thought was the right way to display data, did not work for my data. Instead it made sense to graph each students' scores separately to help explain how that individual was impacted by self-tracking their reading scores. This data could be used in IEP meetings as well as to help student engagement in the classroom. By being part of a group of

teachers, I was able to show the data in multiple ways and see what way of graphing illustrated my point most effectively. From there, I used the provided template to create my poster and was happy to share my findings with my peers by my side, all as teachers and researchers!

Participant Four

What attracted me to the Teacher Inquiry project was the opportunity to personalize and direct my own professional development. As an education professional who is not a teacher, it enabled me to be not only reflective of my performance but to think about it in a way that demanded growth and change. Being provided with the professional development time to develop my own personalized inquiry is what propelled me to move forward with the workshop. My goal, as I started the process of inquiry, was to reflect on social skills groups in a way that would enable me to determine, in a measurable way, whether students were making progress. I wondered if I could see how students performed within the classroom and generalized what they had learned. I was hopeful that the inquiry could shape my counseling skills curriculum and provide information on students' classroom functioning.

As I went along in the process, there were two important things that emerged. As I faltered on developing a tool to collect data, it helped to have feedback from other professionals on how to shape my process of collecting data. The time that was provided to focus on the inquiry was essential to my ability to follow through with this project.

My Inquiry changed over time, and I ended up using a Google form as a data tool to evaluate students' performance in school and areas of need for counseling. I gathered data from teachers, using a rating scale, to identify several key behaviors that are necessary for effective student performance. Rating scales then helped, in a measurable way to shape whether students continued to require counseling and if so, what behaviors to target.

