## Living the Praxis of Teacher Education through Teacher Research

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#### **Abstract**

The main objective of this self-study is to reflect and document the development of our own praxis by using teacher research in our teacher education courses. By praxis we mean an ongoing interdependent process in which reflection, including theoretical analysis, enlightens action, and in turn the transformed action changes our understanding of the object of our reflection. Based on the examination of our reflective journals, collegial dialogue, and students' teacher-research reports, we have achieve three major insights: (1) Teacher Research is a vehicle of genuine praxis of teacher education; (2) Praxis involves a dialectical rationality, which is radically different from the conception of practice within an instrumental rationality; and (3) Modeling and scaffolding the praxis of teacher research for our master's students—in-service teachers—facilitate both their transformation and ours.

#### Introduction

As educators, we are working toward implementing a praxis of teacher education by using teacher research as a vehicle for teachers' empowerment and for our own professional growth. We are purposefully devising conditions that facilitate teachers to study relevant issues in their classrooms, as well as to engage and appreciate collegial dialogues and reflection on their practice and their understanding of it within the current sociopolitical and historical context. In doing so, we are looking at our own teaching and transformation while we model for teachers our own self-studies and our struggles to allocate time and effort to this pursuit.

As we reflect, engage in dialog, and try to conceptualize our transformation process, we have become convinced that teacher research may be a vehicle to make of our profession a *genuine praxis*. By praxis we mean an ongoing interdependent process in which reflection—including theoretical analysis—enlightens action, and in turn the transformed action changes our understanding of the object of our reflection. We framed our praxis as aimed at social transformation in which teachers, as cultural mediators, work toward a more just, equitable and peaceful society.

The purpose of this self-study was threefold: (1) Reflect on and document our praxis of teacher education through the use of teacher research in our courses; (2) Explore and document ways to integrate teaching, research and community service through teacher research as participative, liberating, and socially responsive educational praxis; and (3) Explore and document ways of engaging both in-service and prospective teachers in teacher research as educational praxis.

#### What Praxis Does That Practice Does Not

As educators of prospective and in-service teachers, we are working toward bridging the gap between the theory and the practice of teaching in ways that improve educators' practices, and their understanding of those practices, as well as promoting the impact of those improvements on social justice at the local, regional and societal levels. Throughout history, various thinkers such as Aristotle and Kant (cited by Coulter & Wiens, 2002) as well as educators and researchers (Goodlad, 1984; Kaestke, 1993; Kennedy, 1997; Sroufe, 1997) have been directly or indirectly looking for ways to bridge this gap, but all ended by favoring theory over practice. Although this problem is not exclusive to the teaching profession, as Schön (1983) demonstrates, the theory-practice gap has been especially acute in "minor" professions such as teaching.

The theory-practice gap has its deepest roots in the positivist ideology, that Habermas (1989) calls *instrumental rationality*, and Schön (1983) calls *technical rationality*, whereby the education profession is in essence one of *instrumental problem solving* (Schön's expression). Consequently, positivism is the dominant ideology that underlies most teacher education approaches. Within this context, teacher education is considered as training for *instrumental problem solving*, which broadly implies the *application* in the classroom of theories and techniques of learning and teaching. Considering the teaching profession as one of *instrumental problem solving* reduces any decision about the appropriateness of a given educational theory or method to empirical tests, whose results become time and context free prescriptive principles of practice. Practice is, thus, conceived as a direct, unidirectional, and simple application of those principles in a particular instructional situation. The sources of educational knowledge are almost always the empirical sciences such as psychology, sociology, computer science, and anthropology, and not those disciplines such as ethics, philosophy, epistemology, critical social sciences and

others, which concentrate on reflection and understanding the role of education in the transformation of society and the fulfillment of human potential.

The theory-practice gap has explanations other than the technical rationality and the subsequent lack of reflection-in-action, alleged by Schön. A critical historical look at the theory-practice gap ties its roots to the division of labor between 'intellectual' and 'manual', assigning more value to the 'intellectual' domain, and devaluing 'manual' work (Bernstein, 1971; Gadotti, 1996; Hoffman, 1975). Teaching is one of the professions most affected by this unfair relegation of professional practice to a second-class level, subordinate to research. In addition, there is an increasingly generalized tendency to reduce any educational approach or philosophy to simple 'how to' methods (Aronowitz, 1993; Bartolome, 1996; Glass, 2001). Hence, teacher education is basically the training of distinct skills as if teaching were the sum of them, which makes teaching no different in principle from motor skills training or animal training. From an instrumental rationality perspective, empirical knowledge is the only valid knowledge, and science and technology are the main resources for progress of humankind. According to this view of the teaching profession, educational researchers require objectivity and detachment to produce 'valid scientific' knowledge. The procedures used to achieve this type of knowledge contrast with the subjective knowledge and insights resulting from teaching and classroom dynamics. One implication of this teachingresearch 'incompatibility' is the division of labor between researchers and practitioners, or in Arendt's (cited by Coulter & Wiens, 2002) terms, between spectators and actors, with the subsequent alienation of teachers (actors) from the dominant discourse of education.

The notion of praxis here characterized fundamentally opposes the instrumental view of practice and its relationship with theory. Following Freire (1992/1970) and Freire and Macedo (1996), we understand praxis as the dialectics of reflection and action. The reflection dimension involves a dialogue among parties to understand critically the social structures and ideologies that shape and control their daily lives and practices. The action dimension is concerted in dialogue among parties, and aimed at impacting those structures and ideologies that oppress some sectors of society in a variety of ways, by preventing them from achieving full participation as members of society and fulfillment as human beings. In brief, and according to Carr and Kemmis (1986), praxis is a response to a real historical situation in which the actors act based on their understanding and commitment to transform their work and society at large. Weltman (2002) indicates that *praxis*, as conceived by Aristotle and reconceptualized by Marx, "requires one to practice what one theorizes while ... theorizing what one practices: reflective action and active reflection make for good praxis" (p.62). Thus, "good praxis makes possible a self-sustaining, self-perpetuating social movement, a permanent revolution" (p.62). Nonetheless, Weltman considers that this is a tough standard for educators to meet. Educational praxis as a dialectics of theory and practice, reflection and action, leads us to focus on the dynamics of movement and changes in our thinking and acting in specific and concrete educational situations. This contrasts with the static standardized prescriptive principles, and often mindless practice, promoted by the instrumental view of the theory-practice relationship.

The dialectics of theory and practice is based on a dialectical rationality, in which practices are the product of existing traditions, beliefs, values, and expectations, which are in turn established and maintained by institutions. Thus, educational practice is not simply the identification and implementation of certain means for achieving given ends, but "acting educationally in social situations which typically involve competing values and complex interactions between different people . . . " (Carr & Kemmis, 1986). Schön (1984) reconceptualizes practice as an epistemology, by demonstrating how professionals "know-in-action," and how "reflection-in-action" is an art that responds to the divergent character of practice and promotes inquiry into the practice. His work has been crucial to understanding professional practice in a completely different way from that generated as technical rationality. Nonetheless, Schön does not embrace a critical perspective of praxis, radically participative and emancipatory such as that developed by Freire (1992/ 1970), Carr and Kemmis (1986), and Kincheloe (1991), among many others. Teacher research is inquiry into teaching and, as Kincheloe (1991) states, "a path for empowerment". Actually, teacher research is a fairly new paradigm of research and teacher education. It can help educators to bridge the gap between theory and practice, as teaching and research become interactive and interdependent. Coulter and Wiens (2002) maintain that teacher research allows linking between the researcher and the practitioner or, in Arendt's terms, between the spectator and the actor. Actually, they consider that the emergent purpose of teacher research is to counteract the dominance of the 'spectator' or researcher over the practitioner. Teacher Research or Action Research, as understood by critical educators (Carr & Kemmis, 1986; Elliot, 1991; Freire, 1992; Kincheloe, 1991; Zeichner (1993, 1996), among others), is a true praxis. Pioneers of a second wave of teacher research in the United States and Canada (Anderson et al., 1994; Cochran-Smith & Lytle, 1994; Goswami & Stillman, 1987; Wells, 1993, among others) have been inspired by Schön's (1983) epistemology of practice as well as by Kurt Lewin's (1946) ongoing cycle: planning -> acting -> observing -> reflecting. This cycle constitutes the basic process of "action research," a name that was also coined by Lewin. Even though he advocated for a more democratic involvement of employees in the decisionmaking processes of the companies in which they were working, the actual goal was to increment productivity in the company, and not necessarily the liberation of participants by engaging in a critical analysis of the ideology and social structures that prevented them from their full development as human beings. This liberal, but not liberating, praxis of teacher research has shaped the type of projects developed by many practitioner researchers.

Carr and Kemmis (1986) use the process developed by Lewin (1946) with an

emancipatory model of praxis. They characterize action research as "retrospective analysis and prospective action" (p. 185). Therefore, it has a constructive momentum (plan and action) and a reconstructive momentum (observation and reflection). According to these authors, the main goals of self-reflective inquiry should be: (1) To improve the teacher's own practice; (2) To improve the teacher's understanding of it; and (3) To improve the situation where this practice takes place, as well as build up social change.

## **Modes of Inquiry**

Samaras (2002) documented self-study as a legitimate form of professional development. She engages with her preservice teachers in systematic self- reflection on the technical, interpretive and critical dimensions of their practices. As we engaged in doing a systematic self-study of our teaching, we used teacher research, both as a pedagogical tool and as course content, to model for teachers an emancipatory educational praxis. We facilitated the involvement of teachers in studying their own teaching (first author) and for learning and understanding issues of literacy in the context of bilingual education (second author). We provided teachers with opportunities for sharing and supporting their inquiry endeavors with their peers. Our selfstudy was carried out through: (1) Reflective journals and collaborative reflection with colleagues and graduate students; (2) Examination of students' work and reactions to teacher inquiry through interviews and course evaluations; (3) Examination and revision of handouts and syllabi created for the courses; and (4) Examination of the notes of staff meetings held on a weekly basis for first author's courses. The reflective journal and collegial dialogue took place in a quite systematic way for both of the authors. This retrospective analysis of action allowed each of us to identity the specific problems that were emerging, as well as to plan to deal with those specific problems in the following session of our respective teaching team. As the teachers reflected on their own inquiry processes, they pointed out also some of the issues each of us had identified, ratifying in this way our observations. Another way to carry out our analysis was by mapping all the information collected for emergent themes and processes. Since the first author's corpus of data was based on three cohorts, she was able to identify some communalities in the process of engagement and transformation of teachers doing classroom inquiry.

Below we describe our experiences, followed by a self-analysis and a collaborative reflection on our praxis.

#### First Author's Experience

The first author's self-study is based on teaching a graduate course on "Practitioner Research" in a mid-career program (master's level) for three consecutive cohorts of teachers. Participants in this collaborative state university and public

schools master's level enhancement program were teachers with at least five years of experience. They worked four days per week in their classrooms and devoted one full day per week during 14 months to the program. One of the main program components consisted of participants' self-study of their teaching in an intentional and systematic way; that is, carrying out a teacher inquiry project.

The enhancement program supported the teachers' inquiry project by integrating courses and curriculum activities around the project. To do so, the program staff, composed of the coordinator, three Peer Support Teachers (PSTs), a senior faculty member and a junior faculty member (the author), jointly planned, conducted and evaluated all the activities of the program. The whole program staff devoted one full day for meeting with teachers, and another day for evaluation and planning the next session. First author was in charge of this teacher inquiry component, but also participated in all the other program activities. To facilitate teachers' engagement in inquiry, she designed and conducted her own teacher research project in which these teachers were the participants. Her project looked at the ongoing processes of understanding and transformation of both the teachers and herself.

The staff developed what we called an *inductive approach* to learning how to conduct classroom inquiry. Basically, we asked teachers to start the inquiry of their teaching by building upon their own resources and intuitions. The program staff supported them through small-group activities for sharing and receiving feedback, reading and comparing their experiences with those reported by other teacher researchers, and through periodic observations of each participant by his/her PST and subsequent dialogues between them. These activities often set the stage for teachers' engagement, mediated by the staff, in conceptualizing the principles and purposes of teacher research as a vehicle for their empowerment. When this happened, we provided them with concepts and techniques distilled as the common ground of the area of teacher research. Participants used Cochran-Smith and Lytle (1994), *Inside-Outside: Teacher Research and Knowledge;* Gordon Wells (1994), *Changing Schools from within: Creating Communities of Inquiry;* and Hubbard and Power (1993), *The Art of Classroom Inquiry: A Handbook for Teacher-Researchers*, among others.

The beginning was somewhat difficult in all three cohorts, due mostly to teachers' fearfulness, skepticism, and rejection as irrelevant to their central role as teachers. Nonetheless, as they started to see the changes generated by their own actions, most of the teachers became more engaged, although there were a few who remained skeptical as to the validity of their research.

#### **Second Author's Experience**

The second author's self-study is based on teaching a graduate course "Language and Literacy Instruction for Bilingual Students" during two semesters at a large southwestern university. Students were engaged in an action project on

literacy development in the context of bilingual education, in order to better understand how different programs of bilingual education have distinctive impacts on the development of first- and second-language literacy. The class spent considerable time on the examination of their specific local contexts of bilingual education, and on discussions concerning the possibilities of literacy development within such parameters.

The major goals/purposes for this project included: (1) An in-depth examination of systemic, sociohistorical, and sociopolitical issues impacting literacy development in bilingual education, while developing a critical view of the teaching and learning of literacy in the context of public schools, and specifically in bilingual education classrooms; and (2) An experience of teacher research as a model for professional development and as a way to support teachers' continual critical reflection on and learning from their own practices.

The time devoted to the action project was one hour of the two and a half class hours per week during the first half of the semester. Selection of topics of interest in the area of literacy in the bilingual education setting took considerable time as was anticipated. Several teachers were constrained from using action research in their classrooms because of the rigidity and inflexibility of the school reading program, which did not allow for any deviation.

Once the teachers had selected their areas of study, they discussed particular insights, problems or other issues they were experiencing during the implementation of their projects. This was accomplished throughout the semester by using small-group activities, discussions, individual conferencing, and written feedback from the instructor and her graduate assistant. At the end of the semester, each of the teachers made a poster presentation to their peers about their teacher research project. In addition, they wrote a final paper about their experiences conducting action research.

#### **Teacher Research as Praxis**

Our intention is to reflect systematically on our teaching by making such reflection a habit of mind and practice. Even though urgent tasks often overwhelm us and put important and systematic work off track, we are slowly getting into the habit of a more reflective practice including journal keeping. We are purposely trying to take the insights we get from individual and shared reflections and use them in our ongoing planning and subsequent actions. The immediate purpose is to maximize the dialectics between our reflection, including theoretical analysis, and our teaching.

A persistent barrier that we, as educators, have found has to do with the institutional constraints for a systematic reflection on our practice. Based on teachers' conversations and our own experience working in schools and other universities, we can say that administrators, teachers and other educators regard

such reflection as highly desirable; however, very few institutions allocate time and support for workers to reflect. One notable exception was the enhancement program in which the first author was working. In this program the staff participated one full day in their regular 'teaching' activities and devoted another full day to reflect on the previous session, evaluate the results and plan the following meeting with the participants.

Facing institutional constraints in working for the establishment of a praxis of teacher education is not an easy task. Despite time restrictions and limited opportunities for collaborative work in academia, we are actively seeking collegial dialogue and support. We have ourselves experienced teacher research as a dialectics between a conscious and systematic reflection on our practice, and the subsequent transformed teaching. As a pedagogical tool or as a content course, we have thus modeled and scaffolded teacher research as praxis for our students.

#### Modeling and Scaffolding the Praxis of Teacher Research

Through our own teacher research projects we have modeled the choice of focus/question, approaches, methods, use of resources, use of teaching-generated information, teaching-research link, etc. The first author designed and carried out a teacher research project while teaching teachers to do classroom inquiry. Hers was a kind of metaproject in which teachers' inquiry projects and their own transformation was the focus and source of data. These data were used for further planning of upcoming sessions of the enhancement program. In the second author's case, bringing in several examples of teacher research, supported students in planning their projects. The second author and her graduate assistant, a student who had conducted action research prior to the course, discussed their own action research in the classroom, providing a scaffold for students as they undertook their own work. Students had specifically asked the second author to "see an example". After this modeling, several students developed ideas for their own action projects.

Besides modeling, we scaffolded for teachers a step-by-step inductive approach to teacher inquiry by providing peer support groups, whole-group presentations and dialogues. The first author went to various classrooms to assist and dialogue with teacher participants. In the enhancement program there were also peer support teachers who assisted participant teachers with the study of their teaching. One of the most important scaffolding practices concerned connections between teaching and research while teaching; the second author did this through discussion of her own teaching in the elementary education setting. In many cases, sharing the insights about our own inquiry projects facilitated teachers' selection and implementation of procedures, methods and models appropriate to their projects. In designing the methodology of our courses, we devised various activities that encouraged teachers to have a continuing dialogue with a small group of peers about the study of their teaching. In the program in which the first author was

teaching, each participant had a continual dialogue with his/her peer support teacher. There was an implied assumption that teachers, especially the peer support teachers, would consider teacher research as something appealing and important to do. However, the peer support teachers were not very enthusiastic about the idea of teacher research. Although their skepticism affected the work negatively with regard to supporting the program participants, it also fostered a critical reflective posture in carrying out the various curriculum decisions and activities.

The second author's graduate assistant played an instrumental role in this reflective dialogue. He was experienced with critical action research himself, both as a teacher and in his work in teacher preparation. The second author had experience doing teacher research, but not in teaching it as an approach for teacher education. Thus, their collaboration was complementary in the course. In addition, her graduate assistant was also a student and thus not in an evaluative role, which helped him to establish fruitful dialogical relationships with the teachers in a way that the second author as instructor could not.

#### **Problems Engaging in Teacher Research**

In both first and second authors' classes, some teachers showed resistance to engaging in classroom research. Primarily, they found it difficult to consider research part of their practice. They often had a preconceived idea of research as an activity following the scientific method and rarely compatible with the complexity and dynamics of actual classrooms. Hence, they felt that teachers are unable to carry out 'research' in their classes. We think that another contributing factor in their resistance was that the teacher research project was a program requirement and not entirely their own choice.

One of the challenges for conducting action research in university coursework is the structure of the traditional course format. In the second author's case this was a two and a half hour meeting once a week over a sixteen-week semester. She had planned that one hour of the class time would be devoted to the action research. However, several teachers struggled throughout the entire semester with the project, and required a great deal of assistance and feedback. Combining course content and action research methodologies does indeed require more time. Engaging teachers in doing research in their own classrooms is a lengthy process requiring time and commitment on the part of both teacher educators and teachers. Teachers are extremely busy, and the action research project cannot be left to the end of the course semester to complete.

The second author and her graduate assistant had also considered that perhaps conceptualizing the project as a process built over time would assist teachers with planning their individual projects. Such a process was similar to that described by Carr and Kemmis (1986) as a spiral: planning, acting, observing and reflecting. The focus on the process rather than merely on the product clearly facilitated teachers'

engagement. Peer dialogues, thinking-aloud and group discussions were some of the strategies aimed at involving teachers in the teacher research process.

#### **Transformation by Doing Teacher Research**

Teachers' resistance started to diminish as they began to see changes in their classes, which were often followed by changes in their perceptions and understanding of their own practices. Teachers started to listen differently to students' voices, to become more aware of the advantages of collaboration, to awaken to the viability and importance of their role as researchers; and they were more willing and able to link teaching and research. Some of the special education teachers started to move from the dominant skills-based educational paradigm to one more concerned with students' feelings and meaningful learning. One of the second author's students felt that she had never really learned how to teach reading, so she became quite motivated as she inquired into the different approaches and philosophies related to the teaching of reading. Nonetheless, despite their acknowledgement of the relevance and intimate relation between teaching and research, some teachers in both programs were still doubtful of the "scientific validity" of this research.

The first author tried to do some follow up and found out that only a few of the participants continued doing classroom research after leaving the program. The school organization, lack of support, growing paper work, and onerous testing are some of the mentioned obstacles to continuing engagement in teacher research. Those who did continue experienced gradually diminishing school support. In the second author's case, interviews demonstrated that several students considered this a viable approach and continued with it as a strategy. One teacher, who was apparently bound by the conventional ideas of research, found the action project not particularly useful for her teaching.

One of our major realizations concerned the role of teacher research as a tool for implementing a real educational praxis. The dialogues between the second author and her graduate assistant facilitated their understanding of the needs of teachers concerning literacy for the bilingual student. What were their understandings related to the teaching of reading? What were their understandings related to the bilingual student? The action project helped them to uncover students' assumptions, knowledge bases and interests.

From our analysis of participant teachers' reflections on the changes and challenges experienced while doing classroom inquiry, we became more aware of the advantages and possibilities of teacher research, not only for teachers' development, but also for our own. For second author, it was a vehicle for taking into consideration students' prior knowledge about literacy for the bilingual student and using it to construct practice. The first author was able through the whole experience to better understand teachers' perspectives within the system of education. She moved from merely teaching research to engagement in modeling teacher research while teaching it.

Another major realization was that of the multiple ways of connecting teaching, research and scholarly writing. At the same time, both of us are approaching a more genuinely participatory, liberating and socially committed praxis of teacher research, which we envision as a promising way to connect teaching, research and community service. By genuinely participatory we mean the conscious and systematic involvement of participants in selecting the topics, planning the action and strategies and using the results first for their own benefit.

## **Theorizing Our Praxis**

Based on our experience, collegial dialogue and the supporting evidence, we have reached three major insights: (1) Teacher Research is a vehicle of genuine praxis of teacher education; (2) The notion of praxis as defined in this paper involves a dialectical rationality, which is radically different from the conception of practice within an instrumental rationality; and (3) Modeling and scaffolding the praxis of teacher research facilitate transformation of teachers and ourselves.

#### 1. Teacher Research as a Vehicle for Genuine Praxis

We have described our teaching as praxis, that is, a dialectics of reflection and action as defined by Freire (1992) and Carr and Kemmis (1986). Actually, writing this paper is part of this dialectics. Writing allows us to deepen our understanding of teachers' resistance, engagement, and transformation in doing teacher research. We are aware that our reflection would have not reached such a depth otherwise. Our practice has become more conscious, systematic, comprehensive and intense, hence a praxis. At the same time, we are trying to model this praxis to teachers, hoping to facilitate their own praxis through engagement in teacher research.

### 2. Dialectical Rationality Vs. Technical Rationality

Teacher research as a genuine praxis of teacher education can only be understood as such from a dialectical view of rationality. This view implies that the educational theory- practice relationship is mutually constitutive and interactive. Through this dynamic of reflection and action, teachers have great potential to sharpen their self-understanding, and their understanding of the mechanisms of the social structures, ways of thinking, and social practices that prevent them from working as agents of change. The new conservative era of educational policy is putting more and more control on teachers through narrowly defined standards and massive student testing. Nonetheless, there is an urgent call for a reconceptualization and re-definition of teacher professional development, for educators and teachers to work collaboratively toward liberation from the instrumental rationality of the positivist paradigm—the unquestioned ideology of control and oppression. Despite these efforts, the notion of praxis in the dominant discourses of reform in teacher

education as accounted by Cochran-Smith and Fries (2001, 2002) and follower commentators (Fenstermacher, 2002; Furlong, 2002), is still absent. A dialectical understanding of truth or valid knowledge in teacher research is related to the transformation of practice, the improvement of understanding of that practice and of the situation in which this practice takes place. Hence, any project starts with a set of practices and understandings and ends with another (Carr & Kemmis, 1986). The ultimate goal of this praxis is to transform the present, based on a good understanding of the past, in order to create a better future for teachers, students and society at large. A dialectical view of teacher education focuses on movement and transformation of practice. This opposes the timeless, decontextualized prescriptive models coming from outside teachers' classrooms, which are based on instrumental reasoning.

An important component of the dialectics of reflection and action is the notion of conscientization introduced by Paulo Freire (2000/1970). For him, individual consciousness is dialectically related to social consciousness, which arises from and is shaped by action. However, we are aware that, due to various factors, the teachers with whom we have worked have hardly crossed the boundaries of individual conscientization toward a more active role in the transformation of society through their liberating praxis. At any rate, we agree with Carr and Kemmis' (1986) statement that conscientization at the individual level is necessary but not sufficient to change practice in a substantive way. Thus, we are moving toward embracing a more participative, liberating, and socially committed praxis of teacher research in teacher education.

The idea of professionalization of teaching that we envision is that of a reflective, socially responsive and ethical praxis; the type of teacher education that includes technical solutions to teaching problems, but is far from reducing it to a merely instrumental view of practice. We envision a professional of education committed to 'acting educationally' for social change toward a participatory, just and equal education for all children. Carr and Kemmis (1986) summarize this role as follows:

the problems of education are not simply problems of achieving known ends, they are problems of acting *educationally* in social situations which typically involve competing values and complex interactions between different people who are acting on different understandings of their common situation and on the basis of different values about how the interactions should be conducted. (p. 180)

# 3. Modeling and Scaffolding the Praxis of Teacher Research Facilitate Transformation

When we started writing this paper, we were not yet ready to call our practice *praxis*. However, our collaborative retrospective reflection on our experiences using teacher research both as a pedagogical tool and for our development as educators, has transformed both of us. This transformation has been played out in the

reconceptualization of our practice as praxis and consequently the transformation of our praxis itself. As to changing the situation in which this praxis takes place, we have not yet advanced very far. We are starting to think of avenues for transforming the situation in which our praxis takes place. For now, we are trying to share these ideas about the transformative power of teacher research for teacher education.

In using teacher research as a pedagogical tool for teacher education we have been able to scaffold, model, and support teachers who have engaged in transforming their practice by doing teacher research. Our own studies and those of other educators working in this area (Cochran-Smith & Lytle, 1994; Goswami & Stillman, 1987; McIntyre, 1997; Pappas & Zecker, 2001; Poetter, 1997; Wells, 1994) provide evidence of various types of transformation. Some examples of transformation we have seen are: acceptance of the relevance of teacher research for teachers' own development, ability to articulate and document the mission of teaching, increased awareness of the legitimate links between teaching and research, and various cases of transformation of the practice to a genuine praxis.

One of the major realizations has been the establishment of the dynamic of reflection and action in our respective courses, which has been implemented at two levels: at our own and at the teachers' level. The ingraining of these two dynamics is one of the distinctive characteristics of our praxis.

Even though teachers eventually recognize their empowerment by engaging in teacher-research, in our courses we must be prepared to face some resistance to engagement in this kind of project, along with difficulties in understanding research in a new way. The principles and methods of conventional research run so deep in teachers' thinking that there are required several comparative analyses of specific research reports for people to realize the fundamental differences between this new paradigm and others with which they are more familiar.

Through the study of our own praxis and that of others by using teacher research, we maintain that teacher research may be a viable path toward a distinctively participative, liberating and socially committed praxis of teacher education.

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