

Teacher Research— It Can be Done¹

Introduction

Teaching and learning is a story unfolding over time through classroom interactions where teachers and children become environments for each other, their responses to each other determining what actually gets taught and what is actually learned. It is a complex and dynamic process. Paley captures this process when she explains that it is up to teachers to reflect on and document their life in the classroom, their experiences with children and those things that perplex and astonish them—something that no one else understands (1997). Through systematic, intentional, and reflective research of their own practice teachers seek answers to their questions, problems, and interests. These data-based inquiries by teachers are unique stories of teaching and learning that make an essential contribution to our understanding of professional practice. The goal of teacher research is better teaching and the real beneficiaries of better teaching are children and families.

This collection of papers provides a window into how teachers carry out teacher research in early education settings, in collaborative groups of teachers and by early childhood students during their internship. Authors examine the processes, the support system, and the benefits of teacher research.

We begin with one of our best known teacher researchers, or anecdotist (her preferred title)—Vivian Paley. Paley draws us in to her narrative as she takes us back to her own beginnings as a kindergarten teacher when she first began to try to figure out how children learned from her teaching in her classroom.

¹This article is adapted from the panel session, “Teacher Research: It Can be Done . . . by Teachers, Teacher Educators and Professional Developers,” presented at the National Association for the Education of Young Children Annual Conference, November 2011 in Orlando, Florida.

In the next paper, Andy Stremmel discusses the initial challenge of teacher research—finding a research question. He demonstrates how the unique insight generated by teacher researchers begins with asking questions that come from real world classroom dilemmas and interests that engage the mind and passion of the teacher and develop over time.

Andrée Howard, a teacher researcher, and Ben Mardell a university-based facilitator, examine the way a professional community of pre-K teacher researchers functions to both deepen and broaden their understanding of teaching and learning. They reflect on the features of successful participation in the group as they collaborated on an exciting project, collected data, and pursued questions as individual teacher researchers in their early childhood settings.

Teacher researcher Anna Golden reflects on the impact of teacher research on her own practice and on her colleagues, administrators, and families at her school. Anna provides a poignant description of the powerful role of collaboration among the teachers that began in her initial teacher research project. She chronicles the journey of the teachers at her school documenting and sharing their unique inquiries with children and engaging in ongoing dialog about their practice.

In the final paper of the collection, Amos Hatch describes how to support pre-service teachers as they undertake action research projects in their internship in urban schools. He highlights the importance of building teacher research into teacher education programs to help the students begin to see themselves as problem solvers and change agents. He offers strategies for addressing the challenges of conducting teacher research amidst multiple academic demands and working with mentor teachers in schools under pressure.

—Gail Perry

Reference

Paley, V.G. 1997. Introduction to *Class Acts: Teachers Reflect on Their Own Classroom Practice* by I. Hall, C.H. Campbell & E.J. Mieh. Cambridge, MA: Harvard University Press.

Teacher Research—It Can be Done

Getting Started

VIVIAN PALEY

I would like to write about how I got started. You can call it research if you wish—storytelling— anecdotal histories—but one thing I do recognize is that it is very personal stuff that I’ve been doing. I do think there are some people, perhaps people reading this paper, who also enjoy following through on watching themselves figure out how to do something. With me it was teaching. Perhaps it seemed kind of random in the beginning, but then it all started to make sense after a few years. Looking back on it now, I would say there were a couple of things that I looked for, needed, as a young married woman starting off teaching, first in New Orleans, then in New York, then back to my hometown—Chicago. I needed a *continuity* of some kind in the classroom. I realized when I entered the classroom, even with my degrees from Chicago, Tulane, and Hofstra . . . following our trail of where we lived . . . I knew nothing about the classroom. How could I have gone through all of those courses, and read all those books, and been a student myself from first grade on, and know nothing about little children—really know nothing about them? I must not have been a very curious person, not about children, and not about teaching. But I knew I would have to figure out how to be a good teacher. And I would have to do it myself, day by day, in my own classroom. I began in small ways. Every step was important because it was my urgent need plus I was finding solutions myself. Above all, I wanted to discover how one thing connected to another in a classroom of young children.

Becoming an anecdotist

My first fulltime public school job was in Great Neck, New York. I taught a kindergarten in the morning for three hours with 24 or 25 children, alone in the classroom. Then in the afternoon, I taught another kindergarten class of 25 children by myself. The first thing that plagued me to the point of not sleeping at night was that I could not remember all the names in each class. Every year in the morning and the afternoon classes there would be about six names I could not remember. Well into the winter I would be giving a version of *you, honey, darling*, or *sweetheart* instead of the child’s name. I became very affectionate using all of those names, but I didn’t know how to solve the problem. I made out lists to memorize at home and tried to visualize the children’s faces, but it didn’t work. Then one day something made me realize that all I had to do was put the names I

couldn't remember into a story, a little anecdote. I didn't know whether it would work but it seemed like a good idea. I started following around the children whose names I couldn't remember and if I heard them say something interesting in a little play event, I would make a note of it, then an anecdote. When I made the child a character in her own story, she came alive for me.

After a month or so, I not only memorized all their names, plus a lot of other attributes, but I was starting to think of myself as an anecdotist. I developed a love of listening to the odd little things that children say to each other and I began to keep a journal of these bits of dialogue. There was no real continuity yet, but I felt a little more emboldened, ready to tackle the next problem.

Learning about starting the day

Simply put: What should the children do when they first come into class? What was the best way to start the day? Some might say, "Why don't you go visit other people's classrooms, you'll see what they do." That would be a good plan for others, but it wasn't for me. Instead, I decided to do a little planned research of my own. In the morning, I would let the children come in and just play. They just came in, said good morning or good afternoon and found some area to play like the doll corner, the blocks, or the water table. In the afternoon group, they came in and found a piece of paper on their desks or tables. They came in and completed any kind of worksheet or expectation on a piece of paper with crayons on their desks. They had some little task. I didn't even really care what the task was, but it was something appealing. I wanted to see which sort of activity helped organize a child in a three-hour session. What beginnings helped create a sense of continuity for the children and for me?

I designed two ways of coming into the classroom. I took notes on them both. After a week, I switched and had the morning group and the afternoon exchange plans. They either found some kind of picture to fill in, or engaged in free play. The results were easy to observe. There were big differences. If the children came in and played, there was a sense of continuity that went through the morning session or the afternoon session. If they came in and had some kind of teacher-created activity at their place, though it was pleasant stuff that I put out there and they enjoyed it, there was no continuity. They didn't say anything about it later. They didn't bring it into their play or their talk. My need to find stories about the children, and theirs too apparently came only when they came in and started playing. Throughout my almost 40 years of teaching I never varied from that piece of learning—just start the day playing and we'll see what comes of it.

So those are two very important things that I learned, but I wouldn't call them research. I was starting to feel more as if a classroom might be a place in which I could start to figure things out about children and teaching. Perhaps I felt, as such a young bride moving to a different part of the country, I needed to find a place where I could figure things out. Figure out why I was there, why the

children were there, what we were supposed to be doing. I had lucked into the work that became my passion for the rest of my career, and still is.

Learning about extended day kindergarten

Another big jump in my perception of kindergarten came when I moved back to Chicago. I was presented early on with a question about extended day kindergarten at a time when everywhere in this country, except daycare centers, kindergarten was half-day. Mothers were going back to work. PhD mothers as well as mothers who looked for jobs in cafeterias went back to work. Their children needed longer school hours. Thus, I was presented with the idea of an extended day. I told the director of my school and the principal, that I would consider an extended day if I could figure out how the extra time should be used. They agreed. And so I began to organize a plan that would study three different outcomes for a longer day. As always, my goal was continuity. Which plan provided the most follow through in social, linguistic, and logical behaviors? It turned out to be a good activity for me and for the children.

For one year, I had a morning class only. Every day, five or six children would stay for lunch and until the time when the first graders went home. I alternated three kinds of activities after lunch and recess. The first offered indoor free play. The second consisted of a small amount of play and teacher-made activities that the children enjoyed. I didn't ask the boys to make weaving patterns out of strips or stuff that made them feel a little anxious after a few minutes. I used activities that I thought they might enjoy. The third approach after lunch and outdoor time was storytelling, story acting, and free play. I wasn't trying to anticipate what the answer should be. I wanted to really find out from them, from the 25 children, how extra time should be spent in an all day kindergarten to everyone's advantage including my own. Of course, when there are only six children in the class, they're going to enjoy everything that goes on. We know what it is like to have the whole kindergarten just to yourself with half a dozen children on the rare occasions that it happened. So I had to take that into account.

What was it then that made me decide that the most advantageous, growth producing, happiness producing activity for an all day kindergarten was storytelling, story acting, and play in those brief afternoon hours from 1:00 to 3:00? The same thing that made me decide as a new teacher to let the children begin their day in play—*continuity*. During the period of time when the children had storytelling and story acting and play compared to the structured activities after play, or even all play, it was again the issue of *continuity*. On the days when the extra time was spent with play and storytelling and story acting, the next day they all came back, five or six children, wanting the other children in the class to hear the stories that they had dictated and acted out. They wanted their stories acted out again with their entire classroom community. It was consistent with all the children and the interest was intense. Sometimes it caused friction. Children

would compare. The Monday group got more time so they did more stories. The Tuesday group got longer stories—ours were only half a page.

My next period of growth as a researcher came with the discovery of the tape recorder, which is a story in itself that I'll write about at another time. These brief events that I've described here can be called "my beginnings as a teacher."

Teacher Research—It Can be Done

Finding a Research Question

ANDY STREMMEL

Teaching begins with a sense of wonder, an attitude of curiosity, a need to know about something that perplexes and distracts us, something we simply cannot get off our minds. Teachers develop questions based on their own curiosity about their teaching and their students' learning. Questions like, "Why does one activity engage the class so thoroughly one day, while the same activity bombs the next day?" "What can I do to help motivate my students?" and "How can I make a connection with those children who seem distant and unwilling to interact?" are examples of the kinds of questions teachers ask every day.

If we take the complexity of teaching seriously, then we understand the need for teachers to have an active role in the process of finding the answers to their meaningful questions. When teachers start to ask questions about what, how, and why they do what they do and to think about alternatives to their practice, they incorporate the element of inquiry into their teaching. When teachers systematically and intentionally collect and analyze data in order to address their questions, they demonstrate the value of teacher research as a vehicle for promoting self-reflection and decision-making. Most importantly, as they begin to investigate questions that are important to their own situations, they move from transmitters of knowledge about teaching and learning to creators of their own knowledge.

When teachers begin to pursue their teaching questions, using methods that are meaningful to them for the purpose of improving their teaching and children's learning, they engage in teacher research. Teacher research is practice-focused inquiry. Teachers' research questions emerge from areas they consider problematic (i.e., puzzling, intriguing, astonishing) or from issues they simply want to know more about.

Getting started can be surprisingly difficult. I found that it is best to start by talking with a trusted colleague or fellow teacher who understands the joys and dilemmas of teaching. Together, pondering and discussing your interests, wonderings, and curiosities can lead to great insights and new understandings. Asking questions such as the following are good ways to start:

- What interests me?
- What intrigues or puzzles me?
- What would I like to change or improve?

- Why am I interested in this issue?
- Why is this issue a problem?
- Why is this important?
- What are my hypotheses?
- What have my initial observations revealed to me?

The questions worth asking are the questions that come from real world obstacles and dilemmas. They are problems of meaning that develop gradually after careful observation and deliberation about why certain things are happening in the classroom. These questions are not aimed at quick fix solutions; rather, they involve the desire to understand teaching and learning in profound ways. Questions worth asking have the power to change us and to cause us to look at our students and ourselves differently. They engage the mind and passion of the teacher; encourage wonder about the space between what is known and what is knowable; and allow for possibilities that are neither imagined nor anticipated (Hubbard & Power 2003).

Having an opportunity to reflect on what puzzles the teacher with another colleague can help him or her think critically about these questions. Once, the teacher does this, the next step is to frame the question(s). Ask open-ended questions—*how?* and *what?* questions tend to produce richer information. The more personally meaningful and urgent the questions are, the more likely the teacher will have the desire and motivation to address them. The question must be cared about—inquiry demands an orientation to what matters. Lastly, questions that can evolve with time and with continued observation and reflection produce the most useful information and results the teacher can act upon and use to make the changes and improvements.

Here are some examples of teacher research questions:

- How can I become more self-aware of my feelings and how they affect my interactions and relationships with children?
- What can I do to emotionally prepare myself when I am not feeling my best?
- How do children react when I use praise? What do children learn from this?
- How does the lack of recess time affect learning in the classroom?
- What kinds of learning activities promote interaction among peers?

Researchable questions have the power to change us and enable us to document this change. They lead to surprises and epiphanies, and allow us to look at our teaching, our children, and ourselves differently. Finding specific answers are secondary to the processes that teachers undergo in helping them to develop greater self-awareness, understanding, and more meaningful ways to teach.

Thus, the benefits of teacher research begin with finding and enjoying the possibilities in the questions themselves.

Stringer (2004) points out that one of the reasons teachers have difficulty developing researchable questions is that classrooms are complicated places involving complex interactions and an interplay of actions and perceptions that are not easily examined without ample time to carefully observe and reflect on classroom situations and problems. Therefore, teachers need time to focus on what happens in the classroom and to reflect on what they do and why in order to clarify the nature and purpose of their research. One of the major strengths of teacher research is that it allows the teacher to reflect on issues and problems and to formulate tentative questions that may be refined and reframed throughout the research process.

Teachers' research question(s) will be modified continually to create a closer fit with what they want to "uncover" about their teaching or learning. Often they rethink and reframe the question as they begin to collect and analyze data and reflect on what they are finding. In other words, they always go back to the original purposes or aims for the research to guide them in their thinking. A wonderful example of this can be seen in the article by Stacia Stribling and Susan Kraus (2007) "Content and Mechanics: Understanding First Grade Writers."

Let's take a look at how this reframing might work using the question, "What are the effects of having limited social interaction in the classroom?" A teacher with whom I worked was concerned that the implementation of standards of learning was limiting kindergarten students' opportunities for interaction both in and outside the classroom. Her concerns lead her to her question. Her own assumptions about children's learning, her review of the research, and her initial observations all indicated that children benefit from opportunities to learn with and from each other. With the assistance of a "critical friend," a trusted colleague with whom she could reflect and discuss her ideas and assumptions, she came up with this first recasting of the original question:

"What influence does social interaction have on classroom learning?"

She then reframed the question to make it more researchable after her discussions and reflections on how she would pursue the question. The following is the result of the reframing:

"What kinds of social activities in the classroom promote learning?"

Finally, after observing children and recording her reflections in her journal, she added a second question to the one above:

"How do the social activities I provide promote learning in the classroom?"

Settling on a question or questions that one feels comfortable with and can address using the methodological tools readily available to teachers (e.g., observation of and conversations with children, reflective journal writing, and opportunities to talk and reflect with a trusted colleague) takes time. But, having a critical

friend or an inquiry group is essential to helping teachers to: recast and reframe the questions; share assumptions, personal theories and data, as well as ideas about data collection and analysis; offer alternative interpretations, challenge assumptions, and make suggestions about next steps in your research process.

Teachers are questioners who address meaningful questions every day. In the course of what they do, teachers ask real questions, worthy questions that enable them to pursue what interests them about their teaching and to address the problems and concerns that they confront daily in their classrooms. Thinking from this perspective, doing teacher research is not an “add on” but a way to build theory through reflection, inquiry, and action, based on the specific circumstances of their classrooms. It is a way to make informed decisions based on data collected from meaningful inquiry. They are in the best position to examine these questions to better understand their own practice and, potentially, to add to the existing knowledge base on teaching by contributing practical knowledge to traditional research scholarship.

References

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Teacher Research—It Can be Done

Inquiry as a Team Sport

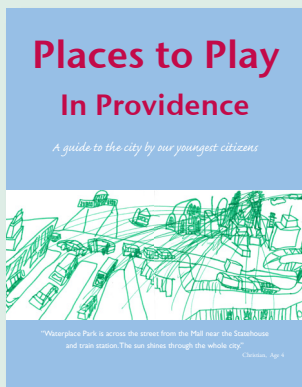
BEN MARDELL AND ANDRÉE HOWARD

In April, 2011 a network of teacher researchers was organized by a research group at Harvard Graduate School of Education, *Making Learning Visible*, and a community-based school readiness organization *Ready to Learn Providence*.² The network, a group of sixteen early childhood teachers from center-based and family child care settings in Providence, Rhode Island, was facilitated by Ben Maddell from Harvard and Beth Carpenter from Ready to Learn Providence.

The peer network was designed to promote three important goals: good curriculum for children, meaningful professional development for teachers, and advocacy for quality early childhood education. The teachers in the peer network viewed teacher research as a team sport, realizing that some of the deepest understandings of teaching and learning are created when educators share ideas and perspectives.

The teachers met as a group six times over a period of six months during which time they also visited each other's programs and the facilitators visited their programs. During the initial session of the network at the end of April the facilitators proposed a book project—the children would construct a guidebook about the best places to play in Providence for the participants coming to Providence to attend the Professional Development Institute, an NAEYC conference. When they got back to their own schools the teachers told their 150 three-, four-, and five-year-old children that 2,000 teachers were coming to their city and that many may not have visited Providence. They suggested that the children could help the visitors feel welcomed by making a page in a guidebook about an interesting place to play in their city. At the second meeting of the peer network the teachers shared strategies they used in their classrooms to further the children's thinking. The teachers also discussed questions that had come up about the project as they introduced it in their own classrooms. A few weeks later the teachers

²Ready to Learn Providence is a Providence-based community organization with a vision that all young children will be healthy and ready to learn. Making Learning Visible is a research group at Project Zero at the Harvard Graduate School of Education. BrightStars, Rhode Island's Quality Rating and Improvement System (QRIS), which is managed by the Rhode Island Association for the Education of Young Children (RIAEYC) funded the network.



brought in the children's drawings and suggestions and the guidebook was assembled.³ For more information on this exciting project, see the chapter "Making Learning Visible/Ready to Learn Providence" in the 2012 NAEYC publication *Our Inquiry, Our Practice: Undertaking, Supporting, and Learning from Early Childhood Research(ers)*.

In the third session the teachers debriefed about the book project, reflected on practices they wanted to explore further, and discussed individual research questions that had arisen while working with their children during the production of the *Places to Play in Providence* guidebook. In the remaining three monthly meetings the teacher researchers examined those questions in light of classroom documentation (see p. 13).

In this paper, Ben Mardell and Andrée Howard, a teacher who participated in the peer network project, describe how the network became a winning team; a group that learned from and with one another.

From a facilitator perspective, Mardell explains the value of launching teacher research with a shared project and examining documentation with a protocol. From a participant perspective, Howard explains the importance of trust. Together we conclude that the self-directed inquiry embodied in teacher research is a valuable form of professional development, preparing teachers to implement the constructivist pedagogies that support young children's learning.

Reflections of a facilitator-Ben Mardell

There are two lessons about professional development I take away from the network.

Launching teacher research with a shared project

The first is the value of having a common project or provocation launch a teacher research/professional development experience. Teachers' exploration of their own questions is central to teacher research. Yet generating a meaningful, researchable question is challenging. Because the teachers had a common project with shared problems they were able to articulate questions relevant to their own contexts as well to create and test strategies to address these problems. The common project also raised philosophical issues that all participants faced (e.g., should teachers impose a project such as making a guidebook on children). A conversation from the third network session illustrates this point:

³The book and a short explanation of how the teachers and children created it can be found at: http://issuu.com/r2lp/docs/places_to_play_in_pvd. The advocacy end of the project is the subject of an article that will appear in the September issue of *Young Children*.

Teacher 1: My question is kind of on the same page as Ted's where (with the book project) we kind of slowed things down with creativity when the kids were doing the pictures. So how can we kind of do that all around with the curriculum? Like if there was something science and I kind of wanted to slow it down.

Teacher 2: My thinking is exactly what Paula's saying, that we're always rushing through curriculum and sometimes we're getting so much information we don't even know if the kids are grabbing all of it. But in the process of the book the kids really, really, seemed to get it and they continue to talk about what they did.

Using documentation and a protocol

The second lesson is the value of grounding conversations in documentation and using a protocol. Regardless of the teachers' training and commitment to children, they can have difficulty engaging in good conversations; conversations that stay on task are focused on children's learning and are based in evidence. Having documentation, something on the table to look at, and having a protocol to guide that conversation can help them.

We found two noteworthy features of the protocol we used in the network. First, following a longstanding practice in early childhood education, the protocol asks participants to separate what they observe from their interpretations and suggestions. The protocol begins with teachers constructing collective meaning from the documentation. Participants describe their own observations regarding the situation presented. Each person brings a unique perspective and will notice something different. Then the other teachers give suggestions, which are often richer after the close examination of the documentation. Second, the presenting teacher is in a listening mode most of the time. After she presents the context and poses a question, she listens. The rationale is that you can't get good feedback if you're talking. We all have the tendency to want to respond and explain more, but then the chance to hear from others is lost.

Network Protocol

- Presenting Teacher
 - Provides context for documentation (1 minute)
 - Poses a question (1 minute)
- Group examines documentation
- Peers respond to
 - The documentation (What do you see?)
 - The presenting teacher's question (What suggestions do you have?)

Note: Presenting teacher listens and records

- Presenting teacher responds, and can ask for additional information.

Reflections of a network teacher-Andrée Howard

When the Peer Network was announced I was eager to participate. I am always looking for opportunities to have conversations with other early childhood educators who are interested in thinking deeply about critical issues in our field. While I enjoyed and looked forward to the network sessions, I didn't realize the multiple benefits of this collaboration until after our final meeting.

Is this project going to work?

At our first meeting we met each other and the facilitators introduced the "Places to Play" book project. In addition, we learned about the practice of giving children feedback about their artwork. We practiced this process with each other that evening, but I didn't leave with a strong sense of how to make it work in my classroom. Quite honestly, I was unsure how creating a book, designed by adults who have never met our preschool children, would fit with our child-directed, constructivist curriculum. My most valuable takeaway from the first session was the sense of excitement and anticipation that I get from spending time with other educators who were interested in questioning, critiquing, and improving their practice.

Back at school, over the course of the next month and with a supportive visit from one of the facilitators, my colleague and I worked with children to create pages for the book, while helping them understand the protocol of giving feedback. This exciting technique for talking to children about their artwork in a way that was both respectful and encouraged children to challenge themselves made sense to me.

Learning to trust

When I returned to the next meeting of the Peer Network, I fully understood the process of providing feedback. During the next four sessions, in addition to a large group meeting, we met in small groups of teachers and a facilitator. Each teacher had the opportunity to briefly share documentation of a teaching challenge from their classroom. At first we shared our work on the book, but after we completed the book we used the protocol to discuss other issues that challenged us in our classrooms. By the third meeting, I felt safe enough, and trusting enough, to be able to be open and honest about my work. That's when I realized that the protocol we learned as educators was the same as the one we taught to the children in our care!

My colleague and I presented a workshop at a local early childhood conference titled, "Beyond 'That's a pretty picture, I see you used a lot of yellow!'" during which we shared the practice of giving feedback to children with a packed room of professionals. I am also sharing the techniques for providing feedback to children with the college students that I supervise, while using the same practice

during feedback sessions with those college students, to help them reflect on their work in the classroom.

At the fifth meeting, during our small group session, one of the other teachers described how frustrated she felt trying to have a large group time every day with three-year-olds. I agreed that it could be difficult, and wondered whether it was even appropriate. Given what we know about how young children learn, I questioned whether it was fair to expect them to gather and all do the same thing at the same time. I have always thought that large group time was the least valuable time of the day, but professional development in the past had only focused on how to implement large group times successfully, not on whether or not we should be having them. My colleagues in this small group were interested in my position on the issue and I decided to pursue it.

I presented the idea of eliminating meeting time to my director, and she loved it. She suggested that I document what I do as I make changes, so that I can share what I learn with other early childhood professionals. In my classroom now, I am experimenting with voluntary gatherings instead of mandatory whole group meetings. Currently, I am documenting what is happening in my classroom regarding this issue and am in ongoing discussions with my colleagues about whether the learning that ordinarily takes place during meetings is occurring in other parts of the curriculum.

Conclusion

We are both committed to constructivist curriculum for young children. We know that children learn best while engaged in self-directed inquiry and believe this best prepares them to participate in a democratic society. We are also committed to constructivist professional development experiences. If we want to promote non-didactic learning for children we need non-didactic, self-directed learning for teachers; professional development strategies that honor and value teachers' knowledge and perspectives.

This kind of learning isn't quick, easy to schedule, or easy to measure. It is also complicated to facilitate. For adults and children it requires flexibility and room for autonomy as well as structure and guidance. Although a common project can be exciting and engaging, it can be limiting. Protocols can allow for expansive conversations, but take practice to use effectively. There is no recipe for successful inquiry. However, over time trust can be built that allows for teacher researchers to co-construct their own professional development.

Teacher Research—It Can be Done

Learning Together

ANNA GOLDEN

In my first experience with teacher research, I explored the wooded area right outside our school's playground fence with my four- and five-year-old children. The study "Exploring the Forest: Wild Places in Childhood" encompassed the experience I had with the children at Sabot School, the reading I did on the importance of wild places and nature for children, and my personal reflections on sense of place in my own childhood. My colleagues and I wondered if we could use our forest as a space for young children. We asked, "What would the children learn from being out there?" Another question I had was, "What draws children to build forts, seek and create hideouts, and make out-of-the-way places to play?" Among the many ways I came to understand the relationships between children and nature, I learned that children's common behaviors create a sense of place that extends beyond the simple act of building. Inside all of us are memories associated with place. They touch the core of who we are and inspire us beyond childhood, into adulthood. That childhood sense of place often has a huge influence on adult ideas. For children, the physical and sensory experiences of place imprint themselves on memory. I saw the children in my preschool class make magical connections to place in their excursions beyond the playground fence. The study brought together my roles as an artist, a teacher, and a daughter. For more information on this teacher research study, see *Voices of Practitioners*, Volume 5, No. 1 and see the chapter "Exploring the Forest: Wild Places in Childhood" in the 2012 NAEYC publication *Our Inquiry, Our Practice: Undertaking, Supporting, and Learning from Early Childhood Research(ers)*.

I also had a question about research itself. Could teacher research make any difference in my work with children? In this paper, I reflect on the influence of teacher research on my practice.

Collaboration and communication are interrelated dimensions of teacher research that have done the most to improve my own practice of teaching. When I went back to school to get my Master's degree, I read a lot of educational theory and research. I was inspired by the social constructivist theories of thinkers like Vygotsky and Bruner, but the research articles, most of which came from formal research done in controlled and seemingly sterile situations, were removed from my experience as a preschool teacher. I wished that I could read about research that was more like the documentation my colleagues and I were learning to make at our school. I wanted to share what I was learning with other teachers like me,

and to see what was going on in their schools as well. I started to wonder how all teachers might be able to show what happens in their classrooms and share their reflections. I thought maybe I would start with myself, and began looking for a place to publish my own reflections on being a teacher. Since I wrote my article in *Voices of Practitioners*, I have become more convinced that when teachers collaborate with each other by sharing our practice it can have a big impact, not only on the participating teacher's practice, but also with parents, administrators, and the public.

Using Teacher Research to Collaborate

Exploring the forest together has been one of the key ways teachers at Sabot School at Stony Point have collaborated over time. The very first step we did as a teaching staff when beginning this work was to read a book together about children and nature (*The Geography of Childhood: Why Children Need Wild Places* by Gary Nabhan and Stephen Trimble). By discussing the book chapter by chapter, teachers shared inspiration and excitement about the potential of going into a wild place with the children. The book discussions also exposed concerns about trying this new experience and gave us a chance to learn from each other how we might cope with our own fears. The group dialog helped us compare our personal experiences in nature, giving each of us courage to take risks. In this way, the project started as a collaborative effort, and even as different teachers began to take on their own unique explorations in the forest, the habits of sharing and discussing our process continued.

Each year Sabot teachers choose a topic that we would like to take on and learn more about. Throughout the years our teacher research questions have often involved learning more about the forest and how it can affect learning. The year after the children and I studied the forest, I studied the group process and the ways children represented the forest using art media. Other teachers' research focused on topics like how children find physical challenges for themselves and how to make better use of natural materials inside the classroom. For two years many of the teachers and their children spent the majority of their time outdoors, learning what happens when children have time to develop relationships with and in the forest.

Supporting each other through dialog

The teacher research projects were done in pairs or individually, but they often influenced the whole school. For instance, after watching how children interact with natural space, and seeing documentation of the natural playground built by the three year old children, the idea that children seek out physical challenges for themselves became part of our belief system at Sabot. The teachers talked about their research weekly, if not more often. This led to an informal system where teachers supported each other's research in many ways. Through dialog, teachers

became critical eyes and ears for each other assisting by brainstorming and looking for next steps in an investigation. Teachers also provided more practical support, by covering the playground so that another teacher could spend more time with a project group, or stepping in as a documenter with a video or still camera. At the conclusion of a project, teachers also helped each other make choices about how to create a final documentation, whether it was a video, a wall panel, or PowerPoint presentation.

Continuing to Learn Together

Since our preschool has merged with a kindergarten through eighth grade independent school, collaboration has become both more complicated and more important. Continued exploration of the relationship between the school and nature is one of the ways teachers have found to learn together. We now have a much larger forest because our school adjoins a wooded city park. Teachers use the forest in ways that are developmentally appropriate for the age of their students. For instance, the teachers of the kindergarten, first, and second grades have found that their children benefit from a longer time in the forest so that they can explore it in depth. These teachers give over the first half of every Friday for forest time. Many teachers use our natural space for science inquiry, so children have tested water quality, measured the force of water in the creek, and studied birds and insects. Middle school students run through the forest as part of physical education, while the two-year-old preschool class has carved out their own space at the edge of the forest so they won't have to hike as far. Witnessing (through documentation) the youngest children's discovery of their wild space teaches the whole school community how to slow down and really "see" nature.

During all of these projects teachers learned from each other because we shared our reflections and documentation with each other and the parents. This sharing was an ongoing process. We held discussions during staff meetings and reviewed our documentation, which included teacher or student written reflections, photographs, video, transcripts of children's conversation, and even poetry. Because we regularly shared the documentation, teachers learned from each other and built on each other's discoveries. For instance, when one teacher reported on her students' discovery of a new area in the forest; others wanted to find that space with their own groups. Even better, when she described and showed photographs of her children playing in and exploring the space, it helped other teachers be better prepared when they took their own classes to explore the same area. This use of documentation as a way of sharing knowledge between teachers is helpful so that teachers can be prepared for as many possibilities as possible. After learning there is a small stream that has been discovered by another group, she will take her own class to that area and have containers and nets for playing in the water available.

Exploring the forest and learning about supporting children in natural spaces has yielded many opportunities to research together at Sabot School at Stony Point. This is just one example of how the habits of teacher research can bring teachers together as collaborators and move a school forward. For me, the sense that I am not alone, that I have a community of teachers learning along with me, has been the most powerful benefit of taking on the role of teacher researcher.

Teacher Research—It Can be Done by Pre-Service Teachers

AMOS HATCH

What does teacher research mean in terms of higher education, in terms of working within early childhood teacher education, and building teacher research into programs for pre-service teachers? Can it be done? I teach at the University of Tennessee in our urban teacher preparation program, and one of my responsibilities there is to guide the action research projects of pre-service teachers in our program. All of our licensure programs are completed at the master's level. Students must earn a bachelor's degree in an arts and sciences major, and once admitted, they complete a minor in education. During their fifth year, students do an internship in the schools and take courses for master's credit. Part of the master's degree requirement is that they do a full-blown action research project during their internship year. While all early childhood preparation programs do not follow similar pathways, my experience has taught me that it is possible to do teacher research in many different kinds of teacher preparation programs with students from diverse backgrounds.

This paper will provide some reasons why we should include teacher research as part of teacher education, give examples of topics that my students are researching now or have done in the past, and provide suggestions for supporting pre-service teachers as they do this kind of work.

We want teachers who graduate from our programs to think of themselves as reflective professionals who are developing and learning throughout their lifetimes. Going through the process of teacher research can help future teachers internalize a model of *continuous improvement*. Once they start teaching, they may never do an action research project at the same level that we require at the university. But if they internalize the inquiry process and the logic and thinking behind that, it can have a positive influence on the way they think about their own development as teachers throughout their careers.

Often at universities, students read what they're assigned, and they process the professional literature in a superficial way that limits their understanding. They're thinking about the test, the required paper, or other academic requirements. With action research, students actually search the literature to answer real questions they have—to find out what other people are thinking about the same classroom issues that concern them. They want to find out how their questions

Why build teacher research into early childhood teacher education programs?

- ▶ Students learn to see themselves as problem solvers and change agents
- ▶ Students internalize the processes of systematic inquiry
- ▶ Students see the value of the professional literature
- ▶ Students contribute directly to the settings in which they are placed

have been addressed and so the literature takes on a different kind of meaning for our interns. I think that's a valuable kind of experience for students to have.

In the urban schools where we place our interns, as in most school systems across the country, the mentor teachers with whom we place students are under the gun. They've been beaten down. They've been on the *No Child Left Behind* list for years and now they are pressured by the teacher evaluation systems built into *Race for the Top*. They're perceived to be deficient by almost anyone who looks at data, or reads the paper, or believes the media. When we ask those schools to take our pre-service teachers, they are reluctant. They are used to arbitrary expectations and doing scripted lessons and often feel like robots. Our pre-service teachers, in some ways, are influenced by these perceptions about their placement schools and by the reactions of their mentor teachers. One valuable benefit from doing teacher research at the pre-service level is that you can challenge those perceptions. Teacher research offers a way out of the trap of being treated and coming to think of teaching as robotic.

We're asking a lot of the mentor teachers and when we place an intern in a school and with a teacher for a full year. The action research projects are a way for our students to give something back. Our student interns collaborate with their mentor teachers to identify issues that both agree are important to address through the action research project. They work together to design the research questions and topics. In this way the students are providing information and data that is helpful to the teachers in their decision-making processes. This is a way for us to say to the schools, to the teachers, "We have something to offer here. We're doing something that can contribute to the school and to the experience of the children."

Here's a list of some of the recent topics that our students select. Many of our students end up selecting topics like reading fluency and mathematics. These are skills for primary and kindergarten children that they select because of the performance pressures on the schools. However we see this as an opportunity to learn more about children's potential capabilities in those domains. The first two topics from the list, student self-regulation and culturally relevant teaching strategies, are examples of how selecting a topic and delving into the literature can change the perspectives of our interns and sometimes their mentor teachers. We say go out and observe, keep track of what's going on there for a while, talk to your mentor teacher, and come back with some potential issues that you might want to address in your project. And frequently they come back with, "We've got children in our class who don't follow the rules. We've got children in our class who don't care about moving their ducks from the pond to the lily pads (or whatever they're doing to manage children's behavior). That's not working for these children, so we've got to fix these children." So here's a chance for them to think about that differently, read the Vygotsky-based stuff. They read about self-regulation as a different way to orient themselves to what appear to be problems in the children.

Topic Examples

- ▶ Student self-regulation
- ▶ Culturally-relevant teaching strategies
- ▶ Math vocabulary development in ELL students
- ▶ Reading fluency and comprehension
- ▶ Science for high-performing students
- ▶ Culture circles in kindergarten
- ▶ Phonemic awareness
- ▶ Emergent literacy in ELL students
- ▶ Intrinsic motivation

The culturally relevant teaching strategies project happened recently. One of my students came back and said that she and her mentor teacher agreed that using music as a tool for developing the language skills of African American students in the class would be a good action research topic. I saw this as an opportunity to help the student extend her understanding of some of the key ideas about culturally relevant pedagogy through her action research project. All of our university students have a healthy exposure to culturally relevant teaching, reading and discussing the work of Delpit and Ladson-Billings, for example. But helping her see these ideas in the context of a real classroom made it come to life for her. Now she's thinking about her project in much richer ways and applying important theoretical concepts in meaningful and culturally appropriate ways. The teacher also benefits from this thinking.

Teacher research is a big undertaking. The word research makes some students apprehensive. There's not a lot of time to do it. Students have lots of other responsibilities. Teacher educators need to make the process more manageable so it is not overwhelming to students. I divide the process into steps beginning with helping the student identifying and developing research questions (in collaboration with the mentor teacher). Then the student does a review of the literature. For each step, students get direction from me and then work on that component and bring it back for discussion. They interact with their peers throughout the process. We do a writer's workshop when they put together their drafts of each section so they learn from each other and shape their drafts before getting feedback from me.

The process needs to be structured and it needs to be done piecemeal. I offer lots of support. We use examples from previous years' students to provide them with examples of high quality action research projects that have been written up in the past. When it's time to write up methods and procedures or findings, I provide them with good models of those sections. I've noticed that they follow the models that other students have used, even when it seems like they are not processing some of the ideas. I do face-to-face consultations throughout the project because part of the logic of all of this is that it's an individual process, it is contextualized. General advice is important, structure is important, but they need support for getting through their individual issues.

To conclude, this quote from a student, Emily, supports the importance of teacher research for my students. So yes, it can be done! That was the initial point, but further, I think it should be done. There's a critical role for teacher research in for the preparation of early childhood teachers. There are benefits for the university. There are benefits for instructors who are directing these kinds of studies, but the main benefits, I think, are for the students that we're working with and for the young children with whom they interact in the schools.

Tips for supporting pre-service teacher research

- ▶ Break process into manageable steps
- ▶ Provide lots of guidance and feedback
- ▶ Help with research questions
- ▶ Provide lots of examples
- ▶ Build in peer support (writers' workshop)
- ▶ Have individual face-to-face consultations

Emily's reflection on a study of developing self-regulation in kindergarten

- ▶ It was exciting for me to see how excited they were with themselves and to actually watch them as they were gaining understanding. I remember after just the second session, I was like "Oh my gosh. Maybe I'm really onto something here." So that was the high point for me—seeing their growth.

Teacher Research—It Can be Done

Conclusion

Whenever I am questioned about teacher research by school administrators, policy-makers, and parents, I always talk about the importance of this work for children. Because I know that everyone remembers a good story, I end up telling stories from my own teaching as well as from the work of my students and colleagues. These stories are always about how the practice of inquiry made a difference for a child, a class, a school. So, as I read the papers, I could not help but think that the power of teacher research and the real gift that lies in the stories that are told here. These narratives are all about the most important part of teaching—the connection between teachers and children—and they show how good teachers go about answering the perennial questions, “Are my students learning? How can I be sure?”

Answering these questions has everything to do with children’s learning socially, emotionally, and cognitively. Children who trust their teachers and feel good about being in school are children who are learning well every day and every way. Children whose teachers know them, whose teachers have taken time to watch carefully and listen actively and attentively, are children who develop confidence about themselves as learners. You see this in the stories that Vivian Paley tells of her beginnings; you see it in Anna Golden’s account of listening to the metaphors and analogies that her preschoolers developed for describing their investigations of their “woods;” you see it in Ben Mardell’s account of the impact of inquiry shared and engaged in as a team sport.

Andy Stremmel notes, “Inquiry demands an orientation to what matters.” What matters? It is always the children but the way to reach them is through good teachers. So the work of inquiry has to be understood as a powerful form of professional development—for the individual (Vivian Paley), for preservice teachers (Andy Stremmel and Amos Hatch), and for a school and a network (Anna Golden, Ben Mardell and Andrée Howard). The practice of inquiry follows a trajectory that takes the teacher into greater and greater understanding of the complexity of teaching and a concomitant refinement of practice. In the beginning and the end, it is always that connection between the teacher and the learner that is the focus. As the narratives presented here demonstrate, it can be done!

—Frances Rust

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