**Teacher-researcher methodology: Themes, variations, and possibilities**

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**Abstract:**

This analysis of teacher research studies illustrates the variety of choices teachers make in exploring questions within their own classrooms.

Teacher action research has a long and rich history (McFarland & Stansell, 1993; Olson, 1990), and there has been a recent renaissance of interest in teacher research (Baumann, Shockley-Bisplinghoff, & Allen, 1997; Cochran-Smith & Lytle, 1993; Lytle, 2000). This resurgence has resulted in the publication of numerous collections of teacher-research reports (e.g., Bissex & Bullock, 1987; Donoahue, Van Tassell, & Patterson, 1996; Patterson, Santa, Short, & Smith, 1993), teacher-research studies published as full-length books (e.g., Allen, 1995; Allen, Michalove, & Shockley, 1993), and articles appearing in periodicals such as The Reading Teacher, Teacher Research: A Journal of Classroom Inquiry, and Language Arts.

Although there are many excellent sources for selecting and applying specific methods in teacher-research studies (e.g., Brause & Mayher, 1991; Hopkins, 1993; Hubbard & Power, 1993, 1999; Mohr & Maclean, 1987; Sagor, 1992), we know much less about the methodological decisions teacher researchers actually make. In this article, we (a) summarize findings from a methodological analysis of published teacher-research studies, and (b) discuss what the results might suggest for the conduct of teacher-research investigations.

**Article:**

*Our study*

We conducted a qualitative analysis of methodologies employed in published literacy teacher-research studies (Baumann & Duffy-Hester, 2000). We selected studies according to a procedure called theoretical sampling (Glaser & Strauss, 1967, p. 45), whereby we generated a theory of methodology in teacher research as we analyzed the studies. This procedure allowed us to add or delete studies from the sample as our analysis progressed. To ensure that we examined a range of teacher-research studies, our sampling was guided by three criteria: (a) We selected studies published in different sources (journal articles, chapters in books, full books). (b) We included research on classrooms of various ages and grades (preschool through college-age students). (c) We included studies examining a variety of topics in literacy education (e.g., reading, writing, literature response, oral language). Our final sample consisted of 34 studies, which are listed in the Sidebar along with codes that specify our three selection criteria.
Our analysis employed the constant comparative method applied to written documents (Glaser & Strauss, 1967) and proceeded through five phases that produced trustworthy findings (Baumann & Duffy-Hester, 2000). We identified 16 categories that described methodology in teacher research, which were organized into four broad themes (see Table). These themes included (a) general attributes of teacher research, which revealed the source and evolution of teachers' research questions and how theory guided classroom inquiry and was generated from it; (b) process of teacher inquiry, which demonstrated that teachers often worked together on studies, learned from and with their students, and used inquiry to inform their teaching and learning; (c) teacher-research methods, which identified the practical, adaptive nature of methods teachers used in classroom studies; and (d) writing and reporting classroom inquiry, which revealed the various forms and structures teachers used to share findings from their inquiries.

We also looked at the frequency of occurrence of the 16 categories. Following each category in the Table is the percentage of the 34 studies that possessed that characteristic. Following the percentage are labels that identify three different clusters of studies according to their frequency. We labeled the pervasive characteristics of teacher research (present in 90%-100% of all studies) as Defining Categories. Categories that distinguished some studies from others (found in 59%-62% of all studies) were labeled Discriminating Categories. Lower frequency (26% of all studies), but still informative, methodological traits of teacher research were designated as Negative-Case Categories.

A sample category
To illustrate how we arrived at these categories, we describe Category C: Theoretically driven: Existing theory--presented through written texts or collegial dialogue--inspires, guides, supports, or informs teachers in their own inquiries (i.e., theory Arrow Right teacher research). While critics of teacher research often contend that classroom research is not scholarly and theory based (see discussions in Allen & Shockley, 1996, and Patterson & Shannon, 1993), we found that not to be the case. Teacher research is grounded on a knowledge base that guides and informs classroom studies. The majority of the reports we examined included literature reviews that demonstrated that teacher researchers were familiar with existing research and theory.

For example, Stephanie Harvey and her research colleagues (Harvey et al., 1996) studied ways to incorporate comprehension synthesizing activities into their primary-grade classrooms. They found that their "review of related research on synthesizing helped the group define the strategy," noting that they "connected current research findings and teaching practices to form new visions of synthesis instruction" (p. 573).

Similarly, in their exploration of whole language, Marianne Newton, Doris Nash, and Loleta Ruffin (1996) found that by reading the professional literature they were able to make "natural connections between the research others had done and what we were trying to do with the children in our classrooms" (pp. 83-84). Whether the literature reviews in their published reports were extensive (e.g., Harvey et al., 1996; Thomas & Oldfather, 1995) or concise (e.g., Cline, 1993; Wood, 1993), most all teacher researchers relied on published theory and research to guide them in their own inquiries.
Theoretical grounding also came in the form of personal contacts. Nancie Atwell (1985) related how a research consultant brought “authority as a teacher and researcher [and] a wealth of knowledge” (p. 179) to their research team. Judy Caulfield (1996) found that informal conversations with a fellow teacher researcher enrolled in a university class enabled them to share ideas and support one another. Sara Allen (1992) reported how her department chair challenged her to engage in a study of student-sustained discussion in her senior English class. Teacher researchers also added their own experience as theoretical grist. Joan Kernan Cone (1994) noted how "my own work as a classroom teacher" (p. 72) helped inform her exploration of efforts to transform high school students into self-motivated, lifelong readers. Thus, our analysis revealed that teacher research is not atheoretical. Teacher researchers confer with colleagues, take courses and attend workshops on research, and read professional materials.

A typical teacher researcher
If we were to portray a typical teacher researcher and teacher-research study on the basis of the four themes and 16 categories, we would characterize them as follows:

A reflective elementary, secondary, or postsecondary classroom teacher identifies a persistent teaching problem or question and decides to initiate a classroom inquiry. This teacher reads theoretical and applied educational literature, including other teacher-research reports, and decides to work collaboratively with a colleague. Using primarily practical, efficient, qualitative methods recommended by other teacher researchers, with perhaps a quantitative tool added in, the researcher initiates a study. The teacher learns from and along with students while engaging in the investigation, and she or he finds that the research questions have been altered somewhat throughout the course of the study. The investigator may struggle to balance the dual role of teacher and researcher or feel uneasy with the innovations that are explored. The teacher researcher decides to share the research story publicly and writes it for publication, using a narrative style that includes figurative language and verbal and visual illustrations.

Issues for classroom inquiry
What does our study of methodology suggest to teacher researchers? We do not view our analysis as prescriptive; that is, the themes and categories do not provide "how-to" kinds of implications for teacher-research methodology. Rather, we see four important issues emerging from our study: (a) the commonality and diversity of teacher-research methodology, (b) the methodological evolution in classroom inquiry, (c) the need to support teacher researchers, and (d) the definition or essence of what it means to be a teacher researcher.

Commonality and diversity. There were some pervasive characteristics of teacher research. In fact, 12 out of the 16 categories met the criterion for Defining Categories (see Table). For example, teacher researchers universally generated questions from within their own classrooms (Category A), were reflective in their teaching and research (Category E), learned from their students throughout the course of their studies (Category G), and employed practical, efficient methods for addressing their research questions (Category K). These almost universal characteristics of teacher research are represented in the preceding description of a "typical" teacher researcher and study.
There was also variation in teacher-research methodology. The Discriminating Categories differentiated some studies from others. For example, some researchers reported that initial research questions were modified while other researchers did not (Category B). Likewise, the change and risk taking that is a part of teacher research caused some teacher researchers to feel uneasy with their innovations, whereas this was not so for others (Category I).

Additional diversity was evident through the low-frequency, Negative-Case Categories. Whereas simultaneously engaging in teaching and research was a reinforcing, symbiotic phenomenon for some teacher researchers, others reported occasional tension between the roles of teacher and researcher (Category J). Although teacher researchers employed qualitative methods in all the studies we examined, several also gathered and analyzed quantitative data to extend or complement their qualitative findings (Category M).

We also found variation within themes. For example, collaboration was a common theme, but it came in many forms. Several collaborations involved teams of exclusively school-based (e.g., Newton et al., 1996) or university-based teacher researchers (e.g., Commyeras, Reinking, Heubach, & Pagnucco, 1993). Others involved mixes of school and university researchers (Allen et al., 1993). Some teacher researchers invited other persons to participate in the research process; for example, Carol S. Avery (1987) involved a parent in her study, and Sally Thomas and Penny Oldfather (1995) had students in Sally's classroom serve as coresearchers. Thus, we found both commonality and diversity in the methodology classroom researchers employed.

**Methodological evolution.** The pragmatic, action-oriented nature of classroom inquiry warrants responsive methodological solutions, and teacher researchers often reported that their methodological tools and perspectives evolved along with their questions. For example, in their study of the literacy development of children they worried about, JoBeth Allen, Barbara Michalove, and Betty Shockley (1993) found that their attempt to employ complex, qualitative analyses of student-teacher dialogue bogged them down: "We decided that we did not like our analysis process.... [Betty] said, 'I'm worried that we're missing the forest for the trees'" (Baumann et al., 1997, p. 133). The team, therefore, abandoned the detailed dialogue analysis procedure and instead created a more holistic analysis process, interpretive dialogue, which enabled them to alleviate "the dread we had been feeling about line-by-line coding [by replacing it] with an eagerness to read, write, ponder, discuss, and construct a meaningful interpretation" (p. 133).

Similarly, Judy Caulfield (1996) revised her procedures for analyzing children's language development through storytelling. Whereas she initially focused on "false starts" such as repetitions or saying "um," she later realized that "this kind of analysis, however, did little to give me insight into the students' language use" (p. 52). After reading more of the discourse analysis literature, she came "to a new understanding of what I had labeled as false starts" (p. 53), viewing them as forms of rehearsal and elaboration rather than storytelling dead ends. As Caulfield and Allen et al. (1993) found, procedures for collecting and analyzing data may evolve throughout the course of a teacher-research project.

**Supporting teacher research.** Our methodological analysis reveals the power of practitioner research to inform teachers about their classroom worlds and to transform their thinking and
actions about literacy teaching and learning. Given these benefits, how might teacher researchers be supported and encouraged? We see viable possibilities at the university, through professional organizations, and within schools themselves.

Those at the university can make efforts to promote teacher research in several ways. If universities do not already offer courses in teacher research or action research, faculty might search for expertise in the university or school community to create and staff such courses. Professors might offer students the option of conducting a teacher-research project to fulfill a course requirement. University faculty might also promote collaborative inquiries between universities and school district personnel, of which there are numerous examples (e.g., Allen, Carey, & Delgado, 1995; Cochran-Smith & Lytle, 1993; Gitlin et al., 1992; see an extended discussion in Lytle, 2000). One important consideration in any teacher-research study, particularly those involving university collaborations, is to make certain that researchers obtain approval from their local institutional review board to engage in research with human participants.

Professional organizations can provide other support structures and services. For example, both the International Reading Association (IRA) and the National Council of Teachers of English (NCTE) have teacher-research committees, and each has a grant program to fund teacher research. The publications programs of both organizations also support teacher-research books and monographs (e.g., Donoahue et al., 1996; Patterson et al., 1993), and IRA has a series of informative brochures prepared by members of their teacher-research committee: Getting Started on Teacher Research (Van Tassell, 1996-1997), Methods of Data Collection for Teacher Research (Donoahue, 1996-1997), Caring to Share: Ways for Teachers to Share Their Research (Dillard & Bintz, 1996-1997), and Local Councils Can Support Teacher Research (Santa, 1996-1997).

In addition, there are various Web sites that provide information about teacher research. The following is a small sampling, but most Web sites provide links to still others: Networks: An Online Journal for Teacher Research (www.oise.utoronto.ca/~ctd/networks), Teaching Today for Tomorrow (www.7oaks.org/ittt/), Action Research at Queen's University (http://educ.queensu.ca/~gr), Collaborative Action Research Network (www.uea.ac.uk/care/carn/), Teacher Inquirer: British Columbia Teachers' Federation (www.bctf.bc.ca/inquirer/), National Writing Project (http://nwp.berkeley.edu), and Ontario Action Researcher (www.unipissing.ca/oar/index.htm).

Finally, school districts can support teacher research in a variety of ways. Building and district administrators can simply encourage teachers to engage in classroom studies, and they can provide inservice programs on how to get started in teacher research. Administrators can support teacher research in more tangible ways, such as providing funds for teacher-research minigrants, for faculty to attend workshops on teacher research, and for teacher researchers to report their research at professional meetings.

**What it means to be a teacher researcher.** Teacher research is usually defined or explained in terms of several features (Baumann & Duffy-Hester, 2000): (a) teacher researchers have an insider, or emic, perspective; (b) they mix theory and practice (praxis) while teaching and
researching within their classroom worlds; (c) teacher research is pragmatic and goal oriented—there are practical classroom problems that need to be solved; and (d) teacher research involves disciplined inquiry (Shulman, 1997), which means that studies are intentional and systematically conducted.

How might our methodological analysis inform teacher researchers in the future? Our analysis did indeed uncover common threads, affirming the preceding features of teacher research. Our themes and categories create a detailed portrait of teacher research, an integrated musical composition of classroom inquiry. This composition may enable teacher researchers to have a better sense of the types of questions, studies, and methodological decisions their research colleagues commonly make, providing them the confidence of precedent in making such decisions themselves.

But an examination of methodology in teacher research also reveals variation—themes that are manifest in diverse ways, and methods that evolve as the research question and setting dictate. Thus, teacher research is more a family album than an individual portrait, more a kind of methodological fugue that varies in voice, tempo, and tone rather than a monophonic melody. As a result, our findings should not be used as a benchmark against which other teacher-research studies or teacher researchers should be compared. We concur with Atwell (1991) who stated, "I worry about attempts to package teacher research as another formula to be followed" (p. xvi). Rather than a blueprint, we view our findings as representing an array of possibilities from which teacher researchers might choose or use to guide them as they select or invent their own methodological solutions within their classroom inquiries. While our analysis may outline choices for teacher research, it does not reveal a script. This lack of prescription relates ultimately to what it means to be a teacher researcher: a reflective, goal-directed, action-oriented, inquirer who explores personal questions in practical ways within the classroom setting.

**Themes and categories of teacher-research methodology**

**Theme 1: General attributes of teacher research**
- A. Questions from within: Teacher research is prompted by the problems teachers face and the questions they pose within their own classrooms. (100%). Defining Category
- B. Question evolution: Research questions are modified as teachers conceptualize and implement a classroom study. (59%). Discriminating Category
- C. Theoretically driven: Existing theory—presented through written texts or collegial dialogue—inspires, guides, supports, or informs teachers in their own inquiries (i.e., theoryArrowRightteacher research). (97%). Defining Category
- D. Theoretically productive: Engaging in teacher research leads to the creation or development of theories of teaching, learning, and schooling (i.e., teacher research ArrowRighttheory). (94%). Defining Category
- E. Reflective: Teacher researchers are reflective practitioners. (100%). Defining Category

**Theme 2: Process of teacher inquiry**
- F. Collaborative: Teacher researchers conduct research with peers, students, families, or college faculty as co-researchers or collaborators. (91%). Defining Category
- G. Instructive: Teacher researchers learn from their students. (100%). Defining Category
- H. Clarifying: Classroom inquiry enables teachers to make sense of their classroom worlds. (94%). Defining Category
I. Unsettling: Because classroom inquiry involves change and risk taking, teacher researchers may feel uneasiness with innovations or changes they examine in their classrooms. (62%).

Discriminating Category
J. Compatible or discordant: Engaging in research and teaching are mutually reinforcing processes for some teacher researchers, whereas others experience tension between them. (26%).

Negative-Case Category
Theme 3: Teacher-research methods
K. Pragmatic: Teacher researchers employ methods on the basis of their practicality and efficiency for addressing research questions. (100%). Defining Category
L. Versatile: Teacher researchers select, adapt, or create qualitative research methods for collecting and analyzing data. (100%). Defining Category
M. Complementary: Teacher researchers supplement qualitative research methods with quantitative methods. (26%). Negative-Case Category

Theme 4: Writing and reporting classroom inquiry
N. Narrative: Teacher researchers employ a narrative style when reporting classroom inquiries. (94%). Defining Category
O. Illustrative: Teacher researchers document findings by including excerpts of transcripts and interviews or reproducing student work and artifacts in research reports. (91%). Defining Category
P. Figurative: Teacher researchers use research vignettes or metaphors to convey key points and ideas. (94%). Defining Category

Notes. Parenthetic percentages indicate the frequency with which a category was present across the 34 studies examined. Labels following percentages identify category clusters: Defining Categories = 91%-100% representation across the studies examined; Discriminating Categories = 59%-62% representation; Negative-Case Categories = 26% representation.


Teacher-research studies analyzed
Following each reference is a three-part code. The first part identifies the type of teacher-research publication (A = journal article; B = full book; C = chapter in an edited book). The second part identifies the age or grade of research participants (EC = early childhood, including preschool, kindergarten, and Grades 1-2 children; EL = elementary children in Grades 3-5; M = middle school or junior high students in Grades 6-8; H = high school students in Grades 9-12; C = college-age students). The third part identifies the content foci for the studies (C = comprehension, D = discussion, I = integrated language arts, LR = literature response, O = oral language, R = reading, S = spelling, W = writing, WL = whole language). We acknowledge the limits and subjectivity of our classification system, particularly with respect to the content focus designations.

Harvey, S., McAuliffe, S., Benson, L., Cameron, W., Kempton, S., Lusche, P., Miller, D., Schroeder, J., & Weaver, J. (1996). Teacher-researchers study the process of synthesizing in six primary classrooms. Language Arts, 73, 564-574. A, EC, C

References


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