

## The Learning and Perceptions of Teacher Researchers and Facilitators in a Literacy-Focused, Teacher-Research Course: A Content Analysis of System, Learner, and Spheres of Influence

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### **Abstract:**

The purpose of this research was to add to the knowledge base of teacher research in literacy education by focusing on the inquiry processes and learning of literacy teacher researchers from their perspectives. We accomplished this goal through presenting the voices of the teacher researchers, providing individual and collective voices and perspectives that are sometimes missing in discussions of literacy teacher-research inquiries. Using qualitative content analysis methodologies, our results indicated that these educators learned about themselves as system members, learners, and change agents within varying spheres of influence. We provide discussion and implications for research and practice, including conducting teacher research beyond the support of a university community and the constraints that teacher researchers face in this current political climate.

### **Article:**

*It has been like putting a spotlight on the classroom to see where we are going, and where we have been.*

The above quote came from Sharon (pseudonym), one of the teacher researchers in our Teacher as Researcher course, as she explained what she learned from conducting teacher research. Sharon's words summarize our attempts to put a "spotlight" on our own work as teacher-research facilitators and literacy teacher educators in the university setting, and on the voices of the teacher researchers with whom we worked. The purpose of this research is to examine what we learned from working as "scholar teachers" (Moss, 1994) with teacher researchers in two year-long courses designed for experienced educators who were pursuing graduate degrees in reading education and to address how participation in a literacy teacher-research course affected these educators' knowledge and perceptions of instruction and research.

### **Review of the Literature**

Teacher research is included regularly in literacy journals for educators such as *The Reading Teacher* and *Language Arts*, and an increasing number of teacher-research articles and books have been published in the area of literacy education in elementary (e.g., Paley, 1997; Von Dras, 1990), secondary (e.g., Allen, 1995; Atwell, 1987), and university (e.g., Altieri, 1998);

Commeyras, Reinking, Heubach, & Pagnucco, 1993; Mosenthal, 1995) settings. In addition to learning from the results of these studies, we became interested in their surrounding contexts, that is, the nature of the thinking, discussion, and learning that occurs as teacher researchers develop and implement their inquiries; and the effects that these inquiries have on the educators who conduct and facilitate them. This review focuses on the processes and effects of teacher research, on the knowledge of the educators who conduct this research, and on the role of the literacy teacher educator in supporting teacher researchers as they examine and reflect upon their practices in teacher education programs.

### *Process and Effects of Literacy Teacher Research*

Proponents of teacher research cite many positive influences for both teachers and students. These influences include helping teachers to: (a) learn about research (e.g., Cochran-Smith & Lytle, 1993; Lampert, 2000; Shulman & Brandt, 1992), (b) improve instruction (e.g., Henson, 1996); (c) connect with other teachers and colleagues (e.g., Burnaford, Fisher, & Hobson, 1996; Hubbard & Power, 1999), (d) bring about change in classrooms, schools, and educators' thinking (e.g., Anderson, Herr, & Nihlen, 1994; Grisham, 2000), and (e) gain new understandings of students (e.g., Hubbard & Power, 1999). In summarizing the positive effects of teacher research on educators, Henson (1996) explained that they "experience a variety of positive changes in themselves" (p. 56), including expanding their commitment to developing a variety of teaching methods, increasing reflection on their own practices, openness toward learning more about "everything in general and teaching in particular," and a positive attitude change in self and toward others. Although we know a great deal about the effects of teacher research on teachers in general, less is known about the effects on literacy educators in particular, sparking recent calls for literacy teachers to study their own practices. Allington (2001) described how literacy teachers learn about their own pedagogy through Teacher Inquiry Projects (TIPs). He asserted that such research affected the teachers conducting the research by developing their instructional abilities:

I have become convinced that local research, teacher inquiry, is a necessary component in developing the instructional capacity of teachers. It is the thoughtful reflection on the complications of teaching our students in our classrooms that exposes "quick fix" solutions as largely offering "mythological" advantages .... A second argument for supporting TIP activities in the quest for improving instruction is that the most powerful source of evidence for the benefits (or lack thereof) of an instructional shift (or a shift in organizational patterns) is the data gathered by teachers in their classrooms. (p. 115)

Given the current political context, why conduct teacher research? Cochran-Smith and Lytle (1999) believed that the resurgence in the popularity of teacher research may be due to the political context, that " 'blaming' teachers for the failure of American education reinforced the idea that teachers could ... make a difference by virtue of the decisions they made on a day-to-day basis" (p. 16). With the abundance of scripted curricula and the pressure to teach to the test, particularly in literacy, teacher research represents a way for teachers to understand the complexities of classroom life. Anders, Hoffman, and Duffy (2000) suggested that teacher research provides one way that teacher educators can help teachers analyze instruction "and then, in a thoughtful way, construct appropriate response. In doing so, professional knowledge ... is perceived not as an end in itself but as grist for thinking and problem solving" (p. 733).

Although the benefits of teacher research have been discussed in the literature, we view our research as adding to the knowledge base of teacher research in literacy education for two reasons. First, our research focuses on the processes and learning of literacy teacher researchers from their perspectives, explaining not only the effects of teacher research per se, but on the process involved concerning how these effects were realized. Second, we ground our research in the voices of the teacher researchers themselves, providing individual and collective voices and perspectives that are frequently missing in discussions of literacy teacher- research inquiries.

### *Role of the Literacy Teacher Educator in Teacher Research*

One of the challenges in teacher education is to provide teachers with an extensive foundation of knowledge applicable in a variety of situations. However, knowledge alone is not enough. Teacher education must also help teachers “reflect and reconceptualize facets of their teaching” (Onosko, 1992, p. 43), deal with the pressing demands of accountability and high-stakes testing, and promote K-12 student learning and achievement (Cochran-Smith, 2001). In other words, the current reform agenda in teacher education concerns both what a teacher knows and what a teacher produces.

Providing opportunities for K-12 educators to conduct teacher research can aid teacher educators in reaching these goals of increasing teacher knowledge and student achievement (Cochran-Smith, 2001; Darling-Hammond, 2000). Typically, teachers learn about teaching from research done by individuals who are not practitioners, rather than studying their own classrooms and learning from their own inquiries. As Cochran-Smith and Lytle (1993) explained, “because teacher research interrupts traditional assumptions about knowers, knowing, and what can be known about teaching, it has the potential to redefine the notion of a knowledge base for teaching” (p. xiv). They concluded that, through teacher research, educators come to know more about all areas of their practice and plant the seeds of change and reform in teacher education and professional development.

Given the potential of teacher research in teacher education programs, and the recent push to include teacher research and reflective practice ideals in university-based teacher education programs (e.g., North Carolina Department of Public Instruction Performance-Based Licensure Process, 1998-99), increasing numbers of university-based educators are being asked to teach courses that include a teacher-research component. In order to develop “reflective practitioners” (e.g., Schon, 1983, 1987) who can use teacher research to improve their practice, it is essential that teacher educators explore optimal ways to support teacher researchers in their knowledge growth and development. In their chapter on reading teacher education in the *Handbook of Reading Research*, Anders, et al. (2000) concluded, “We must commit our energies to studying our programs, our courses, our teaching, and our expectations and requirements. In short, it means consenting to be the subject of study ourselves. It will take courage and creativity. Now is the time to start” (p. 734). Although teacher educators increasingly serve as teacher researchers or “scholar teachers” (Moss, 1994) and learn from their students in the university or classroom setting (e.g., Baumann & Ivey, 1997; Fitzgerald, 1996; Gill & Dupre, 1999; Mosenthal, 1995; Zeek, Walker, & Fleener, 1997), little research has focused on the role of the teacher educator in supporting teacher researchers in literacy education. Hoffman and Roller (2001) concluded, “We are a community of reading researchers active in teacher education who have not been systematic about studying our own practices” (p. 33). Thus, research is needed that explores this role.

## *Methods*

### **Researcher Perspectives and Context**

We are former elementary school classroom teachers and reading specialists who are now teacher educators and researchers at the university level. We both value and conduct teacher research as a part of our own growth and development as teachers and researchers (e.g., Duffy, 2001; Duffy-Hester, 1998; Massey, 2002a).

Our study focuses on two yearlong teacher-research courses. These graduate level courses were designed for kindergarten- through university-level literacy educators. We were members of and served as facilitators in the learning communities in the courses. We conducted our own research outside of this course and shared our investigations with the other members of the learning community. During the first course, Ann studied her own teaching and conducted a teacher-research study focusing on the "possibilities and pitfalls" that both she and the teacher researchers experienced as she taught the teacher-research course for the first time (Duffy & Atkinson, 2001). Dixie was a participant in this class who was conducting a teacher-research study on her instruction of an elementary reading education course (Massey, 2002a). Because of her educational and research expertise, she also became a mentor to many of the teacher researchers in the group. During the second course, Dixie served as a participant observer and conducted research with the participants in the course, and Ann served as the course facilitator and was responsible for the grading. Dixie continued her mentoring role for this new group of teacher researchers and helped Ann to reflect on, improve, and structure the instruction and learning that occurred in the course.

In the first semester of each course, the students learned about teacher research, read and discussed various examples of teacher research, formulated a research question, reviewed extant literature related to their research, discussed possibilities for data collection and analysis, wrote a research plan that was submitted to the Institutional Review Board (IRB) at the university, obtained parent and principal permission to conduct research, and began collecting data. In the second semester of the course, students read and discussed examples of teacher research, discussed the data collection and analysis procedures that they employed, and wrote and shared a research paper based on their own research. Required texts for the course were *The Art of Classroom Inquiry: A Handbook for Teacher -Researchers* (Hubbard & Power, 1993), *Living the Questions: A Guide for Teacher-Researchers* (Hubbard & Power, 1999), and other readings selected by the teacher researchers in the course based on their interests and needs. Supplemental texts for the course were *Action Research: A Guide for the Teacher Researcher* (Mills, 2000) and *Teachers Doing Research: Practical Possibilities* (Burnaford, et al., 1996). In conducting this research with the participants, Ann and Dixie modeled collaboration through teacher research, contributing to their own understandings of teacher research and to the participants' understandings of the research process.

## Participants

All students chose to participate in this research. During the first year of the course, five teacher researchers participated in this research. All were female, European-American, enrolled in a reading education Master's degree program, and experienced teachers. During the second year of the course, ten students chose to participate in this research. All had been or were currently elementary or middle- grade teachers and all had completed or were completing a graduate degree in reading education. Of the nine women and one man, one participant was African American and the others were European American. (See Table 1 for a detailed description of participants and their research topics.)

**Table 1. Description of Participants**

	<b>Descriptive data</b>	<b>Description of teacher research project</b>
Cindy	Eight years teaching elementary school, adjunct college instructor.	Used comprehension strategies, authentic literature, and collaborative learning (instead of practice tests and worksheets) to prepare her fifth grade students for End of Grade tests.
Whitney	Fourth grade teacher, in her third year.	Used a variety of cooperative groups as a way to motivate her students to read.
Shelia	Fourth grade teacher, in her third year. Shelia and Whitney taught at the same school.	Examined how picture books could be used to model reading and writing strategies as well as increase motivation for her students.
Ryan	Sixth grade Language Arts teacher, in third year.	Students chose high-interest, authentic texts. Ryan looked at how these choices motivated his students and increased their critical thinking skills
Jennifer	Four years as a regular classroom teacher; currently taught in a pull-out compensatory education program.	Provided struggling readers with high-interest, instructional leveled text and conducted reading strategies lessons to improve comprehension and fluency.
Karen	Fourth year teaching, second year teaching second grade.	Used reading conferences in an after-school tutoring program to provide individualized, intense reading intervention for struggling readers.
Karissa	Previous experience teaching third and fourth grades; currently taught preschool for four-year olds in a church-sponsored school while her own children were young. Planned to return to regular classroom.	Examined the impact of print rich environment on preschoolers independent writing activities.

	<b>Descriptive data</b>	<b>Description of teacher research project</b>
Korina	Special education teacher in her second year. Worked in a self-contained classroom with four behaviorally and emotionally disturbed boys.	Reviewed how a mandated reading incentive program (Accelerated Reader) could be adapted to encourage her students to read and write. Also looked at how to help her students choose books appropriate to their reading levels.
Kristen	Taught five years as a first and second grade teacher; currently a full-time graduate student. Planned to return to the classroom after her graduate degree.	Examined how word study might affect struggling readers' spelling and reading abilities. Because she did not have her own classroom, she conducted her research in Ryan's sixth grade classes.
Cassidy	First grade teacher in her third year.	Integrated word study into five different guided reading groups to provide appropriate instruction for students at a variety of levels.
Laura	Middle school reading and resource teacher with over 20 years of teaching experience.	Examined motivation of middle school readers.
Sharon	First grade teacher in her fourth year of teaching.	Studied a variety of grouping techniques to meet the reading and social needs of students.
Mary	Third grade teacher in her seventh year of teaching.	Used cross-age tutoring to enhance reading motivation.
Nancy	Second grade teacher in her third year of teaching.	Research focused on the effect of read alouds on students' independent reading book choices and motivation.
Anna	Elementary resource teacher who worked in 2nd and 3rd grades for the research study.	Focused on using poetry with struggling readers and writers.

In total, then, 15 teacher researchers and two university facilitators (Ann and Dixie) chose to participate in this study. The teachers in the course had the opportunity to research any topic of interest related to literacy instruction. Eighty-seven percent of the teacher researchers (13/15) chose a topic that included the achievement or engagement of the struggling or reluctant readers in their classrooms.

### **Data Sources and Analysis**

Data sources included our teaching/research journals, our field notes of the teacher-researchers' comments made during class meetings, the teacher-researchers' journal entries and reflections, informal and formal conversations and interviews, sociograms, the teacher-researchers' formal and informal presentations about their research, and the teacher-researchers' final research papers. Our selection of data sources was informed by accepted qualitative methods of research and the guidelines established by the IRB at our university in relation to conducting research with students and preserving confidentiality. Through our data, we wanted to provide rich descriptions of the participants as we tried to capture the teacher researchers' points of view and understand the constraints of the context (Denzin & Lincoln, 2000). We strengthened our study through two types of triangulation. Data triangulation was insured through the use of multiple data sources over time. Investigator triangulation was insured through our ongoing, analytic conversations that occurred during and after our implementation of this research.

Data analysis occurred in seven phases. We analyzed the data through a qualitative content analysis (Patton, 1990). In Phase I, informal analysis, Ann reflected on and modified her instruction as she read, commented on, discussed, and graded students' written assignments. In this phase, she reflected on the events that took place in the teacher-research class in formal

reflective essays, took field notes, and recorded her reflections in a teacher-research journal. Dixie reflected on her own learning during the first year of the teacher-research class, took field notes, and reflected on classroom events and discussion during the second course. We discussed the class informally throughout both courses, in order to fully ground our unique role as university facilitators and researchers (Denzin & Lincoln, 2000). In Phase II, independent coding, we coded our data separately, writing analytical and methodological memos on the data sources. In Phase III, independent, initial category creation, we used our memos independently to discover the potential categories that emerged from the data. Some of the initial categories included "Support Seeking," "Activism," and "Student Voices." These categories were meant to reflect how the teachers shared their questions in class, tried to bring about change in their classrooms and schools, and the importance of what the elementary students said to the teacher researchers. In Phase IV, independent category confirmation, we documented positive and negative cases within each of the categories, and reworded or discarded categories as necessary based on the results of the confirmation process. In Phase V, analytic conversation and category convergence, we began sharing our results with each other, discussing the categories that emerged in our respective analyses and discovering overlap between our sets of categories. We then listed these common categories and returned to our respective data sets to confirm or negate the common categories. We considered an item to be a category if it was evident in multiple data sources for most of the participants across both cohorts of teacher researchers. In Phase VI, informal and formal member checks, we asked the participants to clarify individual comments that they made and to verify our initial categories for informal member checking. Formally, we distributed a final draft of this article to all participants and invited their feedback, revisions, and edits. This provided the participants with the opportunity to include their voices in another way and insured that we did not misrepresent their perspectives. None of the participants who responded suggested any changes to this article. In Phase VII, audit, we asked a colleague familiar with teacher research and qualitative analysis to serve as an auditor. Based on his audit, we clarified our participant selection guidelines, detailed the procedures that we utilized to preserve participant confidentiality, added to the explicit discussion of the limitations of our research, and included our procedures for member checking. He concluded that, "this study was properly planned, conducted, and analyzed. The researchers made consistent efforts to ensure that the study's methodology was properly aligned with the research focus. In addition, their methodology as it relates specifically to data collection and analysis established a high degree of rigor and trustworthiness."

### *Results and Discussion*

Three themes served to structure what the teacher researchers and facilitators experienced as a result of participating and facilitating teacher research: educator as system member, educator as learner, and educator as change agent within varying spheres of influence. Within these themes, categories and properties emerged that served to detail the learning of the participants (see Table 2). With the exception of the authors' names, all names used in this section are pseudonyms to preserve the confidentiality of the participants.

**Table 2.** Themes, Categories, and Properties of Teacher Researchers' and Facilitators' Learning

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- i. Educator as system member
  - Category A: University system
    - Property 1: Institutional Review Board (IRB) constraints
    - Property 2: University-based community
  - Category B: School system
    - Property 1: Testing constraints
    - Property 2: Reading program constraints
    - Property 3: Classroom and school constraints
- ii. Educator as learner
  - Category A: Learning about research
    - Property 1: Questions about research
    - Property 2: Valuing research
  - Category B: Learning about ourselves
- iii. Educator as change agent within varying spheres of influence
  - Category A: Changes in the microsystem
    - Property 1: Change in interactions with, or understanding or instruction of students in the classroom
    - Property 2: Change in interactions with or enhanced understanding of families of students
  - Category B: Changes in the macrosystem

### *Educator as System Member*

The teacher researchers learned about and managed several systems through their work. These system categories included the university system (i.e., Institutional Review Board (IRB) constraints and the university-based community) and the school system (i.e., testing constraints, program constraints, and classroom constraints).

**University System.** As described earlier, this teacher-research course was situated in the university setting; most of the teacher researchers took this course as a requirement for their graduate degree. Because of this context, the teacher researchers learned about and faced constraints placed upon them from the Institutional Review Board, and learned the value of the university-based community that we created.

**Institutional Review Board Constraints.** Although well intentioned, the IRB policies to which the teacher researchers were required to adhere affected the type of research that they conducted, how it was conducted, and when it was conducted. We spent much time and energy dealing with constraints placed upon us by the Board.

For the most part, Ann was more concerned about the influence of the IRB than were the teacher researchers. For example, throughout her journal and field notes, she reflected on her work with the Board. She began the course learning that all of the teacher-research proposals had to be submitted to the IRB, appearing in front of an IRB committee herself to discuss her own proposed teacher-research project, and attempting to guide her students through IRB procedures when she had not yet gone through them herself as a new faculty member. The chair of the IRB

asked to obtain permission in person from the teacher researchers regarding whether they wanted to participate in this study and visited her classroom throughout the year to determine whether students felt coerced to participate in the research. Looking back on these experiences, Ann realized these events needed to occur if teacher research at her university was going to be allowed to continue. As she reflected at the end of the semester, “I continue to struggle with IRB requirements, but I have learned a lot about how the ... process works here ... based on our experiences. I think that future researchers in our department will have an easier time conducting the research that they want to conduct thanks, in part, to our efforts.” We were a test case, and we passed the test.

Beyond Ann’s own experiences, Dixie and Ann were concerned about the effect that following IRB procedures had on the research conducted by the teacher researchers in the class. As Ann lamented in her journal, “Continued problems with IRB — still no approval for Mary. It’s been six weeks. This is just not working.”

Dixie noted, “In their initial interviews, their biggest goal was just to begin their research. They couldn’t because they were waiting for IRB approval.” For many of the teacher researchers, waiting until they received IRB approval to officially begin their studies served to widen the gap between research and instruction for them. There was a clear demarcation point for them as to when their normal, reflective teaching ended and their “teacher research” began. For example, Laura wrote in her journal, “I’m going to keep a folder of writing, spelling, etc. on each child and teach with a variety of methods (emphasis: books to read at home, reading in class) and I’m thinking maybe do the poetry as my research. I could start the approach 2nd semester after permission is granted.” In her initial interview and in a discussion during class, Karen remarked, “IRB approval may force me to change my plan due to lack of time.”

As one of the common characteristics of teacher research is question and methodological evolution (Baumann, Bisplinghoff, & Allen, 1997; Baumann & Duffy-Hester, 2000), we were not surprised that the initial research questions of the teacher researchers changed during the course of their projects. However, these question evolutions required two of the teacher researchers to submit research plan addendums to the IRB for approval, causing further delays as to when they could begin their real research.

Perhaps Mary encapsulated our IRB experiences best when she concluded at the end of the first semester in her final reflective paper:

The IRB acceptance was not that big of a deal. I can see why a form such as that is necessary for a project to be published, but for mere teacher research without intent to publish and without physical or mental harm being involved, I am not sure that it all makes sense.

Although IRB approval certainly “makes sense” and is necessary on some level (Pritchard, 2002), we question whether standard IRB procedures need to be followed with all teacher-research studies. McNiff (1993) concluded that “we need to see research as practice, and that pedagogic practice should be viewed as a constant process of enquiry” (p. 59). It is this understanding that was difficult to develop, at least in part, because of the IRB procedures to which we had to adhere.

University-based Community. During the course, we learned the value of the university-based community that we created. The teacher researchers in the course valued our experiences as teacher researchers, our educational experiences, and the experiences and expertise of the other educators in the group. We, too, valued and learned from the experiences of the educators in our research community. Community members offered support to one another in many ways, including providing ideas and insights on research; affirming, empathizing, and sympathizing with the school and life events that group members faced; and sharing ideas for literacy instruction. Jennifer wrote in a final email, “Throughout our class, I feel we became a community of learners. Together we were able to share what we were doing and receive helpful suggestions on how to make things better.” Similarly, Ryan stated in a final interview, “Another aspect of our class that was extremely helpful was the support that we provided for one another. I honestly believe that without that support, guidance, and suggestions from my classmates, I would not have been able to complete this project successfully.” Mary reflected in her journal. “After much discussion with peers in this class, I was able to develop a clear research project idea — without ALL of the group members present, my project NEVER would have developed!” Laura related similar thoughts in her final reflection:

My favorite part of the class has been the interaction with you and my classmates. I feel involved with their projects and find them as interesting as mine. I can’t wait to find out how they all turn out. It makes classes interesting to share progress. I also think that belonging to a class of teacher researchers multiplies each person’s growth. We learn from each other — through not only suggestions made about our own projects, but also shared frustrations, failures, successes, etc. You also have experienced these inevitable features of classroom research and so your experience makes you a better facilitator of our efforts.

Dixie charted several weeks of conversation through sociograms. Following one such sociogram which showed many comments back and forth between the teacher researchers, Dixie wrote that “many [of the participants] offered suggestions to teach other. It was also a good, safe place to vent. This process of sharing seems very important to fostering teacher research.”

Ann and Dixie also valued the supportive research community. The teacher researchers provided ideas, suggestions, and insights on other research projects that we were conducting and inspired us to learn more about teacher research, and served to help us clarify our roles as teacher educators.

The teacher-research course served many purposes for our community members, including sharing aspects of literacy instruction and instruction in other subjects; venting frustrations, concerns, and insecurities; sharing professional and personal events and successes; reflecting on problems and proposing solutions; chronicling the evolution of their research questions and projects; and detailing difficulties with their research. The course also served as the context in which the teacher researchers asked for help and advice regarding their literacy instruction, research, and graduate coursework. We initially conceived of the course as the context in which we would share information about the implementation of teacher research, discuss readings related to teacher research, and provide assistance to one another regarding our research projects. The course included much more than we anticipated initially.

As an example of the diversity of our class discussions in the community, Nancy reflected on our class sessions in her final reflective essay:

The Monday night class discussions have been so helpful. One night while riding home we [the other teacher researchers and Nancy] were discussing how we could feel like we did not have enough information to discuss in class, but after we started talking to the others in the group we left with many new ideas related to the research question. It was amazing to me how I could feel like I had nothing, but then when I discussed what I had been doing, I was given so many new ideas. For example, last week I discussed how I had been doing the read alouds in my classroom and how my predictions were being proven true. I was at sort of a standstill as far as my research question goes. After we talked, I was given new ideas to add to my research.

The teacher-research course served many purposes. In their discussion of establishing teacher-support groups, Watson and Stevenson (1989) explained, “Some teachers will share; some won’t; some forget; some bring things, but for some reason... some don’t; nevertheless, the constant opportunity to share is powerful” (pp. 126-127). Perhaps the varied purposes of the teacher-research course can be captured in one word: sharing.

The results of this research affirm the work of Baumann, et al., (1997), who discussed the uniqueness and commonality of teacher research cases and concluded:

The opportunity to have professional conversations is a powerful methodological tool in teacher research. Having the time to discuss what was going on in classrooms and in students’ lives released them from the isolation and anonymity of teaching-as-usual. The professionalism, esprit de corps, and simple self-esteem engendered by focused conversations with colleagues deepened their interest in, commitment to, and need for teacher inquiry. (pp. 140-141)

### *School System*

One of the contributions of teacher research is that it offers the reader a glimpse into the “real world” of teaching. It is within this world that the teacher researchers faced constraints that made teaching and conducting teacher research challenging. Specifically, the teacher researchers managed testing, program, and classroom constraints when conducting their research.

**Testing Constraints.** An interesting paradox existed for the teacher researchers in this study. Because they all taught in a state in which high-stakes testing was emphasized, they all faced constraints that this testing produced. Many felt the need to spend or were told to spend significant amounts of instructional time preparing students to perform well on these assessments. In some schools, this preparation took the form of having students complete workbook pages and “testlets” that were similar in format to the multiple-choice reading tests that Grades 3-5 students took at the end of the year and write to prompts in a structured format (for example, requiring students to write a fixed number of sentences in a fixed number of paragraphs on a given topic). Because the promotion of Grade 5 students depended, to a significant degree, on whether they passed these tests, and teachers, administrators, and schools received money and recognition based on the way students performed on these tests, many of the teachers who taught in grades where the high-stakes testing occurred felt pressured to teach to the test. Educators not in these grade levels felt constrained in their instruction as well, as they were sometimes pressured to prepare students for these tests beginning in kindergarten through the use of benchmark assessments that were intended to expose children to the format of high-stakes tests.

For some of the teachers, the testing significantly changed what they were able to accomplish in the classroom. By the second month of her study, Shelia was still not conducting the reading

lessons that she designated as part of her teacher research project. Shelia wrote in her journal, “I am spending so much time on writing right now in preparation for the test ... After the writing test, we will be preparing for End of Grade Tests.” It was not until two months into the semester that she was able to dedicate more of her time to her teacher research project, “I have been so stressed about this test, but now I can put it behind me. I hope that I can concentrate more on my research now” (Class discussion).

The pressure surrounding high-stakes testing in reading was discouraging to many teachers. Korina’s principal reminded her that she needed to get her scores up. Korina later said, “I thought, do you know what I’m doing? ... If there was a test to show how much [my students] have gained in my class, they’d all do wonderfully” (Interview). This stress influenced much of her conversation in class and in her journal.

Several of the teacher researchers were able to integrate what they were doing in their teacher research with their test preparation activities. As an example, Mary concluded at the end of her teacher-research study in her final research paper:

In this age of high-stakes testing, it is essential to combine balanced teaching with authentic opportunities for the children to practice their developing skills (which will improve the test scores). A cross-age tutoring program is one such method that does both. By explicitly teaching the reading strategies and then allowing the children to model these strategies for younger students, the third graders were able to repeatedly practice using these strategies, and internalize them. This increased practice for a real purpose is one reason that my students improved in their decoding and word recognition skills and thus reading. By providing authentic opportunities for reading we see an increase in reading improvement in the classroom. Over time, we will see an increase in test scores.

Gerry Duffy (1997) posited the tension surrounding “teaching teachers to be entrepreneurial while simultaneously preparing them to ‘talk the talk’ with hiring personnel who often expect teachers to follow district mandates” (p. 363). We view a similar tension with teacher research, and view it as ironic that, while increasing numbers of graduate programs are requiring teachers to conduct teacher research and teach reflectively, increasing numbers of administrators are requiring teachers to narrowly teach to the test by mandating reading programs and methods. We continue to feel the effects of these high-stakes tests across our courses and strive to strike the balance that the teacher researchers in our course tried to achieve, that is, to support educators in their learning about how to facilitate optimally the literacy development of all students, while at the same time aiding them to help their students perform well on high-stakes tests.

**Reading Program Constraints.** In addition to feeling constrained by the effects of high-stakes testing, several of the teacher researchers felt constrained by being mandated to teach reading in certain prescribed ways or to use certain reading programs. For example, Korina’s principal asked her to start using the Accelerated Reader (AR) (Renaissance Learning) program in her classroom. This program assigns a point value based on the difficulty of the book. Students read the book, then take a computerized test on it. If they pass the test, they earn a specified number of points. These points can then be used to “buy” prizes. Korina wrote in her journal about one situation that occurred:

I am extremely angry! The assistant who is in charge of the Friday Accelerated Reader lunch raffle came to the room this morning to pick two names from our bin ... I am trying to teach a math lesson ... It is too early during the day to do this so my students became anxious and angry.

Shelia also faced challenges with the Accelerated Reader program in her school. She chose to use picture books to model reading and writing strategies to her fourth-grade students. As she explained, “Of course [my students] wanted to know if they would be able to take AR tests on the book. I had not given this much thought before. Did I want them to take AR tests on the picture books I used?” (Class discussion).

There were other influences of program constraints on the teacher researchers. Karen chose to research reading conferences as a way to improve students’ reading proficiency because “progressing to the next level of reading ... is something required by the county this year” (Initial Interview). Sharon was required to teach reading using a prescriptive phonics program that seemed to go against the kind of instruction that she wanted to do in her teacher research and that her students needed. In the end, all of the teacher researchers had to negotiate program constraints when conducting teacher research. All were successful in doing so and achieved the seeming paradox that Gerry Duffy articulated so well as “balancing round stones” (Duffy, 1998). The teacher researchers were able to both do what they were told they must do to teach reading and to conduct research and teach in ways that were meaningful and important to them.

**Classroom and School Constraints.** Circumstances and constraints in the classroom and in the school oftentimes led to there being little time left to teach reading and to conduct and write teacher research. For example, the time that Korina spent managing students’ behavioral challenges took away from the time that she could spend teaching and reflecting on her instruction. She often discussed situations related to classroom management during our teacher-research course and in her journal entries. One week of journal entries for Anna began as follows:

October 18: I went to an AIG [Academic and Intellectually Gifted] workshop again today.

October 19: I went to another day of the AIG workshop.

October 20: I went to the Technology workshop today. I was bored. It was about word processing, and I am already familiar with it.

Similarly, Mary related in her journal:

Today was the day full of interruptions!! As test coordinator for our school, I had to get all materials ready to go to central office. No problem —but [two colleagues] kept asking questions about this and that. Every time I started teaching my kids, I was called away. Seriously — was interrupted no less than seven times from 10:00-2:30. WOW. With lunch and P. E. [physical education] in between those times also!

For some of the teacher researchers, the constraints were focused more on finding the time to conduct research rather than finding the time to teach. For example, Karissa related in a class discussion that she was “trying to figure out how to balance the needs of my students with the needs of my research. They [the students] need lots of little things (shoes tied, pants buttoned, etc.) that take away from my ability to write down immediately what it is they have done related to literacy.” Shelia commented in class on the difficulties of doing anything that was not related

to instruction and test preparation, such as finding the time to write and reflect in her journal. Similarly, Cindy explained in her journal:

As the teacher in teacher research, there is still all of the planning, organizing, and evaluating that need to be accomplished in any classroom. On top of this never ending mission, teacher researchers need to carve out time to record data, write in journals — and just when I thought I had those balls up in the air (I like the metaphor of juggling associated with the tasks) data analysis needs to be added . ... sometimes the balls seem to have a mind of their own. Oh, is that ever like teacher research!!

Indeed, these classroom and school constraints may be considered a normal part of teaching, but one wonders about the effects that these interruptions have on the instruction, reflection, and thinking of teachers over time. The effect of such interruptions on instructional time have been discussed in the literature (Allington & Cunningham, 2002); however, given the literature on teacher-research trends, we also wonder about the effects of such interruptions on the implementation of teacher research itself (Cochran-Smith & Lytle, 1999).

### *Educator as Learner*

The teacher researchers in the teacher-research course were not only teachers of elementary and middle school students, but also learners themselves. Specifically, they learned about research, pedagogy, and themselves through their participation in the course.

### **Learning About Research**

The teacher researchers gained many understandings about research through their participation in this course. Some of these understandings related to questioning research in general and teacher research in particular, whereas others related to the value of research.

Questions About Research. Although conducting teacher research served to answer some of the questions that participants had initially about conducting research (e.g., Cassidy commented that “It wasn’t until I actually became a researcher that I understood what teacher-research really involves”), other participants left the course with questions. Throughout the research process, four of the teacher researchers doubted, at times, the significance of what they were doing and questioned whether theirs was real research. Their understandings of teacher research differed, at times, from Ann’s understandings. For example, midway through the first semester of the course, she wrote in her journal that, “Laura said that it ‘doesn’t feel like research yet’. ... Mary and Anna stated in their final reflections that teacher research “didn’t feel like real research because it had no control groups.” At the conclusion of the course, Laura reflected:

Doing qualitative teacher research is very different from doing quantitative research and in some ways, perhaps less satisfying. I haven’t done any quantitative research, but wouldn’t it be nice to know for certain (or more so) what the results were? I gleaned some general benefits for the children, enough to feel the experience as a valuable one for the students and me, but I certainly could not advocate my methods as “the” method of teaching poetry (final reflection).

It was clear to Ann by the end of the first semester that she did not do a very good job of explaining teacher research and that her biases may have affected the teacher researchers’ understandings of teacher research. As she shared with the teacher-research group at the end of the first course:

My perceptions of teacher research have changed as a result of our work in this class. With the excellent questions you raised regarding how this was “real research,” why control groups were not a part of teacher research, and how this research can be done on a day-in and day-out basis in real-world classrooms, I have had to read more, think more, write more, and soul-search more than I had to do when I reviewed the literature on teacher research or when I conducted teacher research myself. Coming out of the doctoral-student world ... I had taken on a very defensive attitude about teacher research, thinking that, at this point in time, teacher research was more needed in our field than any other kind of research. Thanks to our discussions, however, I have become more balanced in my views, re-remembering the value of all research paradigms, including, but not limited to, teacher research (journal).

As Baumann and Duffy-Hester (2000) concluded, “we believe that teacher research has already achieved a new educational research genre status” (p. 94). The question that remains is whether the teacher researchers in the course shared the same belief. Given the continued debate on whether teacher research is good research, the difficulties that university educators who wish to conduct research continue to face due to Institutional Review Board constraints, and the limited publication outlets for teacher-research studies, we view the questions that the teacher researchers raised about teacher research as being both timely and important.

In addition, the teacher researchers learned that conducting teacher research while teaching full time is not easy. During the course of our year together, all of the teacher researchers expressed the difficulties they faced when conducting their research. These difficulties included finding a research question, collecting data while teaching, changing research questions, and not having enough time and resources. We worked together as a group to try to address these difficult issues, but we could not solve all of the problems that arose. As Laura summarized her frustrations at the end of the course, “I learned through this project how important and how difficult it is to collect data while teaching. This may be why so many published teacher research projects seem to be from two teachers (one often from a university and one the regular classroom teacher).”

As Lytle (2000) explained, “taking the dual stance of teacher and researcher has indeterminate and sometimes problematic implications for the role of teacher researcher as teacher, raising issues about what it really means to attempt to embed research in practice” (p. 697). Our results concur with Lytle’s finding and suggest that being a teacher researcher can also be difficult for the teacher researcher as researcher.

Valuing Research. Most of the understandings that the teacher researchers gained in this course were positive. For example, most articulated that learning about and conducting teacher research changed their views and understandings of research. As Nancy explained in her journal, conducting teacher research “has allowed me to see research in a different way that is not as scary as I originally thought research was. Now I can see that research is done every day in our classrooms.” Anna concluded in her final reflection:

When I began this semester, I could only see research as quantitative. I didn’t see how research could be qualitative and reflective . ... Now it is clear to me that research can be qualitative and reflective. As my class has revealed this year, circumstances are not always constant. Since life is always changing, I now question how “quantitative” quantitative research really is.

All of the teacher researchers in the course valued their experiences conducting research in their respective classrooms, although what they valued from this experience varied. For Laura, the value was related to learning how to look carefully at the events and students in her classroom.

As she shared on the last night of the course, “If you look carefully at your data, you can discover a lot of things that you wouldn’t have if you didn’t have that purpose.” For Mary, the value of conducting research came in the form of learning to trust her instincts as a teacher. As she related in her journal, “I can trust my gut feelings about students’ performances and have data to back that up.” Anna reflected in her journal that conducting research helped her understand responsive teaching:

From implementing this research, I learned that things do not always go according to plan and that is OK. As I looked through my journal I noted how many times I had to change my plans and move students to different groups to meet their needs. I also realized how much I had to change my plans to meet the needs of the school schedule. I recognized that each technique or process was adapted to meet these needs. I was responsively teaching.

Similarly, Karissa explained:

In the beginning there was me and a big project and a big question mark. What was I going to do? What exactly is teacher research? How am I going to manage all this? I knew I was required to take Teacher as Researcher, but ... was it really going to help me? Yes! I have grown in areas that are important to teaching at any grade level. I have become a Kid Watcher, thanks to my teacher research journal. Another thing that I have become adept at is “teacher watching.” I now watch myself as I teacher. I am not as harsh if things do not go the way I had envisioned. I simply reflect and try to improve (Reflective essay).

Nancy concluded that teacher research helped her to affirm what she was already doing in her classroom. She explained in her final reflection,

When I began my research, I was already conducting read alouds in my classroom, but I think that I am much better at it now as a result of my research. My research showed me that what I was doing was offering positive results. I realize that this is something that I need to continue doing in my classroom.

Kristen surmised in her final reflection that “teacher research is definitely radical because it is not carried out by men in white jackets in some exclusive laboratory (the proposed experts) ... teachers are not waiting to hear what ‘large-scale education research’ has to say, but they are solving problems in their own classrooms by collecting and analyzing their own data.” Finally, Sharon reflected, “What has action research meant to me? It has been asking a research question and evolving as a teacher as I explored that question.”

The value of conducting research for the teacher researchers in this research was personal, practical, and complex. Teacher researcher Jane Kearns (in Hubbard & Power, 1999) used the metaphor of jazz to explain the value of teacher research:

“Good teacher research cannot be explained away in neat packages or labels. Good teacher research swings. Jazz — and teacher research — affirms who we are, where we have been, and where we are going. This is why we teach. This is why we research” (p. 14). We believe that the teacher researchers in our study would agree. As researchers continue to lament “the disparity between the world of the university and the world of the school” (Beach, 1994, p. 145), the present study suggests that this disparity does not have to exist. When educators see the need to use extant research when conducting research in their own classrooms, the worlds of the university and the school are connected. Hubbard and Power (1999) shared a group poem of an

Oregon group of teachers on what they learned about research. An excerpt from the poem reads: “The more I write or reflect, the more questions I ask . ...Everyone’s research informs my question” (pp. 11-12). If we were to synthesize the views and understandings of research that our teacher-research group developed, we came to a similar synthesis. For teacher researchers, research can become personal.

### **Learning About Ourselves**

The teacher-research course also helped the teacher researchers to learn about themselves. Most of the teacher researchers discussed the influence that conducting research had on them as educators and as people. For example, Whitney commented that studying the reading groups was making her a better reader. She now looked for connections in the text and among texts, just as she asked her students to do (class discussion). Sharon concluded in her final reflection: “I feel that every time we deal with other human beings there are challenges and frustrations . ...This can be one of life’s most rewarding moments.” Finally, when interviewed, Cindy shared the following about her identity as a teacher and researcher:

Oh, I feel like I’ve come home. I really do. I don’t see myself doing the kinds of traditional research ... I love teaching in the classroom and I love being with children and so teacher research gives me the best of both worlds. I left the university setting to go back to teaching ... I missed the children and I felt one step removed. I wanted to have a group of children I could look at. I didn’t want to guide other people. I wanted to really have my hands in it.

Ann and Dixie also learned about themselves in the teacher-research course. For example, Dixie wrote:

I need to remember that it’s OK, even necessary to give direct instruction. In all the conversations about constructivism, we don’t talk about how to correct students’ wrong assumptions. Ann has found this necessary when it comes to the testing issue among the teacher researchers. I think my instruction is still caught up in wanting students to like me.

Ann reflected:

Throughout this semester, I have struggled with my identity as an assistant professor.... I strove to be more of a facilitator of students’ learning than a professor. I wanted to be a person first. It was within this teacher-research class that I felt I could be myself — I was Ann, I was a facilitator of learning, and I did not have to pretend to know all of the answers . ... I have learned that I can be the kind of educator and person that I want to be, at least sometimes. I have learned that I can be a teacher educator and a literacy educator, and still be myself.

Palmer (1998) suggests that good teaching is closely connected to knowing who we are as people and being willing to let who we are shine through as we teach. He surmises that “knowing myself is as crucial to good teaching as knowing my students and my subject” (p. 2). Perhaps conducting teacher research is one way that educators can begin to know who they are as people and to use that self- knowledge to inform their professional lives.

### **Educator as Change Agent Within Varying Spheres of Influence**

Conducting teacher research brought about changes within the microsystems and the macrosystems of the teacher researchers’ educational worlds. Although for most of the teacher researchers these changes occurred at the classroom and school level, the influences of teacher research went beyond this level for other teacher researchers.

## **Changes in the Microsystem**

The teacher researchers changed in their interactions with or instruction of students in their classrooms and in their interactions with the families of their students. These changes affected the microsystem of the classroom in which they worked.

Change in Interactions With, or Understanding Of, Instruction of Students in the Classroom. All of the teacher researchers indicated that their literacy instruction and understandings were altered as a result of their research. The discussions in our teacher-research class and the reflections that the teacher researchers made in their journals and formal reflections served to help all of the teacher researchers integrate instructional principles gleaned from their graduate coursework and to modify their pedagogical knowledge. For example, Sharon related in her journal:

I realized ... that I was teaching them from a White, middle-class perspective. ... This revelation from reading Debbie Diller's (1999) article led me to want to read more research and to adapt my classroom to fulfill the literacy needs of my students. I also became interested in doing action research in my class to see if responding to the students' needs would make them more successful.

As Whitney explained in her final interview:

I was incredibly weak in the way I taught reading ... I believe that this [teacher research] class has been the most instrumental in my growth as a reading teacher. Because of the choice of research topics, I had the opportunity to delve into something that interested me ... I was able to learn a great deal about motivation [of readers] ... I was able to connect with students on a level that I had not connected with them in the past —through reading.

Ryan shared in his final interview, "I have bonded with my students more than ever. They're excited; I'm excited. I've taught more skills and strategies than last year and I have fewer discipline problems."

Finally, Anna related in her final research paper:

My question at the beginning of this study was which grouping techniques would effectively meet the needs of my students. I think I was looking for a technique that would eliminate all reading difficulties. It seemed I was concentrating more on the techniques than the students. I now realize that each class has different students with different needs. We have to alter techniques to meet the needs of the students.

Ann and Dixie also learned much about pedagogy through facilitating this course and changed some of their instructional practices as a result. Dixie changed her own instruction from content-coverage to providing teachers with the tools necessary to solve problems in their own classrooms. One of the difficulties that Ann faced was learning when she should be explicit with the teacher researchers in terms of their research and, at times, even with their instruction in the classroom, and when she should take a more passive stance. As she wrote in her journal, "I continue to think about the struggles of being a constructivist rather than a transmissionist educator." As a result of what she learned, she has changed how she facilitates the teacher-research course to include more explicit instruction and sharing of her own research and teaching experiences.

Burnafor, et al. (1996) explained, “teachers want to know and create; they are curious about their practice. Teachers hope that their research will inform that practice and lead to better teaching and learning” (p. xii). For the teacher researchers in this study, this hope was realized. As has been discussed in the literature (e.g., Cochran-Smith & Lytle, 1999), teacher research can indeed be a powerful form of professional development and school reform. As Sharon reflected on conducting research in her own classroom and as we agree in terms of facilitating the work of teacher researchers:

It takes countless hours of work outside the classroom, and untold patience in the classroom. Each victory can be turned into a setback or defeat the next day. It takes a teacher who is willing to meet the students where they are, and one who is willing to try a myriad of methods. It takes a reflective, caring teacher who will not give up.

**Change in Interactions With or Enhanced Understanding of Students' Families.** Sometimes the research projects involved students’ families. For example, Karissa commented in class that the parents of her preschool students were “excited” about the students literacy attempts and “they let me know when their children said or did things that they thought I’d be interested in.” In class discussion, Shelia described a specific lesson she taught using picture books and the resulting enthusiasm of her students. “The students wrote, wrote, wrote, they were so excited. They even took them home when they didn’t have to and wrote some more.” This enthusiasm for unassigned homework gained the attention of many parents who wanted to know what was happening in the classroom. Whitney mentioned that the parents of her students were also drawn into her project. She described the beginning of the year when parents told her that their children were not motivated to read. By the end of the year, she had parents asking what she was doing to bring about such a positive change in their children’s desire to read (final interview). For Laura, conducting teacher research helped her to learn more about and understand the families of her students. For example, one of her students wrote a poem about the divorce of her parents:

I loved my dad.  
He went away from me.  
I cry when I go to bed  
With my face in my pillow.  
He mails me letters.  
He is coming back to me.  
I loved my dad. (Final research paper)

Schmidt (1998) concludes that “connecting home and school for literacy learning is crucial for all students” (p. 206). It may be that conducting teacher research is the only way for educators to begin to make those connections.

### **Changes in the Macrosystem**

Conducting teacher research affected the macrosystem to which the teacher researchers were connected, that is, the school system in which they worked and the broader educational system outside their school system. Many of the teacher researchers described positive interactions with other teachers and administrators in their school as a direct result of their teacher research. Most often this was first expressed when other teachers became curious about what the teacher researcher was doing in his or her class. For example, Ryan said that “more teachers are asking me what I’m doing and they have asked how they can do this in their classroom” (final

interview). Korina reflected back on her teacher research by saying some of the most positive things to come from her teacher research were “the wonderful discussions and insights between my peers and myself. It allowed for everyone to share their own ideas about their own research” (final reflection). Jennifer was conducting several in-service trainings for her school. “[Teacher research] has given me something I can share with other colleagues in helping our school become a community of learners” (final reflection). Mary talked with her principal about the results of her research on peer tutoring and intended to continue to implement a tutoring program next year with a colleague because of its effectiveness. Anna shared her research on the use of leveled books with other teachers in her school, and later with other teachers and administrators across the school system.

Some interactions were not so positive. Shelia said in her final interview that some of her peers “just don’t want to know what’s going on. They’re very traditional.” Ryan told Dixie in his final interview that “Some are unsure about this teaching style and don’t see it as ‘real learning.’ ”

Most of the teacher researchers did not share the results of their research outside of their schools or school systems. Two of the teacher researchers did, however, and presented their research on the use of high-stakes testing in reading and the use of leveled books at a national conference.

Overall, the participants in our study found teacher research to be a powerful means through which to share information and research with their colleagues in their school and school system. Cochran-Smith and Lytle (1999) viewed a major trend in teacher research in the United States as being “the prominence of teacher research in teacher education, professional development, and school reform” (p. 15). The results of the present study highlight that teacher researchers themselves view their research in this way. Indeed, through sharing what they learned through their inquiries with other educators, the teacher researchers were able to affect change beyond their own classrooms.

As Henson (1996) noted, there are numerous definitions of the term “teacher as researcher.” Although the terms teacher research and action research are sometimes used interchangeably, the results of the present study suggest that some of the teacher researchers affected change within their classrooms only (which could be considered teacher research), whereas others affected educational change both inside and outside of their classroom contexts (which could be considered action research). The question that remains for us is why some of the teachers chose to share their research with other educators, and some did not.

### *Limitations, Conclusions and Implications*

We must acknowledge this study's limitations. First, this study was conducted with only two groups of participants and thus may not be generalizable to other teacher researchers. Second, our investigation occurred during a limited amount of time (i.e., two year-long investigations that were conducted in the time frame of university-based courses). Third, we served dual roles of facilitators and researchers in this study, both a strength and a limitation. Fourth, our experiences as educators and valuing of teacher research served to limit our decisions surrounding the data sources that we chose to collect and to influence our analyses of the data.

Many teacher-research studies end with the teacher researcher discussing what he or she learned from conducting research and the questions that remain after conducting the research. Ours will be no exception. In this section, we will explain five issues and sets of questions related to facilitating the work of teacher researchers in literacy education that we learned and that we want to learn more about as a result of conducting this research.

First, we have learned that facilitators of teacher researchers need to be balanced teacher educators, engaging in both explicit, teacher-directed instruction and in facilitative, student-responsive instruction. Although these roles are not easy to balance, our results suggest that both roles are important. After reflecting on her facilitation of the teacher-research courses with Dixie, Ann changed the way that she facilitates the teacher-research course. Now she is very explicit about defining what teacher research is and what it is not, discussing how one can reflect on one's practice, providing examples of all aspects of teacher research, discussing up front how and why the class will be following IRB procedures and how following these procedures may affect teacher research, and being clear about her biases. She is also careful to allow time to respond to the questions, interests, and needs of the teacher researchers. In short, she is much more clear about how much she values teacher research and why, how she defines research, and her views on ways in which research can and should be conducted by teachers in their own classrooms. Further research needs to examine the role of the teacher educator in the teacher-research community.

Second, we wonder what effects conducting teacher research will have on educators after they are outside of the university community. Did some of the teacher researchers conduct research simply because they had to do so as a requirement in a university course? What long-term effect does conducting teacher research have on educators, if any? Given the many constraints and barriers to conducting teacher research in classrooms, many of which the teacher researchers in our study related, will educators value teacher research to such a degree that they will continue to conduct research on their own? Once educators consider themselves to be teacher researchers, does this identity always remain with them? Although we predicted, based on the discussions with the participants in the present study, that the teacher researchers would continue conducting research beyond the coursework, Dixie (2002b) concluded that the majority of these educators did not continue formal teacher research, but instead practiced tenets of this research process, including viewing assessments and record keeping as means to collect data informally, and using reflective teaching practices. Additional research is needed to investigate and describe the outcomes of teacher research coursework on the practical knowledge (praxis) of educators.

Third, the relationship between conducting teacher researcher and student achievement needs to be examined more closely. Although general discussions of the positive effects of teacher research on students can be found in the literature (e.g., Henson, 1996), research is needed that details the specific effects of conducting teacher research on the literacy achievement of the students who are involved in this research.

Fourth, we question the impact of constraints (e.g., IRB, testing, and classroom constraints) on the conceptualization and implementation of teacher research. In discussing teacher-research trends, researchers have alluded to these constraints in their conceptual discussions (e.g., Cochran-Smith & Lytle, 1990, 1999), but we know little on a

practical level about how these constraints affect the research of classroom practitioners. For example, how might the constraints of testing and the absence of a supportive network of educators and administrators diminish the "transformative potential" (Cochran-Smith & Lytle, 1999, p. 15) of teacher research? What effect do mandated reading instructional programs and required high-stakes test preparations have on the trend of teacher researchers collaborating with their students (Goswami & Stillman, 1987)? The complexity of the political context influenced greatly the topics of research that many of the teachers selected (e.g., research on testing, the use of reading programs that they were required to implement) and thus were reflected in our research. Additional research is needed to examine the nature of teacher research in the current political climate.

Finally, just as the teacher researchers with whom we worked viewed teacher research as contributing to their understandings of both teaching and research, we view this same potential for teacher research conducted by university teacher educators. Through reflecting on what we learned through the inquiries of the literacy teacher researchers with whom we worked and on our own practices, we have engaged in a powerful form of professional development that has served to improve our facilitation and support of teacher researchers, as well as our work with other inservice and preservice educators. For example, throughout the project our discussion evidenced a new understanding of the context of the teachers. Prior to this project, we often blamed teachers for not implementing certain strategies and ideas from their teacher education courses. As a result of documenting the teachers' experiences and our own struggles to conduct research while teaching, our conversations placed less and less blame on teachers and more responsibility on teacher educators. We concluded, as Short (1993) stated, "Teacher research can add a new perspective about teaching and learning for college educators because it asks them to examine their own teaching and its implications for themselves as well as for the broader educational field" (p. 156).

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