

Teacher Development and Action Research:
Findings from Six Years of Action Research in Schools

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Research division: process

Action research has become a required component of teacher education programs throughout the United States and in other countries. It has also become accepted in some institutions as a legitimate way to conduct a masters-level or doctoral thesis. However, little research has been done to understand the nature of action research in these settings.¹ In this study we ask what can we learn about the nature of action research and the development of teachers as they progress through a credit-bearing course in action research. The course, Action Research in Schools, has been taught for the past six years to nearly 150 students.

We realize that action research takes many forms and can serve various purposes (Cochran-Smith & Lytle, 1993; McKernan, 1988; Noffke, 1997; Rearick & Feldman, 1999), thus we acknowledge that our findings may be particular to the type of action research espoused by the instructor. We describe his theoretical framework and his teaching methods more fully in the paper with reference to publications that describe them (Feldman, 1998; Feldman et al., 1998). We do claim, however, that while our findings may be particular to this situation, our study can help others to better understand how taking an action research course affects professional growth and leads to school improvement.

Theoretical perspectives

Two theoretical perspectives have informed this study. The first, which shaped the curriculum and instruction of the course itself, is of action research as a self-reflexive process that is systematic and public (Stenhouse, 1975; Altrichter, Posch, & Somekh, 1994), and that its aims are to improve practice and the understanding of educational situations in which practice is immersed. This action research methodology was enacted by collaborative conversations (Feldman, 1999; Hollingsworth, 1994) and the mechanisms of enhanced normal practice in collaborative action research groups (Feldman, 1996).

In Feldman¹'s model of action research, teachers work together to aid each other as they engage in individual action research projects. They do so by engaging in three research mechanisms: anecdote-telling, the trying out of ideas, and systematic inquiry (Feldman, 1996). When teachers come together they tell stories about their practice. Other teachers listen to those stories and respond in several ways. One is by responding with a story or anecdote of his or her own. They also may ask questions of questions of the anecdote-teller. Some questions seek

¹ For a notable exception, see Sarland (1995).

factual or technical information. They ask for details of context (e. g., school or students characteristics), or they may ask about how to replicate a teaching idea in their own classroom. Other questions are more critical as teachers try to uncover the educational value of teaching methods, the constraints under which they practice, and issues of social justice.

As a result of these collaborative conversations, teachers share and generate ideas about teaching that they can then take to their classrooms and try out. Teachers engaged in enhanced normal practice pay close attention to the ways that they implement their ideas and how their students respond to them. They then return to the collaborative group to share anecdotes and data.

Anecdote-telling and the trying out of ideas can continue for an extended period of time. Often it can lead to the illumination of a problem, dilemma, or dissonance in practice that can only be resolved through a more systematic form of inquiry that resembles the practice of educational researchers in colleges and universities. This systematic inquiry is what Cochran-Smith and Lytle (1993) call ³classroom studies² and what most others call action research.

We also used our construct of the action research space (Rearick and Feldman, 1999). In this construct, we envision action research as a process located in a three-dimensional space in which the three dimensions are purpose, theoretical orientation, and types of reflection. Along the theoretical orientation dimension are found the technical, practical, and the emancipatory (Grundy, 1987; Habermas, 1971; Van Manen, 1977). The technical orientation seeks to control human situations through rules based on empirical laws that govern action. It results in the development of theories, propositions, and law-like hypotheses with empirical content (Grundy, 1987). The practical orientation recognizes that most human problems are ill-defined and that rules are rarely transferable without modification. The practical orientation is deliberative and interpretive, and centers on meaning-making in situation (Grundy, 1987; Nussbaum, 1986). The emancipatory orientation arises from a critical perspective that seeks to uncover societal structures that coerce and limit freedom. The insights that arise from its analysis of the social construction of human society can lead to autonomous action (Grundy, 1987).

The purposes of action research include professional understanding, personal growth, and the political empowerment (Noffke, 1997). Professional purposes include staff development and adding to the knowledge base for teaching. The action leads to shared knowledge and to the improvement of the academic and social curriculum. Personal purposes for engaging in action

research include teachers becoming more familiar with the development of personal knowledge and educational theories. The action can lead to the understanding self and others. Political purposes include the critique of the nature of teachers' work and workplaces and the advancement of social agendas. Teachers' actions in the interpretive, conceptual, political systems of classrooms and schools can lead them to an increasing awareness of socio-economic, racial, and gender inequalities, and of the interconnections between knowledge and power.

The third dimension is the type of reflection that occurs in action research. In autobiographical reflection the action researcher strives to examine literal meaning of his or her stories and probes into the metaphorical meanings as they relate to common usage so as to understand and explain. Collaborative reflection involves sharing personal theories, asking questions and seeking answers beyond the self. Collaborative reflection involves reflecting on the social construction of the self and the system within cultural, historical, and institutional contexts. It can involve political public dialogue about philosophical questions such as the meaning of democracy, freedom, and social justice.

Context

The course in which the students were enrolled is a graduate-level seminar at a research-oriented land-grant university. A primary objective of the course is to prepare students to do action research in schools. There are three other goals (1) the development of professional community; (2) the illumination of power relationships; (3) students' recognition of their own expertise. The instructor attempts to achieve these goals through two main strands of the course. One is an in-depth analysis and critique of the theory of action research. The other is the doing of an action research project. The two strands are connected through a series of assignments, some of which come from the text used (Althricher, Posch, & Somekh, 1993). These assignments include a slice of life (Tremmel, 1993), the starting point speech, research plans, an interim report, and a final report. In addition to the once per week class sessions, students meet outside of class each week in formal small groups in which they discuss their projects and the readings for that week. Additional information can be obtained from the instructor's writings on the course (Feldman, 1998; Feldman et al., 1998) and on his website (<http://www-unix.oit.umass.edu/~afeldman>).

Three different groups of students typically enroll in the course: (1) new teachers seeking a second endorsement, (2) previously certified teachers seeking further professional development, and (3) doctoral candidates from a variety of programs including teacher education, curriculum studies, special education, counseling, administration, and international education seeking to explore action research as a research.

Methods

The three of us (Allan, Mary, and Tarin) have been engaging in research about the development of teachers' understanding as they learn about and use action research in schools. Allan is the instructor of the course, Mary, who is a professor at another institution, conducts action research with inservice and preservice teachers. Tarin is a doctoral student, and former middle school science teacher, who works with Allan. Our varied backgrounds provide us insight into emic and etic interpretations of the data.

In this study, we ask, ³What can we learn about the nature of action research and the development of teachers as they progress through a course in action research?² To gain a better understanding of both action research and the development of students enrolled in the course, we did a post hoc analysis of documents generated by the students and the instructor. While our data consisted primarily of final papers written for the course, we also examined other documents produced by students in the course, such as starting point speeches and interim reports (Feldman, 1998).

Our research progressed through three cycles of second-order action research (Elliott, 1988). In our first cycle of research, we each used the categories specified of the action research space to analyze ten of the final papers from the Fall 1998 Action Research in Schools seminar. First, we made sure that we were in agreement about the definitions and coding. We then read through all of the papers and constructed ³star diagrams² for each (see Diagram I for an example of a star diagram). We realized that most of the students were using autobiographical reflection, had professional or personal purposes for conducting inquiry into practice, and had a relatively technical orientation. In other words, they were ³the researcher² who was studying ³a problem², using ³a tool², such as a survey. In addition, using grounded theory (Strauss & Corbin, 1990), four categories emerged from our analysis of the ³findings² sections of the students¹ papers: efficacy, locus of change, moral/political, and implications for further action or understanding.

-----Insert Diagram I here -----

In our second cycle, we expanded our categories beyond the action research space to include the four categories identified in cycle one. For the second cycle, Allan selected a representative sample of twenty-one papers from the six volumes of students' action research studies. In this sample, we included the projects of graduate students who worked in social service agencies, libraries, and elementary, middle, and high schools. In addition, the sample included projects by administrators and other school-based practitioners. The teachers' papers included those by teachers of language arts, math and science. We chose to expand our sample because the Action Research in Schools course draws graduate students from various institutions and roles, and because the students' learning and their products are influenced by these diverse perspectives.

After examining the students' reports from these two perspectives, we felt that we needed to do a test of our findings through a third cycle of analysis. To do this we analyzed the students' papers in relation to Allan's goals for the action research course. In the next section of the paper, we discuss our findings from the second and third cycles of our analysis.

Findings

In this section of the paper we present three sets of findings. The first comes from our analysis of the findings reported by the students in their papers. The second set of findings is based on what we learned by using the construct of the action research. The final set is based on Allan's goals for the course.

Analysis of Students' Findings in their Final Reports

As part of their participation in Action Research in Schools, students were required to write a final project report. Using the analysis methods described above, we categorized the results or findings that we found in the students' action research papers. Our first category was efficacy, which appears in the papers as evidence that the researcher gained confidence that action research improved practice and/or theory in some way. The second category was locus of change. By this we mean the people or educational situation in which the student expected change as a result of the action research. We also examined the papers to see if the students had

reported any evidence that that either a moral or a political agenda guided their research. Finally, we looked to see what types of implications the students included in their reports.

Efficacy

In reading through the action report reports we searched for evidence from the students of the efficacy of their action research. We found evidence that suggested a feeling or statement of empowerment or new understanding, and evidence that the action research led to specific effects, such as changes in practice and effects on students.

One student who is seeking ways to encourage men to become early childhood teachers in his country expressed the feeling of efficacy that he gained from doing action research in the following way:

I will introduce [what I learned] to male kindergarten student teachers when I go back in 2001. I hope I could change the traditional attitude among the male student teachers and so that they stick with their profession as kindergarten teachers.

A graduate student who was studying her work as a supervisor of student teachers expressed her feeling of empowerment, new understanding, and the effects on her practice in this way:

The process of researching my own practice has been extremely rewarding. I have a tremendous stake in my research because it has helped me to become a better supervisor. Therefore, I have become more qualified to obtain certain educational positions. It has enabled me to become more aware of the issues that affect supervisors and their students. I feel confident when I speak about my role as a supervisor and am clear about my strengths. I have been able to make some specific changes and improvements in my supervision (improved listening skills, more capable in ability to ask meaningful questions, deeply value sustained conversations with students, aware of students¹ need to engage in meaningful reflective process).

A high school teacher saw potential in the use of action research in other educational situations:

Now that baselines and data collection techniques have been developed, this process can be used to explore future changes in the course, analyze the effectiveness of those changes, and to uncover questions yet to be discovered. Further, I see the potential value of action research in the other courses that I teach and I plan to investigate its use in these programs.

One final example can be seen in the following example from a middle school teacher concerned about the ³top kids² in an inclusion setting: ³While the top kids were my initial focus, I found that many of the policies I enacted benefited the lower level kids as much, if not more!² Although he related in his paper that early in the semester he could offer no solutions to a lower level student¹'s mother concerning the student¹'s attention and academic level, after completing his action research project he concluded: ³I am confident that I could approach a meeting (with that mother) with new insight and greater optimism.²

Locus of Change

Most of the teachers enrolled in the action research course had as their ultimate goal change in their students' performance. For the secondary school teachers, increased performance meant that they wanted their students to learn more content, to develop conceptual understanding of the content, and to be able to use their knowledge and understanding in real-life situations. The elementary school teachers also had these goals for change, but in addition focused on literacy and development. For many of these teachers, the principal change they sought was in student behaviors. These behaviors the skills and habits of mind that would enable them to learn more content would then lead to increased performance.

While the ultimate locus of change was students in schools, there were two other ways that the teachers wrote about change. In some of the papers the action research students wrote about their desire to change their educational situations, either through modifications in their classrooms, the restructuring of schools, or the development or implementation of new curricula.

A middle school math teacher, concerned about math anxiety in her students, decided to try to make changes in her classroom to counter the students¹ fear:

Due to overwhelming feelings of math anxiety among my students, I decided that I must focus on decreasing these levels of anxiety. To do this, I must make changes in my classroom, from a more traditional setting to one more responsive to the needs and interests of my students.

Not surprisingly, school administrators enrolled in the course tended to focus on whole school restructuring as a way to improve student learning and development. However, there were several cases of teachers trying to effect change in school policy. In one case, two middle school

teachers working together sought to change the grading policy of one of the academic departments. In another, an elementary school teacher studied her students' learning of spelling through a whole language approach as a way to show that her methods can be more efficacious than a basal approach to prepare students for standardized exams.

In other papers, there was a focus on change of the self. This can be seen in the following quote from the action research paper of a computer teacher:

After analyzing the situation (computer misuse) I decided to develop a unit on computer ethics ... Clearly, this project has caused me to focus on the contents, methodology, and objectives of the computer ethics program in away that, for the first time, revealed how little I truly understood about my teaching practice and how my course content was being received by my students.

Overall, we saw some evidence that the teachers began to realize that to enact significant changes in the ways that their students participate in schooling, they must go beyond a focus on the students alone to seek ways that they can change themselves or that they can change their educational situations to facilitate student change.

Moral/Political

By moral, we mean an agenda that arises from a sense of what is right and from existing values, traditions, and laws, and is concerned with improving the situation for individuals. We define a political agenda as one that is normative or ideological, and is concerned with the structure or affairs of institutions or organizations.

Most of the teachers had an explicit moral agenda -- to improve teaching and learning so that their students would be motivated to participate in learning activities. However, this agenda could be carried out in a variety ways depending on the ethical basis of the agenda, such as authoritarian, technical, or humanistic means. Therefore, we decided to seek evidence of the underlying ethical basis for the teachers' agendas. For the most part the teachers based their moral or political agendas in one of the following ethics: an ethic of care or concern (Noddings, 1988); the democratic classroom (Apple & Beane, 1995); an ethic of professional responsibility (Lomax & Whitehead, 1998); an ethic of self-improvement or professional development (Lieberman & Miller, 1984); or an authoritarian ethic.

There were numerous examples of each of these among the action research reports. A community college science teacher expressed his concern that students actively participate in classroom discussions about their learning and his teaching. A new teacher who was studying her work as a substitute teacher stressed the importance of democratic principles of class structuring so that all students can learn and be heard. We saw the ethic of professional responsibility in the international student's concern to increase and support male early childhood teachers in his country. We also saw it in the graduate student who focused on issues within the dean's office that affected the quality and quantity of work and her interactions with the undergraduate workers. Finally, we saw many examples of the ethic of self-improvement. They included the middle school teacher whose interests in brain-based learning and Zen were tied to her concern to improve herself as a teacher for the good of her students.

There were, however, those teachers who used technical or authoritarian means to control student behavior as a way to increase performance. These teachers focused on issues of control, order, and compliance, and they used low grades, attendance records, and school policies to justify their reasons for conducting the research. For example, one student who was a graduate assistant instructor at the University noted that he would lower students' to control absences:

Now, as university policy states, a student is allowed to miss three days of class time that meets on Monday, Wednesday, and Friday. For each absence, after these three the final grade will suffer a penalty of some sort.

While the moral agendas with their ethical bases were evident in the vast majority of the reports, we saw little evidence of explicit political agendas. Some of the ones that we did see included a student concerned with the plight of incarcerated Native Americans; a social studies teacher who adopted an explicit critical theory framework; and the elementary teacher who took action within her school to support the whole language approach.

We have proposed several possibilities to explain why we saw so little evidence of political agendas among the students. First, there is the artificiality of doing action research as part of a university course. The power differentials between instructor and students and the embedding of the course within the conservative structure of the university may impede students move into the political realm. Second, the time available in a one-semester course may not be sufficient for that move to occur. Third, the students are teachers who did their action research

within schools, which are also conservative institutions. Fourth, the politics of education is not an explicit part of the course.

Implications

In the "suggestions" that Allan gives to his students for writing the action research report he refers to an implications section in the following way:

Although this fifth element is labeled implications, it is not necessary that each project have far reaching effects. These implications could be a statement of how participation in this research has affected the ways in which you look at your teaching, your students, or your school. In other words, do you see the educational world differently now, and how will that affect what it is that you will do next?

Given this, we were surprised to find that less than half the students included this element in their papers. Those who did often used generic statements about what they would do next, such as the early childhood student teacher supervisor who wrote, ³I will use this process of action research to investigate my practice in the future.² Or the veteran teacher who wrote, ³My view of teaching continues to evolve. I think that we may be doing some students a disservice by imposing the traditional model of schooling on them."

Some students did include specific implications. For example, an administrator in a state agency saw the following implications of her study:

Breaking from old patterns, establishing new ones challenges a person. If I can sustain changes in my own practice and continue to build the perceptions I've identified as prerequisites to cooperation and collaboration, then I will realize several outcomes, increased satisfaction in my work, the resolution of better defined goals, and a more thorough testing of the hypothesis developed in this pilot study.

The general lack of attention to specific implications led us to ask, "Why did so few students include implications in their reports, and why were they so lacking in substance?" Again, the artificiality of doing action research as part of a university course, and its truncation by the end of the semester may be significant factors affecting the development of clear implications. Another possible factor is that teachers, and especially new teachers, often find themselves overwhelmed by the immediacy of their situations. The lack of attention to specific implications may also be the result of good judgement on the part of the teachers. For example,

they may have concluded that it is unlikely for significant implications to arise from a first attempt at action research.

It is also possible to think of the improvement or generation of theory as an implication of action research. For example, Oja and Smulyan (1989) saw this when teachers engaged in action research seek greater understanding of their teaching and of student learning, and test these understandings in practice.

In our analysis we found few cases of the development of scientific theories, that is, generalizable propositional statements (Feldman, 1997). Instead, the teachers enrolled in the action research course developed and made explicit the personal, practical "living" theories associated with practice (e.g., Clandinin & Connelly, 1987; Elbaz, 1981; Fenstermacher, 1986; Grimmett & MacKinnon, 1992; Whitehead, 1993). As with other aspects of action research that we looked for in these papers, we were able to group the students' aims to improve theory in several categories. First, there were several papers in which we found no evidence of the aim to develop theory of any kind. There was a much larger category of papers in which we saw no explicit aim to develop theory but where there was evidence that practical theories had been developed and tested through action research. Third, in some papers we found explicit statements that the students had as their aim to develop theories about their practice.

One case stood out. A doctoral student who was considering action research as a methodology for her dissertation in social work did a thorough review of the literature on action research and she reflected on fifteen years as a counselor for incest survivors. In her concluding remarks, she wrote

Action research requires that the researcher live with anxiety, transforming a need for closure to a need for journey. .. Conversation as the basis of research was crucial to them, and, therefore to me. Enlightened research originates from enlightened researchers who are interested in empowerment, change, and informed action. Š I think that researchers need to rethink the question, ³when does research begin?² Of course I consider my ³results² with a respect for their tentativeness. In a few months, perhaps, I will change the criteria in assisting me in organizing my question, selecting domains to discuss, and delimiting my sample.

Dimensions of Action Research

In our second set of analyses in Cycle II we used the action research framework developed by Mary and Allan (Rearick & Feldman, 1999). Using the criteria that they developed, we identified whether the action research papers had professional, personal, or political purposes; technical, practical, or emancipatory orientations; and showed evidence of autobiographical, collaborative, or communal reflection. We attempted to make sense of this three-dimensional data using Excel and other graphing software. The results of one attempt can be seen in Graph 2 and 3. Both graphs compare a sample of eleven studies according to the dimensions of action research. We have arranged the purpose, orientation, and reflection with professional, technical, and autobiographical at the base of the graph, with personal, practical, and collaborative in the middle range, and with political, critical, and communal near the top, then we begin again with professional, technical, and autobiographical at the very top of the paper. It is necessary to imagine that each bar represents a curved ring and the action researcher could very well move from a political to a professional purpose, or a critical to a technical orientation, or even from an autobiographical to a communal reflective process depending on the question being investigated. What we see here is that for the most part, the eleven action researchers are conducted action research for professional and personal purposes. Their orientation was by-and-large technical and practical.

The eleven students in this group break down into two groups. In the first, we find those tended to have personal purposes, a practical orientation, and used collaborative reflection, drawing on research or critical friends for assistance in interpreting the data. In the second group, we find those who tended to have professional and personal purposes, a technical orientation, and who used autobiographical reflection, relying mainly on their own perceptions, thoughts, and interpretative filters for making sense of the data and the situation.

We did the same analysis for the students who were enrolled in the course in Fall 1998. In that group we found that most of the students were in the second group that we identified above. These seven students had a professional purpose, a technical orientation, and an autobiographical form of reflection. The other three students also had professional purposes, but had an orientation that was practical and reflection that was collaborative or communal. These two groups differed primarily in two ways. All the students in the first group were teachers, and all but one were novices. The second group was more varied one was working in an

administrative position, one had a fair amount of experience as a teacher, and the third while a novice as a teacher had considerable experience in human services.

While we have been able to separate all of the action research reports that we read into these two categories, we were unable to relate categories of students -- such as secondary versus elementary; male versus female; masters versus doctoral, or teachers versus administrators -- to placement in either of the groups.

Cycle III: Allan's goals for the course

In his 1998 paper, Allan stated three goals for the course: 1) the development of professional community; 2) the illumination of power relationships; and 3) students' recognition of their own expertise. We now look at each of these in turn.

The Development of Professional Community

In a previous paper (Feldman, 1998) the ways in which the development of professional community is encouraged in the course were described and analyzed. This included the formation of "Action Research Notebook Response Groups" and extensive use of formal and informal groups during the class meeting time. While all the students whose papers that we read participated in these groups, we saw little evidence from the papers that they interacted with their peers in a meaningful and substantial manner. For example, most of them did not reflect on class discussions or on the readings in the report. We also saw little evidence of their interaction with peers in their schools or of interaction with the larger professional community through access to the knowledge base. This has led us to ask why they have not acknowledged the interactions that they did have.

We suggest several possible answers: First, the students were not explicitly asked to write in their final reports about their interactions with their peers. Second, while the students participated in the group activities, it may be that those activities were task-oriented and may not have led the teachers to form a "professional community." A third possibility is that the students did form professional relationships but that they were invisible to the researchers. A fourth possibility, and one that was addressed by Allan (Feldman, 1998), is that courses may have an artificial and contrived quality that inhibits the development of community. Finally, what we may be seeing is that while people can be encouraged to form collaborative work relationships within a course, those relationships do not always result in the development of professional

community. This leads to a more fundamental question as to whether a university course can lead to the development of sustained professional communities, and if so, how?

The illumination of power relationships

Teachers often speak of the ways that their practice is constrained. An analysis of these constraints suggests that they are not "real" but rather are cultural myths (Britzman, 1986; Tobin & McRobbie, 1996). We do acknowledge that teachers often are not aware of the ways that power differentials and hierarchies constrain their practice and that action research can be impeded if teachers are not aware of the ways that power relationships affect their practice (Feldman, 1997). That is why Allan has as his goal that those power relationships be illuminated.

That having been said, we found little explicit evidence that teachers became more aware of the power relationships that constrain their practice. We did, however, find that teachers became more aware of the power relationships between themselves and their students. We noted that they examined problems by looking at both student concerns and school policy guidelines. As a result, we have begun to think about teachers' relation to power as being bi-directional, as illustrated in Diagram II:

-----Insert Diagram II here -----

This lack of evidence of the illumination of power relationships raises some interesting questions in terms of the empowering nature of action research. While this course does not have an explicit critical orientation, students do read selections that introduce them to concepts of critical theory (Carr & Kemmis, 1986) and feminist critique (Lather, 1991) and they do discuss political issues orally, but the students did not include these discussions in their reports. Are we again seeing the effects of action research in the context of a university course? Is a sense of empowerment something that grows over time, and cannot be seen within the three-month timetable of the course? Is it that teachers construe pedagogical practices as political, but they do not label their work as political? Again, there is the possibility that we saw little of this because of the lack of an explicit critical orientation within the course.

The recognition of one's own expertise

Becoming aware of power relationships is only one way that teachers' research can become more efficacious. Empowerment of this sort can also come about for teachers through their recognition that they possess legitimate knowledge, understanding, and creativity. It appears from our reading and analysis of the research reports that these teachers did come to recognize their own expertise. For example, the third grade teacher who promoted a thematic approach to the learning to spell became aware of her expertise as her data began to support her contentions, and when the principal of her school invited her to give a workshop on her method to the other teachers:

Several weeks after speaking to the principal about my approach, she asked me to conduct workshops for the teachers from the school. That definitely helped to reinforce the positive feelings I have about thematic spelling and integrated learning.

A novice middle school teacher found that he had new expertise in assessment:

I have learned what feedback students expect and this has changed the way I grade in light, specifically, of assignment objectives. I have also learned that no single set of assessment rules exists. This is left up to the individual instructor, which accounts for the vast number of methods one can find within a single school or program. Yet, there are some methods which are better than others and through my research, I have determined the method which will best suit my needs and my students needs within the classroom and, as that method can be modified, beyond.

This may be the goal that was achieved best. The teachers did acknowledge that action research process encouraged them to look beyond their own personal perceptions, to look at the perceptions of their students and of colleagues beyond their classroom for ideas for improving their practice. In so doing, the teachers became more conscious of their own expertise--of their own personal and practical theories.

Discussion

We began this study by asking what we can learn about the nature of action research and the development of students as they progress through a course, Action Research in Schools. We attempted to answer this question by reviewing the final reports written by a representative sample of the students enrolled in the course during the past six years. We examined the papers

in three cycles: In the first we used the construct of the action research space (Rearick & Feldman, 1999) to understand the purposes, theoretical orientations, and types of reflection used by the students. In the second cycle we looked at what the students themselves claimed as outcomes of their action research. Finally we reviewed the papers to see if they contained evidence that the students had achieved the goals set by Allan for the course (Feldman, 1998).

In the previous section we presented our findings from each of these perspectives and reflected to some degree on their implications for action research in credit-bearing courses. In this section we summarize those findings and implications. First, we reflect on the fact that Action Research in Schools is a credit-bearing course and is taken by some students to fulfill certification requirements. Second, we consider that these papers are post hoc documents written as part of the requirements for the course. Finally, we try to make meaning of the various characteristics of the students, including degree program, years of experience in practice, type of practice, and gender.

We believe that action research should be a process that teachers and other practitioners engage in for their own purposes. That is, the reasons for doing the work of action research should be intrinsic rather than imposed from the outside. We acknowledge that the course in action research that is part of a degree or certification program is to some degree artificial. This artificiality and the placement of such a course within the university may account for several things that we saw, including the limited implications present in the reports, the lack of development of professional community, and the only limited attention paid to issues of power. This led us to wonder about the students¹ reasons for taking the course. Some possibilities are that some students may see the course as just a hoop to jump through and the final report as a ritual performance. If that is the case, then their goal is to finish rather than delve deeply into practice or to question the status quo. There is also the possibility that the placement of the course within a 14-week semester results in a truncation of the action research process. Perhaps the students are learning a new method for reflecting on their practice rather than conducting action research with an explicit social change agenda. Finally, the placement of the course within the institution of the University may impose a power structure that impedes the types of outcomes that Allan had for his students.

The placement of the course within the University may also help to explain why most of the action researchers referred to only one cycle of planning, data collection and reflection. It

may also explain why many of the papers were written in a technical genre that left out the process of doing action research. This type of post hoc retelling of the action research diminishes the importance of the processes of action research, such as multiple cycles, reflection, or conversations in community (Feldman, 1998). This was made particularly clear to us when we examined students' other written work during the Fall 1998 course (e.g., slices of life, starting point speeches, interim reports, and metaphors), in which we did see evidence that they engaged in multiple cycles of action research.

We used the construct of the action research space to see if it were possible to somehow link the purposes, theoretical orientations, and types of reflection that we saw in the papers to the characteristics of the students in the course. We saw that most of the papers could be placed into one of two large groups. One group consisted of papers that showed evidence of a professional purpose, a technical orientation, and autobiographical reflection. The other group showed evidence of a personal purpose, a practical orientation, and collaborative reflection. As we looked at these groups of papers and the characteristics of their authors -- degree program, years of experience, type of practice, and gender -- we saw little link between the characteristics of the authors and the group in which we placed the paper. The one possible relation may be that novice teachers -- those with two or less years of experience -- tended to fall within the first group. This is not surprising given that many new teachers find themselves overwhelmed by their new jobs and seek ways to gain control of their situations. It is also not surprising that those who do inquiry in the practical domain engage in collaborative reflection or that they discuss personal as well as purposes for conducting action research.

Conclusion and further research

Our study has left us with several questions that we would like to investigate further. The first is why we saw so little relationship between student characteristics and the placement of the reports within the action research space. A second is whether the artificiality of action research done within a credit-bearing degree and/or certification program impedes the development of sustainable professional community and prevents most of the students from becoming critical (Carr & Kemmis, 1986). Third, while the students became aware of the power that they had in relation to their students, we saw little evidence that they became aware of their place in the power structure of schooling. We wonder if this is an effect of the placement of the course within

the institution of the University. Finally, how does the structure of teachers' work and the limited resources available to them restrict their ability to take a more critical stance toward their practice?

It is also clear that changes can be made in the course to see if they lead to different outcomes among the students. For example, (1) make explicit the political goals of action research, (2) change the instructions for the final paper in ways to encourage the students to report on multiple cycles and their interactions with others in the class; (3) discuss the findings with current participants to elicit their thoughts.

We end by noting three implications of our study. The first is that the students' stances towards their practice changed while enrolled in the course and while doing action research. As they became aware of their own expertise, they felt a greater sense of efficacy in planning and implementing instruction and programs. In the few cases where students had opportunities to share their work with colleagues within their agencies, the teachers acknowledged feeling empowered to influence existing practice. We feel that these changes in their stances, or what Feldman (1997) has called their ways of being, makes it more likely that they will act as levers of change within the educational system.

The second implication arises from our finding that while these students changed their ways of being, they produced little in the way of what many would call generalizable knowledge. This suggests that if teachers move in the action research space from the technical orientation and autobiographical reflection towards a critical orientation and communal reflection they may move to what Bruner (1986) has called "paradigmatic knowledge" to more narrative ways of understanding their ways of being teachers.

Finally, we note that one of the features that is distinctive about the course is that students from many educational situations come together to investigate educational problems within their own situations. We wonder if there were structures that would enable mixed groups of practitioners to continue to get together to discuss their practices over time, they would develop professional communities of practice oriented toward inquiry into political as well as professional and personal purposes of education.

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Diagram I: Star Diagram

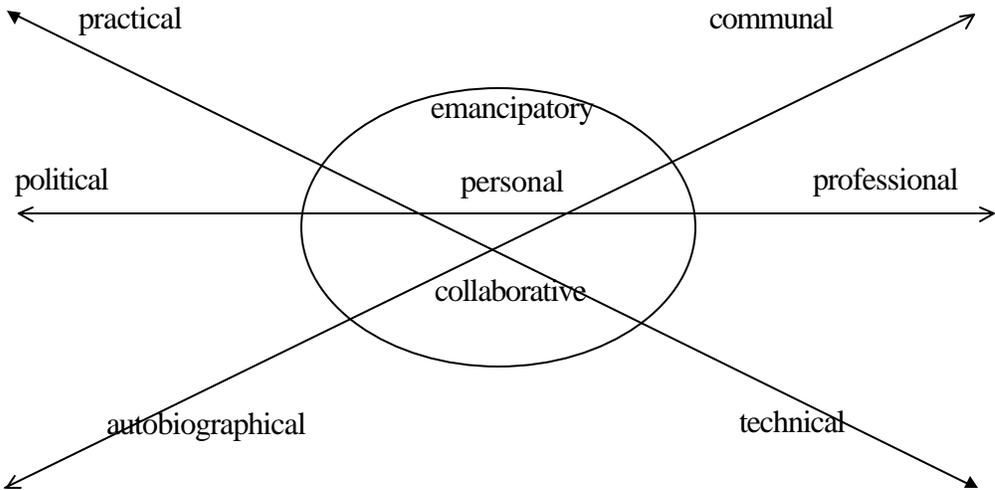


Diagram II: Power relationships

