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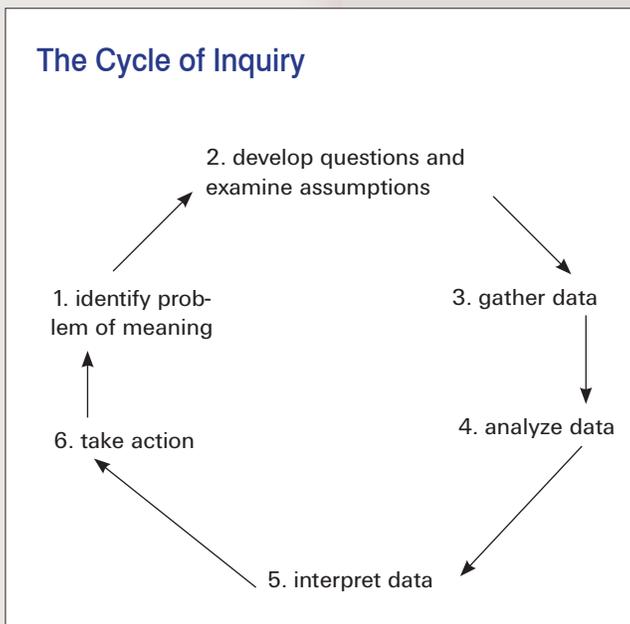
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The Nature of Teacher Research

Teacher research is intentional and systematic inquiry done by teachers with the goals of gaining insights into teaching and learning, becoming more reflective practitioners, effecting changes in the classroom or school, and improving the lives of children (Cochran-Smith & Lytle 1993; 1999). Teacher research stems from teachers' own questions about and reflections on their everyday classroom practice. They seek practical solutions to issues and problems in their professional lives (Corey 1953; Stringer 2007). The major components of teacher research are: conceptualization, in which teachers identify a significant problem or interest and determine relevant research questions; implementation, in which teachers collect and analyze data; and interpretation, in which teachers examine findings for meaning and take appropriate actions (McLean 1995). Teacher research is systematic in that teachers follow specific procedures and carefully document each step of the process—from formation of a question, through data collection and analysis, to conclusions and outcomes.

Teacher research takes many forms and serves a range of purposes, but it is conducted by teachers, individually or collaboratively, with the primary aim of **understanding teaching and learning in context and from the perspectives of those who live and interact daily in the classroom** (Meier & Henderson 2007; Zeichner 1999). These studies thus provide unique insider perspectives on meaningful issues in early care and education settings. A preschool or primary grade teacher, an infant/toddler caregiver, a family child care provider, or a home visitor begins an inquiry by asking a genuine question about the work in which she or he is engaged with children and families. Research questions can begin simply enough: "Should we allow pretend gunplay in any circumstances?" "How can I use storytelling to build literacy among bilingual preschoolers?" "What is it about me or my caregiving that helps me build securely attached relationships with toddlers?" Teacher researchers learn about themselves as teachers as they try to understand children's learning.

Let's take a more detailed look at the teacher research process. After defining the problem or interest, a teacher may draw upon a combination of theory and intuition, experience and knowledge of children, observation and reflection, and perhaps the experiences of valued colleagues to develop relevant questions and assumptions (hypotheses). These questions 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. Information (data) is collected through multiple means, which might include doing formal and informal observation, conducting interviews, collecting artifacts, or keeping a journal, to name a few. Assumptions may be reformed or reconstructed by gathering and analyzing evidence. Ultimately, discoveries are used to further reflect on and address the original problem, and the cycle of inquiry continues as the teacher lives out the process in the classroom. This process, often more messy and disorderly than may be implied here, is nonetheless a process of reflective inquiry as shown in "The Cycle of Inquiry."

The Cycle of Inquiry

2. develop questions and examine assumptions

1. identify problem of meaning

3. gather data

4. analyze data

6. take action

5. interpret data

Because the word *research* is often associated with the use of rigorous scientific methods, the term *inquiry* often has been preferred. However the distinction between teacher research and conventional outsider research about teaching is less about methodology and more about the very nature of educational practice (Anderson & Herr 1999). According to Dewey ([1933] 1985), education is best practiced as inquiry, and teacher research employs the "scientific approach" to inquiry. While some teachers regard inquiry as a natural part of their everyday work in the classroom (e.g., Paley 1981), some teachers collaborate with university researchers while teaching full time in their classroom or center, contributing insights to the questions under investigation (e.g., Booth & Williams 1998; Charlesworth & DeBoer 2000; Miller 1990; Nicholls & Hazzard 1993; Stremmel & Hill 1999). Whether reflecting on experiences in the classroom or systematically studying an issue, teachers are often in the best position to ask and answer questions about children and learning.

Children are at the forefront of teacher research. The studies are usually designed to help teachers gain new ways of seeing children, develop deeper understandings of children's feelings and growth, and become more responsive to children. Children's voices are heard through their own words and gestures, photos, drawings, and any other ways by which they are best portrayed. As teachers begin to observe closely, they see children's development played out in their own unique classroom contexts, always influenced by the potentially overlapping cultures of home and school lives. Unlike with conventional educational research, children and families are not *just* the subjects of research; they are participants and often co-researchers. In this way teacher research is participatory, inclusive of differences, and democratic in nature.

Teachers who research their classrooms are systematic and deliberate in their use of observation and reflection to make sense of what they see and experience. Reflection involves a teacher's deliberate scrutiny of his or her own interpretive

point of view, which is rooted in personal and formal theories, culturally learned ways of seeing, and personal core values. What distinguishes teacher research from teaching reflectively is the commitment to a disciplined method for gathering and analyzing data, and that the research can be publicly shared (Borko et al. 2007).

Although the questions and reflections teacher researchers explore are specific to their own classrooms, they enable teachers to relate particular issues to theories of teaching and learning via documentation and analysis; hence, teacher research links theory with practice (Bullough & Gitlin 2001). Teacher researchers attempt to create new knowledge (or what may be called *local knowledge*) about teaching and learning that will contribute to improving classroom practice.

Teacher research and *action research* are often used interchangeably in the literature, the latter being the preferred term in Britain (Cochran-Smith & Lytle 1993). Action research is broadly defined as a reflective process of progressive problem solving undertaken by individuals working with others as part of a community of practice to improve the way they address issues and solve problems. It is employed in many disciplines and organizations outside of education, such as by scientists or business leaders. As Meier and Henderson note (2007), not all teacher research is action research, although teacher research frequently shares the goal of some type of action to improve practice. Teacher research also flourishes when it is lodged within a supportive network of colleagues and mentors and becomes a collaborative activity.

Teacher research examples

The following brief examples illustrate the range of formats, teacher questions, and methodologies that might be used in early childhood teacher research. More examples of and information about teacher research can be found in this journal.

Example 1

Friendships: A critical incident study of two children

A teacher of toddlers presents a photo chronology of two children's social interactions as they use the classroom environment to promote their friendship. Six photos taken over two months show critical incidents in the children's budding friendship.

The teacher adds anecdotes to accompany the photos. She also includes her analysis of how this research has increased her understanding of how the toddlers' nonverbal communication within the environment impacts their relationship.

Example 2

Improving environments with voices and images of families

A Spanish/English bilingual teacher at a state-subsidized center serving a Latino population finds ways to make her center more homelike and comfortable for children and their families. She writes vignettes of her mother's history as a teacher in rural Mexico and offers a narrative of how this relates to her own personal growth as a preschool teacher.

These family memoirs help her understand and explore the kinds of changes she wants to make in the classroom environment and why.

She documents the impact of the changes by recording conversations with families about their feelings on the environment's redesign and with photos of the children and their families as they interact in the new environment.

Example 3

Understanding teaching through memories

A Filipina American teacher reflects on her English language learning as a first-grader and what it was like to attend parent conferences with her Tagalog-speaking parents. In both English and Tagalog, she tells a story of childhood shame and pride as her mother and teacher talked together. She uses her writing to consider how she supports English learners and their families in her own classroom.

Example 4

Seeing links through a home-based program

A home-based visitor from Early Head Start records and transcribes dialogues between a few parents and children with whom she works to evaluate an emergent literacy curriculum she has created. These transcripts allow her to document the effects of her intervention.

She sees results in parenting skills built through positive, low-stress opportunities for parent and child to interact over books and writing. Using these experiences, she argues that home-based programs offer families a powerful way to bridge home and school, as literacy practices become part of normal home life and parents see themselves as their child's first teachers.

Example 5

Children's behavior prompts a valuable metaphor

A veteran preschool teacher working in an inclusive classroom for transitional kindergartners finds a group of boys having persistent trouble concentrating during circle time. She begins taking field notes on the children's behavior and writes vignettes, which she shares with her colleagues. From these comes a metaphor of the Rolodex card file (as in "OK, how do I respond to this challenge? Let's see . . ." [*flip, flip, flip*]).

Using this metaphor allows her to shift her relationship with one capable child as she sees her own unintended rigidity. Instead of acting on how she thinks he should behave ("He can do this!"), she attends to his actual needs, which shifts his behavior and lets him build self-regulatory skills.

Narrative inquiry

Narrative inquiry, an important form of teacher research, is a process of studying and understanding experience through storytelling or narrative writing. Information is gathered for research through stories. The researcher then writes a narrative of the experience. "Humans are storytelling organisms who, individually and collectively, lead storied lives. Thus the study of the narrative is the study of

the ways humans experience the world" (Connelly & Clandinin 1990, 2). Those engaged in narrative inquiry seek ways to enrich and transform lived experiences for themselves and others. The process of story living and telling, and reliving and retelling, are central themes in narrative inquiry. Stories are a powerful way to sharpen our inquiry skills, bringing us closer to moments and incidents of learning both for children and for ourselves. Teachers make a conscious and deliberate effort to embed stories into daily observations of children at work and play and to use stories as a way to reflect and change their teaching. In the process, they can experience shifts and changes in their identities, shifts that create changes in the way they see themselves as teachers or see children as learners.

In inquiry, teacher researchers use field notes, interviews, journals, letters, oral stories, and autobiographical memories when collecting and representing their data. Two good examples are "Understanding teaching through memories" in this article and another article in VOP, "Exploring the Forest: Wild Places in Childhood." In the latter study, Anna Golden incorporates memories of her own childhood and work as an artist with stories of the children's and teachers' explorations and understanding of the importance of natural places to young children.

There are connections between narrative inquiry and action research primarily in that both are focused on change and action (Connelly & Clandinin 2006; Pushor & Clandinin 2009). For example, both narrative inquiry and action research can bring to light practitioner knowledge gained through the inquiry process. In particular, narrative inquiry enables practitioner researchers to tell the stories of how they have taken action to improve their situations by improving their own learning (McNiff 2007). Through telling their stories, they gain insights into what they are doing and why they are doing it. The process provides critical "points of contact" for deepening the curriculum, improving the quality of adult-child interactions, expanding opportunities for play, and seeing more effective ways to observe children and use these reflections for increasing teacher knowledge.

Perhaps nothing is more important than keeping track of the stories of who we are and who has influenced us along the way. As Connelly and Clandinin (1990) note, narrative inquiry produces a mutually constructed story out of the lives of both researcher and participants. It is through our shared stories that we become fully known to ourselves and others, and see new possibilities for educational change.

How do teachers benefit from doing teacher research?

Through teacher research, teachers have an opportunity to shape their professional development and to validate, affirm, and improve their practice. In every teacher research project, the voice or perspective of the teacher is as important as that of the children. Giving voice to an idea is taking ownership. As Ritchie states:

> Investigating their own questions, rather than waiting for someone to tell them what to do, empowers teachers to generate their own knowledge about "what works" in teaching and learning. Teachers who conduct research are engaging in ongoing, professional learning embedded in the workplace. It encourages them to be reflective and adopt a questioning stance toward teaching and learning—what Bob Fecho 92004) calls critical inquiry pedagogy. Teachers who improve classroom teaching/learning through their inquiries become more accomplished practitio-

ners. And, accomplished practitioners have a positive impact on student learning. In addition, the knowledge generated from classroom-based research can inform local policy decisions, by providing the evidence to back up teachers' claims about best practices. (2011)

As this book explores in Part II, teacher research benefits teachers, other professionals, and the field of early childhood education as a whole by providing an inside view of the diversity of teaching and learning in early education settings. When teachers undertake research, they deepen and improve their teaching relationships with children and with one another as professionals. The process offers an innovative approach to strengthening the professional development of early childhood professionals.

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