

Improving Practice of Pre-Service Teachers through Inquiry

Freida Golden, Ph.D.

Texas A&M University–Commerce

Sarah Guthery, Ph.D.

Texas A&M University–Commerce

Josh Thompson, Ph.D.

Texas A&M University–Commerce

Abstract

This paper describes the implementation of a teacher inquiry project among university-based pre-service teachers. All participating pre-service teachers designed an inquiry project, which included an original question, a literature review, a planned course of action, and conclusions for improving instruction. The details of the yearlong teacher inquiry project provided insights and reflections concerning how pre-service teachers used inquiry to improve instruction and student outcomes.

Keywords: *teacher inquiry, teacher action research, new teacher training, pre-service teacher training*

Introduction

Today's teachers face many challenges in their classrooms, such as various learning differences, diverse cultures, and unique family and economic situations. Teachers must balance prescribed state and federal mandates for student performance with individual student needs. In order to prepare teachers for these challenges and other realities associated with teaching, teacher education programs strive to use innovative practices to shape thoughtful practitioners. This paper described a yearlong training partnership between pre-service teachers, one teacher preparation program, and cooperating schools. The pre-service teachers participated in a field-based program that included classroom

observations, teaching experiences, and research activities. The objective was to transform the pre-service teachers into skilled teacher-researchers to improve practice.

Teacher Inquiry Background

Teacher inquiry trains teachers to think about the classroom like a researcher. It is important to note that each school presents a unique context, and the issues that teachers identify should arise from their individual authentic situations. In a literature review of previous teacher inquiry models, Gallimore, Ermeling, Saunders, and Goldenberg (2009) identified the contextualization of inquiry questions as a key theme in successful teacher

inquiry projects. With this in mind, teacher inquiry offers pre-service and current teachers an effective tool for meaningful improvement of their teaching practices (Ermeling, 2010). As professionals, teachers have a duty to engage in continuous growth that improves their instructional practices (Efron, 2005). Teachers who do so are better equipped to be adaptable and flexible in a change-oriented profession. Teacher inquiry is a multi-step process in which the teachers identify a recurring issue in their classroom and discover a possible research-based course of action through the consultation of professional resources. Armed with new understandings, teachers then develop solutions that address the identified issue.

No matter the difficulties of the classroom, teacher inquiry empowers teachers. Teaching involves complex factors, and research that is done by teachers can help improve the practice (Cochran-Smith & Lytle, 1999). While traditional literature may not view the teacher as a researcher, the daily interactions between teachers, students, parents, and colleagues yield many opportunities for research. Data in a classroom and school is a researcher's dream (MacLean & Mohr, 1999). Teacher inquiry gives teachers the ability to look at problems in a more orderly fashion, while analyzing current practices and traditions. Teachers must critically observe their own practices, as well as how students respond and learn (Mertler, 2006). Teacher inquiry improves classroom practices to the benefit of students and, in turn, the classroom teacher. It is meant to be reflective, encourage further questions, and allow repetition of the study. A teacher who maintains their original passion about the profession will find novel and unexpected situations each day that are suitable for the teacher inquiry method (Korczak, 1967).

Conducting teacher inquiry during teacher preparation encourages pre-service teachers to engage in critical reflection, develop a questioning stance, understand school culture, and modify instruction to meet students' needs (Cochran-Smith, Barnatt, Friedman, & Pine, 2009). Teacher

inquiry creates a community for pre-service teachers to come together to think, discuss, write, read, collaborate, and explore relationships in the classroom (MacLean & Mohr, 1999). Furthermore, teacher inquiry scaffolds pre-service teachers to move beyond logistics to analysis.

Teacher Inquiry Project Overview

We are teacher educators affiliated with a university-based teacher preparation program. We implemented a teacher inquiry project among pre-service teachers during a yearlong field-based experience. Our teacher inquiry project was based on the book *Digging Deeper into Action Research a Teacher Inquirer's Field Guide* (Dana, 2013). Dana defined teacher inquiry as the "intentional study of one's profession" (p. 2). Teacher inquiry includes the process of looking at questions, data, and reading literature related to a question under investigation. Teacher inquiry does not resolve every classroom problem, but rather those problems the teacher finds curious or wonders about. Thus, teacher inquiry creates a self-improving partnership between a teacher and their school campus. Additionally, Mertler (2006) noted that the purpose of teacher inquiry was "to improve one's own professional judgment and to give insight into better, more effective means of achieving desirable educational outcomes" (p. 10). Teachers who engage in inquiry need a collaborative community where they feel safe to learn from each other, discuss early attempts at improvement, bring questions, and express their point of view (MacLean & Mohr, 1999).

Teacher Inquiry Project Observation and Question Development

Early in our teacher preparation program, pre-service teachers complete field experiences that require the observation of classroom performance. Pre-service teachers are assigned to specific mentor teachers, who are classroom teachers affiliated with schools in surrounding school districts, and observe their teaching practices. After completing observations, pre-service teachers reflect on what they notice during

these field experiences in an observation journal. Then, pre-service teachers engage in discussions concerning the ways in which the practice of teaching could be improved. It was from these observation journals that potential research questions emerged and reflected a pre-service teacher's individual interests and challenges. Assigned or pre-determined questions are not as meaningful for teacher inquiry because the pre-service teacher must begin from a place of observation and wonder that leads to authentic research interests. The ideal outcome of our teacher inquiry project was for pre-service teachers enrolled in our teacher preparation program to understand how to engage with

teacher inquiry so that they may continue this important practice when they begin teaching.

Choosing a guiding question is central to a successful teacher inquiry project. We devoted much time during several class meetings to discussions of pre-service teachers' school observations and their initial ideas for a guiding question. We also divided pre-service teachers into small groups so that pre-service teachers could share their guiding question and receive peer feedback from their small group members. Classroom discussion and feedback received during small group interactions helped pre-service teachers refine their guiding question.

Table 1

Examples of Inquiry Questions

Brittney	<i>The same students struggle to learn their sight-words every week. Is there something I can do?</i>
Max	<i>I noticed the students who sit at the back of the class do not participate as much. What can I do to engage them?</i>
Maria	<i>When I teach small reading group, the lowest readers seem to be the least motivated. Is there a way to incentivize them?</i>

Note. All names are pseudonyms.

Teacher Inquiry Project Design

Once pre-service teachers determined their guiding question, the next phase was the literature review. It was crucial for pre-service teachers to understand that other teachers and researchers have attempted to solve similar problems. While we did share a few articles in the beginning, we built a research community by asking pre-service teachers to find and share relevant literature. The goal of the literature review was to identify articles where other researchers had identified similar problems and attempted to improve teaching practices. We wanted to frame this part of the inquiry project with a scholarly approach and illustrate that even

seasoned researchers reported varying degrees of success.

Building on the research methodology presented in selected articles for their literature review, each pre-service teacher determined their own course of action. Pre-service teachers determined how they would establish a baseline and measure impact for their prescribed solution. Next, each pre-service teacher identified data that would best meet their research needs, such as student work, checklists, informal student or classroom observations, or assessment results. Pre-service teachers then implemented their individual course of action and collected the respective data.

Table 2

Designed Course of Action

Brittney	Designed tactile sight-word cards for students to trace as they said the words aloud
Max	Moved desks from rows to a U and taught from the center of the classroom
Maria	Created a reward system for reading groups who were attentive

Note. All names are pseudonyms.

Teacher Inquiry Project Conclusion

At the end of the yearlong field-based experience, each pre-service teacher wrote a paper that described their individual inquiry project and created an accompanying research poster. Pre-service teachers presented their inquiry projects in a public forum where mentor teachers, principals, and other teacher educators in our teacher education program attended. Pre-service teachers concluded their inquiry project by identifying possible next steps. We wanted pre-service teachers to realize that every inquiry project could be improved and that the next steps they identified could be the beginning of another inquiry project.

Reflections and Gained Insights

Through our own observations and reflective journal entries, we continue to notice the positive impact of the teacher inquiry project on the teaching practices of our pre-service teachers. For example, a pre-service teacher shared during one of our class discussions that their mentor teacher made a comment that the teachable moment in the classroom had disappeared because of requirements for standards testing. This pre-service teacher responded, “The teachable moment hasn’t disappeared. It is just a matter of whether or not you are going to use it.” Moreover, two pre-service teachers indicated that their mentor teachers planned to implement findings from their teacher inquiry projects into their classrooms.

As pre-service teachers worked through the process of teacher inquiry, recorded observations, and wrote up results from their research, we began to see a different perspective in how they looked at their teaching practices. One principal told us that she wished all of her teachers would think like a researcher because they would no longer view classroom challenges as problems. Pre-service teachers were proud of their work and eager to share how they found answers to their guiding questions. One pre-service teacher explained that she planned to maintain an observation journal once she began teaching because it would make her more aware of how to address the needs of her students.

We also noticed a systemic effect in the schools where our pre-service teachers conducted their teacher inquiry projects. We heard many positive comments from mentor teachers about how they have been inspired to question aspects of their own teaching practices. The teacher inquiry project not only transformed pre-service teachers into teacher-researchers, it also inspired in-service teachers to refresh their own practices. Some of our most impactful outcomes have been when a mentor teacher observes a pre-service teacher addressing a persistent problem, rather than passively adopting a “you can’t save everyone” mentality.

During the past school year, nine of our former pre-service teachers were chosen by their respective schools districts as either teacher of the year or rookie of the year. The teacher inquiry project has transformed our pre-service teachers into powerful agents of change within

schools. Moreover, the teacher inquiry project has empowered future teachers to tackle a variety of problems in the classroom that were

previously viewed as naturally occurring phenomena.

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