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Emerging Questions: K–3 Teachers' Reflections on Action Research Questions

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Teaching is filled with researchable moments—those instants when a question suddenly snaps into consciousness.

—Ruth Shagoury Hubbard and Brenda Miller Power
Living the Questions: A Guide for Teacher Researchers

Educators who engage in teacher research identify questions from various sources, including professional and personal reflections on their practice, interactions with colleagues within or outside of their teaching settings, the professional literature, and personal passions (Hubbard & Power 2003; Falk & Blumenreich 2009; Castle 2012; Perry, Henderson, & Meier 2012). Meaningful, rich, and contextually driven research questions can lead to powerful learning experiences for teachers through action research methodologies. Perry, Henderson, and Meier (2012) suggest that

> [Q]uestions develop gradually after careful observation and deliberation about why certain things happen in the classroom. Questions are not formed with the goal of quick-fix solutions, but rather involve the desire to understand teaching or children's learning in profound ways. (4)

It is the idea that research questions drive the research process and the ways in which teachers arrive at the research question that we find intriguing. In this article, we discuss the importance of the research question in shaping the teacher research process, by sharing the experiences of two primary grade teachers who integrated authentic inquiry in their classrooms.

We four authors are former teachers and current teacher educators. We have co-taught a teacher research course in our master's of education program for seven years, working with 150 teachers as they completed teacher research projects. From our experience, we know that when teachers conduct action research as part of a graduate program, it is essential that teacher educators support beginning researchers in seeking and identifying meaningful questions. Castle (2012) suggests that little attention is given to the research question. Rust and Meyers (2006) add that "shaping a research question is often the first obstacle teachers encounter in the research process and are challenged by getting started with a 'good question'" (80). We agree with Castle and with Rust and Meyers that the research question matters. As a way to explore the work of our early childhood teacher researchers, we pose the following questions:

- How have they arrived at their research questions?
- Are the research questions rich, contextualized, and meaningful?
- How can we, as teacher educators, support their wonderings at the beginning of their teacher research experience?

Teacher as Classroom Researcher is the culminating course in our master's of education program. The program provides opportunities for experienced educators to advance their knowledge and skills as expert teachers. The capstone project for the program is completed in this final course and requires teachers to design and implement a classroom inquiry project. Participants identify a question, review relevant literature, design and carry out an intervention, and present their projects to classmates and university faculty.

The process of developing meaningful research questions begins two months before the course starts. We ask teachers to examine their practice and keep a journal noting emerging questions about teaching and learning in their classrooms. They are also assigned to read several texts about teacher research methodology, most recently Hendricks (2013), Falk and Blumenreich (2005), and Hubbard and Power (2003). By the time we meet with them for our first class session, they have identified a preliminary research question and have some understanding of the research process. As teacher educators, we work with the teachers throughout the semester as they refine their research questions and use the well-established research methodology to complete their research. Intentionally, to this point, we have wanted teachers to formulate their questions on their own, organically emerging from their work in classrooms. We have facilitated their identification of questions in this way because it seems more authentic, teacher-driven, and efficient under the structured academic calendar. However, we are beginning to reconsider this process to allow us to influence their questions more significantly from the onset; we intend to explore this further in the future.

Teachers' experiences: Yvonne and Lauren

We invited two teacher researchers, Yvonne and Lauren, to reflect on their research projects, their questions, and the influence of their research on their teaching. Both teachers have presented with us at regional conferences and have expressed interest in continued professional development opportunities. We present their stories as central to this article, but our discussion is also informed by our work over the years with numerous kindergarten through grade 3 teachers. We hope to understand more about early childhood teacher researchers' questions and to inform our work with future K–3 teacher researchers. We asked Yvonne (first grade teacher) and Lauren (third grade teacher) to

- Review their final teacher research projects
- Construct a brief narrative about the origin and purpose of their research questions
- Write a reflection on their research, after several years' distance from their work, considering how their research has changed their teaching and enhanced children's learning and identifying new questions

Their stories help us to explore the research questions and share with a broader audience the action research work of early childhood teachers in public school settings.

Yvonne: Implementing student-directed inquiry research topics in a first grade classroom

At the time of my teacher research project, in spring 2011, I was in my fifth year as a first grade teacher at a suburban school district. I earned my Elementary Education Certification as a graduate student in 2006, and was hired to teach first grade after I completed my post-baccalaureate certification program. I began my master's program in summer of 2008, and in spring 2011 I finished my master's after completing my teacher research project in the course Teacher as Classroom Researcher. At the time of my teacher research project, the first grade class was comprised of 18 students—7 girls and 11 boys. Of the 18 first-graders, one child was receiving support services in English as a second language, one child had recently qualified for learning support services, and two children were being evaluated to receive gifted/talented support services.

Community is important to me as a teacher, and I strive to integrate families, school members, and the larger community in the classroom. Throughout my research, I received support from a number of community members, including my first-grade students, their families, grade-level team-

mates/fellow teachers, other faculty members, staff, administrators, the school librarian, the district technology integrator, and the third and fourth grade students who helped the first-graders.

As I review and reflect on my research question and my work as a teacher researcher, I realize that "authentic inquiry" is a concept that has acquired meaning for me during my graduate work. However, it was my work in the master's course Language, Learning, and Literacy that established authentic inquiry as a framework for my thinking and future work. Judith Lindfors emphasizes the importance of engaging children in open-ended questions and "becom[ing] more aware of acts of wondering" (Power & Hubbard 2002, 168). This act of questioning and *wondering* became an established practice in our first grade classroom, and we even began keeping list upon list of student-generated authentic inquiries, interests, and wonderings. When the opportunity arose to pursue my own authentic inquiry project, I posed the question, "How do I take my students' wonderings to the next level? How do I turn these into a meaningful learning experience? What do I do with these questions and interests?" I saw this as my chance to turn my own wonderings into action.

As I sort through the trail of scribbled notes from my initial attempts to define and fine-tune my focus for my first action research project, I recollect that my intent was to find a way to intrinsically connect and enhance students' desires to be lifelong learners through authentic inquiry. I believed this goal was related to elevating first grade students' higher-order thinking skills (HOTS) and critical thinking. I also wanted to seize any opportunities to encourage children to consider and respect multiple perspectives. In addition, I was keenly interested in differentiating instruction for *all* students—satisfying the needs of the enrichment students, intervening for the struggling students who require additional support for learning, and striving to meet the needs of the middle and above-average student not identified as gifted. My interest in encouraging children to direct their own research escalated exponentially with each chapter I read in Falk and Blumenreich's (2005) *The Power of Questions* during the Teacher as Classroom Researcher class. The more I learned about doing my own action research project, the more compelled I felt to "launch inquiries from children's questions" (Falk & Blumenreich 2005, 161) that my students had generated. I knew I had to take the risk myself and let the children do their own research. The teacher research project was my chance to help the children make meaning while I had professors and graduate classmates to provide the motivational support to make meaning for myself.

The research project provided first grade students with the opportunity to select and direct their own research topic, culminating in a PowerPoint presentation to peers and families. During my research, students self-selected

research topics that included historical figures/topics (Abraham Lincoln, Copernicus, the Revolutionary War), pop culture figures (Joe Montana, Elvis, Brett Favre), animals (komodo dragons, cheetahs, angler fish, dogs, alligators, snow monkeys, horses, piranha), and science and nature topics (sun, volcanoes, tornadoes). First-graders learned about their topics of study with the support of several teachers (including me), the school librarian, and the district technology integrator. Over a period of five weeks, children posed questions about their topics and used a variety of resources to pursue their inquiries.

As children completed their inquiries, I collected and analyzed multiple sources of data for emergent themes. Data included questionnaires that documented both affective and curriculum-based assessments of student learning, teacher field notes, student work samples, and documented communication with students, parents, and colleagues. The findings suggest that the first grade students in this study strengthened their content knowledge, demonstrated heightened student motivation, and enhanced their critical exploration skills.

Ultimately, the goal of this constructivist approach of guided discovery through student-directed research was to teach core curriculum while increasing student motivation and critical exploration opportunities. The positive energy and rewarding feedback generated from this experience has intrinsically weaved itself into defining core philosophical truths about who I am as a teacher. Student-directed authentic inquiries and dialogic discussions are highly valued components of our classroom environment. Taking that initial jump into this project has served as a springboard for my confidence as a teacher to start from these authentic student inquiries and encourage children to take more opportunities for meaningful student-directed research through critical exploration of their own student-initiated wonderings.

As a result of my own critical exploration experienced through this initial teacher research project, many new and stimulating questions have emerged for me. I have continued to use student inquiry in the years following my teacher research project, and I am now "questioning and wondering" why scripted text has gained so much credibility for struggling readers. I will use these wonderings to investigate and connect authentic student-directed inquiry and increased content knowledge, student motivation, and critical exploration suggested by the findings of my first action research project.

The authors reflect on Yvonne's story

In our work with more than 150 teacher researchers, we have seen teachers identify research questions in a variety of ways. Yvonne, like many of our students, chose a research question that originated from a personal passion or interest. Yvonne, as a first grade teacher, took Falk and Blumenreich's (2005) advice to develop research projects for children that would allow them to "follow their own intellectual puzzlements and interests" (8). Drawing on previous work in the master's program that emphasized the need for teachers to provide children with opportunities for authentic inquiry, Yvonne created a research framework for children to use in investigating a topic of their choice. When thinking about Yvonne's research, and reflecting on our work with her, it was clear that as a teacher who approached her work from an inquiry stance, she invited her students to see the classroom as a research community in which they are encouraged to ask real questions. As teacher educators, we recognize the power of providing K–3 students with the tools to research real questions as a way for them to take responsibility for their learning.

Lauren: Student-directed literature discussions in a grade 3 classroom

I completed my teacher research in spring, 2011, during my fourth year of teaching. I have been a third grade teacher in an economically diverse suburban school district since I graduated with a bachelor's of science degree in education and certification in early childhood and elementary education. During my teacher research semester, my class consisted of 20 academically diverse children. The class comprised third-graders whose reading levels ranged from below grade level to above grade level, and it included students who receive gifted/talented support, English language support, and Title I support. At the time of my research, the school day began with a 90-minute language arts block. I typically introduced a reading skill each week through read-alouds, followed by independent and small group work. During the language arts block, I facilitated guided reading groups to reinforce the skill that I had taught earlier in the morning. The students and I worked on comprehension, fluency, and story elements while other children were working on independent reading or writing. Language arts remains central in our school day.

As I reflect on my research question, "What happens when children are engaged in two literature discussion models?," and my work as a teacher researcher, I realize that the research question originated from a course in my master's in education program that focused on student learning through literature. One of the course assignments required me to incorporate more student talk while the teacher takes a backseat, talking and questioning less

during reading groups. I was skeptical about the idea of students running literature discussions without direct instruction by the teacher. I did not believe that students in third grade were capable of using deep thinking, questioning techniques, and challenging their various opinions of the text without a teacher's continuous prompting. Regardless of how I felt, I was assigned to implement this reading group model in the classroom. After implementation, I was astounded by the quality of student discussion.

The following year, 2012, when I was assigned a teacher research project in my final course, I knew I wanted to focus on the intriguing conversations of the students that I had observed during their literature discussions the previous year. My question started as, "What happens when a teacher allows the students to control a literature discussion?" However, as I started reviewing the literature related to the topic of student-led discussions, I realized that most student-led discussion models used pre-assigned student roles. I was not sure how I felt about assigning roles to each student, but learning about this model helped me shape my research question. I decided to compare two types of reading group models. I wanted the students to engage in authentic discussions without any roles and also engage in discussions in which they had traditional roles, such as discussion director, literary luminary, and such. My research question shifted from "What happens during open literature discussions?" to "What happens when children are engaged in two literature discussion models?"

During a period of eight weeks, the third-graders experienced two literature discussion models: (1) open discussion and (2) structured discussion with traditional roles. While all children participated in the literature groups, I focused my data collection and analysis on two groups of children. Each group of five students participated in each type of literature circle model for four weeks. Journals, field notes, interviews, audio/video tapes, transcriptions, and a final survey were part of the data collection process. I analyzed data for emergent themes. Those themes included comprehension activities, participation, and student reactions/experiences. My most significant findings suggested that (1) students who participated in literature circles used many comprehension activities before, during, and after discussions; (2) students enjoyed literature circles and were reflective in their thinking; and (3) participation across all students increased as all children were involved in each discussion.

As a result of my research, I found that both literature discussion models can be beneficial and should be a part of a language arts curriculum. Although my research project was completed in 2011, the findings, years later, continue to affect my reading instruction in the classroom. I still hold literature discussions that are student directed. I have conducted workshops with my elementary school colleagues to demonstrate the benefits of student-

directed literature discussions. I still listen to the authentic conversations that the students have with each other. I hear students challenging each other's opinions, leading discussions, and most important, talking about deeper meaning in the text that perhaps I myself, as an educator, would never have thought of. Every year since finishing my research project, I have found that I look forward to having the students engage in student-directed literature discussions. The students also enjoy taking control of their own learning. I have found that the students truly participate and engage with the text. I see communication skills that I never observed before when I led the reading groups.

Following my research, I continue to encourage teachers to try student-directed literature discussions in the classroom. I have had colleagues come back and tell me how rewarding it was to watch these discussions in action. As I implement this in my classroom, I find that the students begin to enjoy reading more and enjoy talking with their peers about the literature. I have observed many students continuing discussions about books beyond the scheduled reading discussion time. With that type of excitement for reading, it has made my research completely worthwhile. My research has made me think about schools and learning. I find myself questioning best practices all the time. I wonder if some of the texts we read challenge students to think differently or challenge them to apply this knowledge in their lives outside of school. I sometimes ask myself how I can better engage students throughout the day and help them really develop a passion for school and learning. I feel that being a teacher researcher has developed this questioning. After starting with a question that interested me and watching my research unfold, I became more engaged in my teaching. I look for more proof of student engagement and learning. Since becoming a teacher researcher, I alter my teaching to accommodate different types of learning. I question the authenticity of what I teach every day and make sure I set a direct purpose.

The authors reflect on Lauren's story

Lauren chose a research question that allowed her to implement a new intervention and examine her current teaching practice. Lauren, as a third grade teacher, at first questioned the ability of her students to take responsibility for their own learning by leading literature discussions. As a result of her research, she learned that the discussions during student-directed sessions were more authentic, as students felt unconstrained by the more traditional model of assigning roles. From our review of Lauren's work, what stands out is the impact her teacher research has had on her teaching after the project was completed. Her research project led to more questioning about best practices and exploring various ways to engage students in authentic literature experiences. Lauren has also conducted teacher workshops on

student-directed literature groups in her school district and participated in a research study on the topic with a faculty member from our university's Literacy Department. Teacher research should be shared outside the classroom as teachers construct knowledge about teaching to enrich student learning.

Like Yvonne, Lauren's question emerged, in part, from her work in one of the previous courses in the program, Language, Learning, and Literacy. As teacher educators, we feel encouraged when the teachers in our program use ideas from earlier courses to shape their research questions. This progression is intentional, as the core courses were designed to reinforce the concept of the classroom as a site for inquiry.

Discussion

In the examples of teacher research questions constructed by Yvonne and Lauren, we see a focus on children. Although Yvonne and Lauren tell their stories differently, both describe how teacher research has influenced their practice in significant ways. Both demonstrate Castle's (2012) assertion that when early childhood teachers conduct classroom inquiry, the child will be at the center of their research. Yvonne encouraged children to ask and research their own questions, and Lauren trusted students to conduct their own literature discussions. Both teachers identified their research questions around children's authentic inquiry and authentic discussions. We consider these to be strong examples of teachers keeping children and their school experiences at the center of their work as researchers.

These two examples show how authentic questions can change children's classroom experiences and teachers' work beyond the teacher research semester. We confirm that research questions must arise from teachers' practice. Our initial exploration suggests that the more authentic the question, the more authentic the research experience for the new teacher researcher and the richer the potential for change. As we begin to explore our role in shaping new teacher researchers' work, we intend to look deeper into how some teachers' questions interrupt the focus on high stakes testing and scripted curricula and how other questions are situated in existing school initiatives.

Though our teachers identify questions that are meaningful for them at the onset of their research semester, we do not know how, if at all, their practice has continued to be shaped by their initial teacher research experiences. Though several graduates have reported back to us informally how they continue to use their findings to inform their teaching practice, we need to conduct a more structured longitudinal investigation of our teachers' work to understand the importance of teacher researchers' questions.

In thinking about our future work with teacher researchers, we propose several adaptations to our current practice. Changes might include our making a more deliberate attempt to have teachers dig deeper into their questions at the onset of their work. As teachers identify their initial interests, we could facilitate teachers' analyses of their initial questions more critically and elicit descriptions of their wonderings as they relate to the children in their classes, their teaching contexts, and the broader field. We suggest that a more deliberate focus on the origin of the research question might help us further support the teachers as they pursue inquiries around authentic questions of practice. We could embed more structured opportunities for teachers to identify and shape their research questions, including the use of journaling, discussions with colleagues, and conversations with faculty as the teachers form and shape their research questions. Currently, we ask our graduate students to engage in each of these experiences; however, we do not have them record their reflections and draw intentional connections between their journaling and the cultivation of the research question.

In *Living the Questions,* by Hubbard and Power (1999), JoAnn Portalupi offers strategies to guide teacher researchers through the process of "figuring out the question." She suggests that teachers should use their "first research tool"—the journal—to record things that "surprise, concern, or delight," and after a week or two, go back and reread the entries (31–34). Teachers should then look for a theme that emerges from the journaling, list genuine questions about the area of interest discovered, examine the list of generated questions, and then write a more succinct, focused question. That question may change, but this more deliberate approach will give teachers a starting point that is based on day-to-day experiences with children. Hendricks (2013) and Cochran-Smith and Lytle (1993), as well as others in the field of teacher research, support reflective journaling or other deliberate experiences in reflection in developing the research question/focus.

Developing the research question and shaping it are important steps. We believe that by giving teachers intentional guidance in identifying authentic questions, in the culminating teacher research course, we might (a) learn more about early childhood teachers' questions; (b) support teachers' shaping of rich, contextualized, meaningful questions; (c) better support their wonderings at the beginning of their teacher research experience; and (d) encourage continued questioning and systematic investigation of their teaching and children's learning that extend beyond the completion of their master's program.

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