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dissertation entitled

CLASSROOM TEACHERS AS MENTORS: THEIR PERSPECTIVES
ON HELPING NOVICES LEARN TO TEACH

presented by

Randi J. Nevins

has been accepted towards fulfillment
of the requirements for

Doctorate degree in Philosophy

Cassandra L. Book

Major professor

Date 1/29/93

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*CLASSROOM TEACHERS AS MENTORS: THEIR PERSPECTIVES
ON HELPING NOVICES LEARN TO TEACH*

By

Randi J. Nevins

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Teacher Education

1993

ABSTRACT

CLASSROOM TEACHERS AS MENTORS: THEIR PERSPECTIVES ON HELPING NOVICES LEARN TO TEACH

By

Randi J. Nevins

The purpose of this study was to describe how five classroom teachers make sense of their role as mentors to prospective teachers within a Professional Development School (PDS). Specifically, this study investigated how the teachers views about learning, sources of knowledge and conceptions of reflection influenced their mentoring.

The study took place at a PDS site where classroom and prospective teachers are affiliated with one of the teacher preparation programs at Michigan State University. Data collected over a five month period included: stimulated recall and structured interviews with the mentors, and observation of the mentors' interactions in language arts and student teaching seminars.

The data was analyzed using the constant comparative method (Glaser and Strauss, 1967; Strauss & Corbin, 1990). This method allowed for comparison across the subjects for the purpose of understanding one subject in light of another. From the data, three descriptive categories evolved which synthesized the major themes of the participants' words: views about learning, sources of knowledge, and nature of reflection used to help novices learn to teach. Using these three categories, data analysis combined the use of cases, frequency counts of the mentors' words, and visual representations created by the mentors.

Findings include descriptions and analysis of patterns and uniqueness across the five cases. The patterns were that 1) a discourse community was created where most mentors share common language, knowledge and beliefs about helping novices learn to teach, 2) the ways in which the mentors interact within the context of Brown PDS affects the sources of knowledge used to mentor, and 3) the content of most mentors' reflections center around work in teacher education and understanding literacy instruction. There were also uniquenesses among the mentors' stories. First, variability across the four mentors who do share some common views about learning are discussed. Then, variability in the fifth mentor, who constructed her role in a traditional manner is contrasted.

Implications for future practice and research include: creating an environment for teacher learning, engaging mentors and prospective teachers in reflective conversations about subject matter, and learning about teachers' own practice through mentoring.

To Dr. Cassandra Book
My mentor

ACKNOWLEDGEMENTS

There are several people whom I would like to thank for their support and feedback throughout the dissertation. First I would like to thank the five teachers who let me participate in their lives across five months. To Lisa, Kimberly, Alexa, Paige and Brooke I extend deep gratitude. Through observing and talking to these teachers, I learned a lot about the significant contributions mentors can make to prospective teachers' learning. I would also like to thank the principal of Brown PDS and all of the MSU faculty associated with Brown PDS. These people made it possible for me to be a part of the Brown PDS culture in order to complete this study.

A significant part of my learning to research and write about my research came from interactions with the members of my committee. I chose the members of my committee because of their outstanding commitments to teaching and teacher education. Cassandra Book, Linda Anderson, Henrietta Barnes and Laura Roehler are the four women who have worked closely to support my learning and research. I would like to extend an extra special thanks to Cassandra Book, the chair of my dissertation. Since I arrived at Michigan State, Cassandra has been my mentor, teacher, friend and colleague. She has helped increase my love for learning and teaching, and has pushed me to learn to conduct quality research of which I can be proud. Her constant support and ability to provide feedback on draft after draft of the dissertation are indicators of her strong commitment to teacher education research. I

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late nights in the office while I wrote, and making me comfortable at home after long days and nights of writing. He gave me much of the strength to complete this work, and to do it well.

Thank you to all those who provided me with emotional and intellectual support throughout the process of writing this dissertation.

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CHAPTER ONE

INTRODUCTION AND PURPOSE

Educators are initiating reforms in teacher education which propose potentially different roles for classroom teachers. One restructuring effort lead by the Holmes Group (1990) seeks to reexamine and restructure the way classroom teachers can be involved in both field and university-based aspects of teacher education. The Holmes Group's vision lead to the conceptualization of institutions called Professional Development Schools (for detailed definition see page 20). A goal of PDS work is to involve prospective teachers, experienced teachers and university faculty in a collaborative venture to learn about teaching together, hoping to blur the lines and weave together sources of knowledge from both the university and field. In this role conception, classroom teachers are asked to work with prospective teachers in forms of guided practice that could be substantially different from traditional forms of supervision.

Many agree that classroom teachers have a significant impact on the learning of novices. Prospective teachers credit field-based experiences as the place where most learning about teaching occurs (Feiman-Nemser, 1983). Throughout field-based experiences, it is the classroom teacher who, because of close interaction during the practice of teaching, potentially exerts the greatest influence on the development of a prospective teacher (Cochran-Smith 1991b; Hauwiller 1989; Meade, 1991). Since prospective teachers value their time with a classroom teacher, those who study teacher learning as well as those who educate teachers need to understand what is happening in interactions between novices and experienced teachers. Shulman (1987) believes that teachers have a wisdom of practice that could be a source of valuable knowledge for teacher education. Carter (1990) asserts that teachers

have practical knowledge of teaching that could be shared with others. Feiman-Nemser (1992) provides an example of how a teacher uses his knowledge of practice to guide a novice. Though field experiences are perceived by students to be one of their most valuable experiences in teacher preparation, questions remain about the nature, contributions, and possible inadequacies of a field-based preparation program (Clift, Meng & Eggerding, 1992; Guyton & McIntyre, 1990).

Because classroom teachers potentially have a lot to offer novices, teacher educators are beginning to develop preparation programs where classroom teachers, in partnership with university faculty, can be involved in more prominent roles in both university and field-based components of teacher education (Cochran-Smith, 1991; Roth, Rosaen & Lanier, 1988). However, we know little about the ways teachers enact these new roles. For example, what does it mean for teachers to work in new roles in teacher education? How do classroom teachers make sense of roles that ask them to mentor rather than supervise, guide rather than tell, and integrate knowledge from both theory and practice?

While most teacher education programs follow a conventional model for teacher education experiences, some programs are working to develop roles for classroom teachers as mentors and collaborators in teacher education (Cochran-Smith, 1991; Roth, Rosaen & Lanier, 1988). One example of a program that is trying to address the issue of involving classroom teachers more in both field and university-based components of teacher education is the Academic Learning program at Michigan State University (for detailed definition see pg. 22). The Academic Learning program makes a mentor teacher component (for detailed definition see pg. 23) an integral part of the program. Classroom teachers, labeled "mentors" by Academic Learning, work

with one student in their classroom over a two year period. Originally, mentor teachers participated in meetings with university faculty where field assignments were discussed, coursework concepts were examined and feedback encouraged. It was hoped that the mentor teachers could help university faculty build connections between university course content and field experiences. But before the advent of Professional Development Schools (PDS), where resources of time, money and personnel made differences in the types of participation that were possible, these conversations were limited. With the conception of PDS's, there is an opportunity to experiment with various ways for prospective teachers and university faculty to participate and collaborate with classroom teachers.

The Academic Learning program faculty developed the mentor teacher component on the premise that connecting field and university experiences is desirable and could have benefits for prospective teachers, experienced teachers and university faculty. Although the Academic Learning program has an explicit goal of involving teachers as mentors to novices, prolonged study of what this role of mentors (for detailed definition see pg. 25) means to the classroom teachers involved has not been possible. In a situation where they are provided with little formal training in mentoring expectations, knowledge or role, classroom teachers often construct their views of how novices learn to teach on their own. Consequently, as a profession, we know very little about how they construct their role. For example, what sources of knowledge do they draw on as they mentor? In what ways do the teachers model and encourage novices to use different knowledge sources to think through teaching actions and decisions? How do the teachers talk about their work in teacher education?

In order to understand what it means for classroom teachers to be

involved in university and field-based teacher education, the teachers' point of view needs to be examined. Without such knowledge, educators will not know whether this new reform effort is worthwhile or whether it can be sustained. Focus on the teachers' perspectives could uncover the extent to which classroom teachers embrace the goals of Professional Development Schools and Academic Learning, and how the teachers think about their role in helping prepare novices to teach.

There are several issues which surround the question of involving classroom teachers in university and field-based teacher education roles. These issues include: 1) what field experiences can contribute to teacher education 2) what university preparation can contribute to teacher education and 3) what university faculty and classroom teachers can contribute to teacher education as they work both in the field and university components of preparation. These issues will be briefly explicated in order to understand the purpose of this study.

Field-based teacher education experiences

Many agree that field-based experiences are perceived by prospective and experienced teachers as the most valuable segment of teacher preparation (Bischoff, Farris and Henniger, 1988; Evertson, 1990; Krustchinsky and Moore, 1981; Roth, 1989; Yellin et al, 1988). Classroom teachers are influential in shaping novices' learning during field-based experiences. Because of the potential influence and value of experience in the field, teacher education reform proposals such as those initiated by Joyce and Clift (1984), the Carnegie Group (1986), and the Holmes Group (1990) seek to examine and restructure field-based teacher education programs. As educators think about contributions and inadequacies of field-based experiences, they focus on issues of how much time in the field is necessary and valuable, and what the

substance of these field-based experiences should include (Cochran-Smith, 1991a; Cruickshank, 1987; Hopkins, 1985; Goodman, 1988; Zeichner & Liston, 1987, Zeichner, 1987b).

One of the problems that educators deliberate about is the amount of time novices spend in the field. There is some agreement that more time in the field could be healthy for preparation (Goodman, 1986). But merely increasing the *duration* of time in the field does not promise that these experiences will be automatically be educative (Arnstine, 1975; Ball, 1987; Berliner, 1985).

Among reformers working to both increase the duration and enhance the composition of field-based experiences, there are some who argue that reflection, experimentation and responsible decision making be the focus of these experiences, helping to make increased time in the field more meaningful (Beyer, 1984; Goodman, 1986; Lanier and Little, 1986; Zeichner and Liston, 1987). It is important to find out if classroom teachers also believe that reflection (for detailed definition see pg. 25) is an important part of their role in helping prepare teachers while working with them in the field. Though much has been written about various conceptions of what it means to be reflective (Denton, 1983; Erdman, 1983; Schon, 1987) and what teachers should be reflective about (Dewey, 1916; Valverde, 1982; Zeichner & Liston, 1987), classroom teachers have not been consulted in helping operationalize this construct for work between mentors and novices in the field.

The ways classroom teachers interact with novices in the field needs to be examined to find out how teachers define the purposes of field-based experiences. In order to work more as partners in preparation, both university faculty and classroom teachers' perspectives are valuable in deciding how to provide an educative experience in the field-based component

of teacher preparation.

The purpose of this study is to uncover, from the perspective of five classroom teachers, how they make sense of their work with helping novices learn to teach while they are working in the field, and in what ways they view the student teaching experience as an occasion for learning. As classroom teachers talk about their role as mentor, analysis will include efforts to describe whether the classroom teachers define, promote and believe that reflection is a part of their role in helping novices learn to teach. Reflection could take place in the form of mentors' reflections about their work in teacher education, and encouraging prospective teachers to reflect about teaching practice.

University-based teacher education experiences

In contrast to the belief that field-based experiences are the most valuable part of teacher preparation, it is perceived that university teacher education course work has little value for preparing students to teach (Goodman, 1986; Lanier and Little, 1986; Grossman, 1989). In the past, there have been few attempts to link what some novices view as the "two worlds" of university and field experiences (Feiman-Nemser & Buchmann, 1987) by involving classroom teachers. If educators believe there is value in both aspects of preparation, it seems worthy to consider how both can be seen as viable sources of knowledge which can be integrated rather than thought of as separate entities.

Grossman (1989) called for researchers to examine their assumptions about the value of university course work and its implications for teacher education. Grossman commented after hearing an address by former Secretary of Education William Bennett that:

"the former secretary's remarks reflect a more general perception that

teacher education offers little value to prospective teachers, its completion resulting only in a meaningless credential rather than in the mastery of a professional body of knowledge and skills necessary for teaching" (1989, p. 191).

Grossman (1989) believes that the inherent value in university-based teacher education pedagogical course work has been dismissed. She believes it is wrong to assume that pedagogical knowledge can only be learned during work in the field.

Feiman-Nemser and Buchmann (1987) differentiate between the roles of classroom teachers and university instructors in what they should focus on while working with novices in the field. They said that classroom teachers should focus on making explicit "the invisible world of teaching" while university personnel should help link specific incidents that occur in the classroom to a larger context provided within university coursework. Instead of dichotomizing the sources that teachers can learn from by talking about knowledge either from the university or the field, the Holmes Group (1990) challenges educators to work for ways to benefit from both sources of knowledge at the university and in the field. The Academic Learning teacher preparation program is working with five classroom teachers at Brown[1] Elementary Professional Development School to try different ways of helping novices see value in both university and school-based learning.

One problem which could be addressed by both classroom teachers and university faculty is how to help novices learn to develop a disposition for analysis of experiences in the classroom. In order to foster dispositions for critical learning about teaching, Livingston and Borko (1989) believe that experiences need to "be designed explicitly to help novices develop and elaborate knowledge structures for teaching and pedagogical reasoning skills" (Livingston and Borko, 1989; p. 39). Another problem is that although studies

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[1]Brown is a pseudonym.

have shown that university course work does have an immediate effect on helping build novices conception of teaching, novices may find it difficult to apply this learning in the classroom, for the immediacy and impact of field-based experiences many times washes out the university's efforts (Goodman, 1986; Hoy and Rees, 1977; Jacobs, 1968, Staton & Hunt, 1992). Prospective teachers may need assistance, from both classroom and university educators, in understanding how conceptions learned in the university can provide lenses for critically examining and applying ideas in the classroom.

The Academic Learning program places prospective teachers in the field concurrently with time in university-based course work. They are working to provide a lens for critically examining ideas that they have learned in the university to the classroom. For example, mentors are included in supporting an assignment that asks the prospective teachers to track student development in reading. Through discussions with the mentors, discussions on campus with the language arts methods instructors, and through working directly with students in a classroom to analyze the students as readers, the novice potentially learns to look at student development from a variety of perspectives. Whether the mentors embrace sources of knowledge other than experiences in the classroom will be examined.

Classroom teachers as partners in guided practice

As stated earlier, it is the classroom teacher who potentially has the greatest impact on the learning of a prospective teacher because of close interaction during teaching experiences. Research findings indicate that indeed cooperating teachers appear to have more influence on prospective teachers than university personnel (Bunting, 1988; Staton-Spicer and Darling, 1986; Staton and Hunt, 1992). Studies show that novices often adopt the values and habits of their cooperating teachers (Freibus, 1970; Seperson & Joyce,

1973; Zeichner, 1980).

Because of the potential impact of the cooperating teacher on the learning of a novice, there could be rich rewards in this form of support in the field. However, studies have shown that often cooperating teachers are "unable or unwilling to provide analyses of their own or the student teacher's teaching practice" (Staton and Hunt, 1992). Feedback provided by cooperating teachers typically focuses on ideas and activities that can be immediately useful in the classroom (Calderhead, 1988; Feiman-Nemser and Buchmann, 1987; Griffin, 1989; Livingston and Borko, 1989).

Since cooperating teachers play a powerful role in shaping how and what novices learn about teaching, some university-based educators are becoming more interested in involving classroom teachers in teacher preparation programs (Cochran-Smith, 1991a, 1991b). It is hoped that through this collaboration, both university and school experiences will become more valuable for prospective teachers. However, work with university and schools is complex, laden with assumptions about where knowledge and expertise are found. The way in which university-based teacher educators value and work with classroom teachers differs among teacher preparation programs. Collaborative work reveals assumptions about "the knowledge, language and expertise of school-based teachers relative to the knowledge, language and expertise of university-based teacher educators and researchers" (Cochran-Smith, 1991b). In addition, if university and school personnel are truly going to collaborate to improve teaching and teacher education, classroom teachers may need support in making a transition from classroom teacher to the role of school-based teacher educator (Clift and Say, 1988).

Academic Learning university faculty are working to involve classroom teachers in constructing a role that asks them to guide and mentor rather than

to supervise novices. However, it is difficult both for university and school-based educators to break away from the traditional label and conception of "supervisor" which is laden with constraints. Traditionally, supervision implies evaluation and performance rather than modeling and learning together.

The Academic Learning program is trying to create a model for mentors and novices that supports guided practice (for detailed definition see pg. 26) rather than supervision. According to Rosaen, many cooperating teachers believe that student teaching is a time to perform, to "show what you know" (Rosaen, 1991) about teaching. Within the Academic Learning program, mentors are encouraged to view prospective teachers as people who are learning to teach, who are using the student teaching experience as an opportunity to "examine your difficulties and learn from them" (Rosaen, 1991). Roth, the assistant coordinator for Academic Learning, also believes that by seeing teachers who model themselves as learners, novices receive a message that knowledge from different sources could be valued by practitioners as well as by university professors.

The form of guided practice which the mentors and university faculty who work with novices embrace is based in part on how each person believes people learn. Academic Learning faculty have worked in varying degrees with the five mentors at Brown, and range from having little to a lot of interaction time with the mentors within which to voice their beliefs about learning. Since there has been little formal training for mentors in the Academic Learning program, the classroom teachers have in large part created their own conceptions of what it means to mentor. For example, one conception of guided practice as a way of helping novices learn to teach includes the premise that "guided practice should help the practitioner gain

deliberate control over his or her practice through active consideration of the connections between professional actions and purposes, and between theory and practice" (Ross, 1990, p. 43). This conception includes the view that learning is active and thoughtful, that there is value in consideration of various sources of knowledge, and that reflecting about purposes and practices is important. Through the study of five mentors at Brown PDS and how they construct their roles, views of learning, sources of knowledge and the role of reflection in helping novices learn to teach will be examined.

PROBLEM STATEMENT

Recent restructuring efforts have lead to the conceptualization of partnerships between area schools and universities in order to work together to enhance the contributions of field experiences, university experiences and the forms of guided practices provided for novices. These partnerships operate on the premise that both university and school-based educators have valuable knowledge to contribute to the preparation of teachers, and that the prospective teachers themselves play an integral role in constructing knowledge about teaching (see for example, Brainard, 1989; Joyce and Clift, 1984; Takacs and McArdle, 1984; Clift and Say, 1988; Holmes Group, 1990).

An outcome of one effort to restructure teacher education has been the conceptualization of what is labeled a "Professional Development School" (Holmes Group, 1990). Professional Development School (PDS) sites were established in hopes of building partnerships between public schools and universities. Since part of the PDS vision includes the notion of university, school faculty and prospective teachers together building and developing the teacher education program, a Professional Development School is a viable place to study an effort to reform teacher education. In order to learn more about one of the reform propositions in practice, it is necessary to examine a

site where participants are attempting to restructure teacher education through a collaborative model. This study affords a unique opportunity to examine critical aspects of change in teacher education from participants who are directly involved and potentially influenced by this new wave of reform.

Central actors involved within these "partnerships" are the classroom teachers. For years students have been placed in teachers' classrooms, with varying amounts of collaboration with university teacher educators about goals and expectations for the student teaching experience. It has been long known that classroom teachers are often the most influential players in prospective teachers' learning during student teaching. What classroom teachers do and ways they interact with prospective teachers play a powerful role in shaping novices' beliefs and practices. Since classroom teachers potentially have a tremendous impact on prospective teacher learning, it is important to try to understand how some classroom teachers who mentor novices during student teaching make sense of and enact their role. In addition, it is equally as important to understand from the perspectives of classroom teachers, if and how the classroom teachers define a vision of a school-based teacher educator within a Professional Development School.

In order for change to occur in teacher education, active collaboration by the principal actors involved is imperative. This collaboration includes the classroom teacher. It is assumed that by assigning experienced teachers to work with novices in the field, that teachers have some sort of knowledge that will help prospective teachers learn. It is not an easy matter however, for experienced teachers to make what they know explicit and understandable. It may be difficult, without collaborative support and time for inquiry, for classroom teachers to talk about their knowledge of teaching in ways that are helpful to the novice as they attempt critical analysis of practical issues and

dilemmas in teacher education.

Reflection facilitates making implicit knowledge tangible to others and oneself. Reflection about teaching practice can allow prospective teachers access to the thoughts of experienced teachers. Reflection about teacher education, in addition, can provide classroom teachers with opportunities to think about teaching in a larger context than their own classroom. Research on teacher thinking has only begun to explore ways to help teachers make their knowledge and beliefs explicit, and the potential value of interactions with novices where teachers expose this knowledge. Although research is moving toward study of teachers as reflective professionals, little has been done yet to study or test models of reflection.

Before the conception of Professional Development Schools, the Academic Learning teacher preparation program at Michigan State University developed a "Mentor Teacher Component" of the program in an effort to involve classroom teachers more extensively within teacher preparation. With the emergence of a Professional Development School as a site where some of the elementary student teachers would be placed, the program faculty felt there was an opportunity to experiment with even more extensive involvement by the classroom teachers in teacher education roles. The Academic Learning teacher preparation university program faculty specifically state that their goal is to work within an environment where all participants are working to define and support a teacher education program that is constructed together by classroom teachers and university faculty.

Within Brown Elementary, one of the Professional Development sites, there are five classroom teachers who are attempting to work in partnership to develop a "mutually constructed learning community" (Cochran-Smith 1991a) with university faculty and prospective teachers involved in the

Academic Learning Teacher Preparation Program. These teachers have indicated a commitment to teacher education, and a willingness to devote time for study, deliberation and practice in mentoring prospective teachers.

The Professional Development School initiative puts forth as a fundamental goal that classroom teachers provide valuable voices in constructing teacher education experiences. If this view of the role of mentor is to work, teacher educators need to understand how to support teachers who attempt to enact this role. The main research question examined was:
How do classroom teachers make sense of their role as mentors in support of novices as they learn to teach?

In examining this question, three other themes arose from study of the five teachers. These themes symbolize how the mentors think about work with novices in the field during teacher preparation. The three themes were: views about learning, sources of knowledge and nature of reflection used to help novices learn to teach. Investigation of these issues led to the conceptualization of three additional questions for study:

1) *How do the mentors talk about their theories of how novices learn to teach?* (views about learning)

2) *How do the mentors use different sources of knowledge to help novices learn to teach?* (sources of knowledge)

3) *How do the mentors model and encourage critical reflection about issues and practices in teacher education?* (nature of reflection)

THE CONTEXT OF THE STUDY

Academic Learning teacher preparation program

The Academic Learning program is one of five teacher preparation programs at Michigan State University. The Academic Learning program focuses on preparation of elementary and secondary teachers who will support conceptual understanding of subject matter in schools (Feiman-Nemser, 1990). Primarily, the thrust of the Academic Learning program includes the ideas that knowledge is socially constructed, thus learners actively seek to create meaning through interaction with people and texts. The program also emphasizes the importance of understanding subject matter knowledge and multiple ways to represent subject matter to students (Amarel, 1988).

Academic Learning mentor teacher component

The Academic Learning teacher preparation program faculty conceptualized the mentor teacher component in 1985 (prior to working in a PDS) in efforts to encourage prospective teachers to see value in both knowledge sources gained from the university and the field, and to help mentors understand, to some extent, the philosophy and knowledge base of the teacher preparation program. According to Roth, Rosaen and Lanier, there was a problem that (1988), "students came to value the practical lessons learned from their cooperating teachers and to reject the conceptual change notions (of Academic Learning) as too idealistic for use in "real" classrooms (p. 3)." The program faculty wanted to encourage students and teachers to value sources of knowledge in both theory and practice.

In order to achieve the more desirable outcome of helping novices weave sources of knowledge from university and field, Academic Learning program faculty began working to involve classroom teachers in an extensive

field-based component of teacher preparation. Program faculty believed that this meant creating a new role for classroom teachers. Instead of merely providing a classroom for prospective teachers to have their field-based experiences, mentor teachers were encouraged to study the Academic Learning Program goals and the research knowledge base, collaborate with Academic Learning faculty in design and revision of field assignments, and play an active role in guiding prospective teachers' work in the field.

Mentors

Within the Academic Learning teacher preparation program, prospective teachers are assigned to a mentor during the first term of their junior year. The novices remain with their mentor throughout the five terms of the teacher preparation program. It is long-term, regular contact with the mentor that is emphasized within the program, for faculty and teachers feel that more intensive interaction can be fostered when there is time for a continuous relationship to develop. During the novices' junior year, for example, mentors are involved with supporting field-based experiences in conjunction with campus-based courses in social studies, science and language arts methods (terms one through three). During the fall term of the novices' senior year (term four), mentors assist with a language arts practicum, which is a field-based experiences held two mornings per week for ten weeks. University field instructors work with the prospective teacher during the formal student teaching segment (term five), and are required to observe the novice five times within this term. The program is structured so that mentors and prospective teachers have the opportunity to develop a relationship over time and across subject areas. Within this format, mentors have opportunities to work with novices as they move through Academic Learning course content. Because the university instructors visit infrequently and enter the

site after the mentor and novice have established a relationship and routine, often much of the responsibility for learning to teach during field-based experiences lies with the mentor teacher rather than a university field instructor. Within the Academic Learning program, because the mentor and novice interact as they move through course work and field experiences together over a two year period, it is hoped that the nature of interaction between mentor and novice is educative.

Academic Learning and mentoring in a Professional Development School

The subjects selected for this study are five classroom teachers who work within a Professional Development School (PDS) and mentor prospective teachers enrolled in the Academic Learning Teacher Preparation Program. As participants in a PDS these educators have been provided opportunities and support for collaboration with university faculty to learn more about teaching and teacher education. For example, subjects are involved in research projects in collaboration with university faculty studying topics such as integrating subject matter and developmental curriculum, co-teaching methods courses on campus for prospective teachers, including social studies and language arts methods, and presenting research findings at national conferences, such as AERA (American Educational Research Association) and IRA (International Reading Association).

The five teachers, along with twenty other classroom teachers from elementary schools surrounding the university, are involved within the 1990-1992 group of the Academic Learning teacher preparation program's mentor teacher component. A mentor, according to the Academic Learning Program Faculty, is one who can assist prospective teachers in linking university subject matter and theoretical learnings with more practical kinds of

knowledge learned in the field (Roth, Rosaen, and Lanier, 1988).

This study

The Academic Learning elementary program is six terms long, beginning with the student's junior year. This study takes place during terms four and five of the six term teacher preparation program. Specifically, this study will focus on interactions between the mentors and prospective teachers in conjunction with the planning, teaching and evaluating of language arts. The language arts methods course included within the Academic Learning curriculum is taught during the third and fourth terms of the program. As part of the language arts methods class held during the third term, prospective teachers on two occasions worked in their mentor's classroom with small groups of elementary or middle school students. The first assignment asked prospective teachers to talk with children about their aesthetic response to text, and to analyze the interaction. The second assignment asked for prospective teachers to conduct a reading sample with children. The reading sample focused more on skills and strategies children use to make sense of text, whereas the aesthetic response interview focused primarily on student enjoyment and appreciation of literature. The primary focus of this term of the course is on reading and discussing theoretical issues involved in the teaching of reading and writing within a literature-based classroom. During this term, the university-based part of the language arts methods course meets on campus twice per week.

During the fourth term of the Academic Learning program, prospective teachers complete a language arts practicum where class is held at the university one day per week, and field-based work occurs in the mentor's classroom two days per week. During this term, prospective teachers develop a unit of instruction in language arts and teach a portion of this unit in the

classroom.

The fifth term of the Academic Learning program is designated for full time student teaching. Prospective teachers are required to be in their mentors' classrooms for the full school day for a ten week period. During this time, prospective teachers create and teach units of instruction for all subjects. This investigation will focus on mentors' work with prospective teachers in the study and teaching of language arts during the fourth and fifth terms of the Academic Learning program.

STATEMENT OF PURPOSE

While other subject matter are taught and practiced within the Academic Learning program's university and field-based components, this study will focus exclusively with mentors in their work with prospective teachers in the study and teaching of language arts. This is not to dismiss the importance of the teaching and learning of other subject matter, but to focus the study in order to gain a more in-depth perspective on the question being investigated. In addition, while this study will focus on the *mentor teachers* who work within a Professional Development School context, data from university faculty and prospective teachers who also work at this site will be used to clarify issues of context and content of interactions.

The primary purpose of this study is to describe and analyze how classroom teachers make sense of their role as mentors in a Professional Development School context. Secondary goals of this study are to investigate 1) the knowledge and beliefs which guide the mentors' work with prospective teachers; 2) the process and content of reflective practice and; 3) the training and support of mentors. Following are the questions which guide this research.

RESEARCH QUESTIONS

How do classroom teachers make sense of their role as mentors in support of novices as they learn to teach?

1) How do the mentors talk about their theories of how novices learn to teach? (views about learning)

2) How do the mentors use different sources of knowledge to help novices learn to teach? (sources of knowledge)

3) How do the mentors model and encourage critical reflection about issues and practices in teacher education? (nature of reflection)

DEFINITION OF TERMS

In order to provide a clear framework for this dissertation, the following terms will be defined: Professional Development School, Academic Learning teacher preparation program, Academic Learning mentor teacher component, mentor teacher, prospective teacher, reflection and guided practice.

Professional Development School -

Reform efforts initiated by the Holmes Group (1986,1990) have lead to the conception of Professional Development Schools (PDS). The philosophy of these schools centers around collaboration and mutual benefits for participants in both universities and public schools. A goal of PDS work is to create learning communities where there is intersubjectivity. Ideally, PDS cultures would establish discourse communities where members are co-equal and knowledge is mutually constructed. As stated in Tomorrow's Schools,

> "Inquiry in the Professional Development School should be a way for teachers, administrators, and professors to come together on equal footing. It should help forge a shared professional identity in schools and universities. And it should serve as a professional norm around which collaboration can take place, bringing together the many parties who are concerned for improving schools (Holmes Group, 1990, p. 60)."

Collaboration, however is not a natural part of the school culture. A problem which has plagued education throughout the years is teacher isolation. Isolation encourages teachers to keep their wisdom tacit. Within the Professional Development School model, classroom teachers are afforded time and opportunities to talk publicly about ideas and dilemmas. Classroom teachers need to be encouraged by colleagues, public school administration, and university faculty that teachers have a critical role in preparing teachers and advancing teaching. The Holmes Group (1990) uses an analogy of medical school faculty and hospital staff overlapping and interacting in multiple ways to help clarify the ideal. As the Holmes Group states,

> "We need the Professional Development School and the parity relationship because the university needs experienced, wise teachers to help us revise the curriculum of education studies. If we don't do that, the Professional Development School is only a clinical setting" (Holmes Group, 1990, p. 82).

Central to the conception of these schools is the notion that university and school-based personnel together grapple with questions which arise out of practice, and experiment with new approaches to teaching and learning. Incorporated with the definition of a Professional Development School is the notion that:

> "we can create ambitious learning communities of teachers and students that are at the same time centers of continuing, mutual learning and inquiry by prospective teachers, experienced teachers, administrators, and education and liberal arts professors. We think our efforts to build inquiry into such coalitions and to do this over time are in fact something new under the reform sun" (Holmes Group, 1990, p. 3).

This study takes places within Brown Elementary Professional Development School (grades K-5). Brown Elementary and Michigan State University's College of Education forged a partnership in 1988 which focused on using research-based knowledge to improve elementary school teaching and learning (Rosaen and Hoekwater, 1990). The mission statement of Brown-

MSU Professional Development school was created collaboratively by public school and university faculty in 1989. It reads:

> "The mission of [Brown] -MSU Professional Development School is to provide students, prospective teachers, and practicing educators opportunities to use learned knowledge to interpret new situations, to solve problems, to think and reason and build new knowledge structures. Professionals at [Brown] School and Michigan State University working together as a community of learners will create an equitable learning environment that will promote educational growth and development as lifelong processes. To achieve these goals in meaningful ways will require creative thinking about organizational structures and professional roles. Collaborative study will permit developing deeper understanding of persisting educational problems and fostering open and inquisitive thinking. This collaborative relationship is based on mutual respect and appreciation for the expertise of all concerned in an effort to build an exemplary educational extension network for the 21st century."

Academic Learning Teacher Preparation Program

The Academic Learning Teacher Preparation Program is one of four thematic programs in teacher education at Michigan State University. Each of the four thematic programs focus on a specific aspect of teaching, such as subject matter teaching, decision-making in teaching, reaching diverse learners or the social context of teaching and learning. The theme of the Academic Learning program is subject matter teaching. In addition to specific thematic emphases, each of the four thematic programs also devotes emphasis to developing dispositions within prospective teachers to be lifelong learners and reflective practitioners.

The Academic Learning program goal is to guide prospective teachers to embrace a model of teaching that encourages conceptual understanding of subject matter. According to Roth, Rosaen and Lanier (1988), there are four curricular themes which are central to the Academic Learning program:

> "(a) helping students adopt a constructivist view of learners who construct their own understandings of subject matter knowledge, and whose prior knowledge and experience influence their interpretations of instruction (Magoon, 1977; Davis, 1981; Posner et al., 1982) ; (b) helping students develop knowledge of effective strategies and

appropriate learning environments for conceptual change teaching that will promote conceptual understanding; (c) helping students develop an understanding of the need for rich subject matter knowledge (Bruner, 1960/1982; Schwab, 1978) that includes knowledge of the structures of the disciplines, the functions of knowledge in subject areas, and the nature of inquiry and knowledge growth in the disciplines; and (d) helping these prospective teachers adopt a view of learning to teach as an on-going process that requires continued study and reflections on teaching experience Feiman-Nemser, 1983; Schon, 1983)" (Roth, Rosaen and Lanier, 1988, p. 7).

Prospective teachers within Academic Learning are encouraged to think critically about different sources of knowledge, both from research and from teaching practice. According to Roth, Rosaen and Lanier (1988), prospective teachers need to "understand both worlds of knowledge and learn to intertwine the two in order to decide on wise, defensible teaching actions" (p. 13).

The Academic Learning Mentor Teacher Component

In efforts to bridge the gap between theory and practice, the Mentor Teacher Project[2] was designed in 1985, piloted in 1987, revised in 1988, and now has become a regular component of the Academic Learning program. One goal of the Mentor Teacher Component, in addition to incorporating course work knowledge in interactions with prospective teachers, is for mentors to share their wisdom of practice. The particulars of this "wisdom" include practical knowledge about students, curriculum, management strategies and context (Roth, Rosaen and Lanier, 1988).

A mentor, as defined by program faculty within Academic Learning, is one who supports a prospective teacher in linking university-learned subject matter and field-learned practical knowledge. Prospective teachers are placed with a mentor teacher for two years, in order to establish consistency and longevity in a field-based experience. With the conception of the Mentor Teacher Project in 1985, Academic Learning faculty worked to achieve this

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[2]The word "project" has now been replaced by "component".

goal by adopting what Cochran-Smith (1990) calls a consonance model. A consonance model stresses the importance of having agreement between theory and practice, along with means to articulate this agreement among university and school faculty.

However, consonance is often achieved by imposing university standards for the knowledge believed important for prospective teachers to learn (McNergney, Lloyd, Mintz and Moore, 1988). As Cochran-Smith (1990) said:

> "Although teacher educators in this group {consonance} claim to combine "knowledge-based empirical research" with "knowledge that comes from practical experience", the fact is that they train experienced teachers by constructing for them both their knowledge (that is, what they ought to see when they look at and think about the classroom) and the language used to describe it (that is, the words and phrases they ought to use to talk about teaching)" (p.4.).

There is a model, described by Cochran-Smith which comes closer to the vision of the Professional Development School called the synergy model (Cochran-Smith, 1991a). Within the synergy model, the goal is:

> "to link the school and university portions of preservice preparation through mutually-constructed learning communities in which all participants, whether student teachers, cooperating teachers, supervisors or course instructors, function as both learners and teachers" (Cochran-Smith, 1990; p.7).

When the mentor teacher project began in 1985, Academic Learning program faculty found themselves originally leaning more toward a consonance model. Even with mentor meetings twice per term, there did not seem to be enough opportunities to actually get the classroom teachers to take on a significant role in creating and supporting field experiences. Because of opportunities which arose with the conception of the Professional Development Schools, the Academic Learning program faculty are making a concerted effort to move toward a more synergistic model. Academic Learning faculty feel that currently within the Brown Elementary PDS site, there is an

opportunity with extra time and support to experiment with the mentor teacher model in a new context that has potential for more synergistic goals.

Prospective teacher-

A prospective teacher refers to an undergraduate student who is working on a degree in teacher education. Candidates for teaching are referred to within this text as "novices" or "prospective" teachers, for they are learning to teach in a university teacher preparation program which combines work at the university and work in the field.

Mentor teacher-

A mentor refers to a classroom teacher who agrees to work with a prospective teacher over a two year period of time within the Academic Learning Teacher Preparation program. A mentor, according to Academic Learning faculty, is one who supports prospective teachers in seeing value in both knowledge which comes from theory and knowledge which comes from practice. Mentors are selected by the following criteria: 1) the teacher's commitment to teacher education; 2) the teacher's openness to learning about educational research and Academic Learning program goals and willingness to support Academic Learning students; and 3) teachers with adequate time to devote to prospective teachers. The classroom teachers were recommended by the university faculty, principals, colleagues, and self-nomination. Each candidate filled out an application, was interviewed, and approved by the principal before accepted (Roth, Rosaen and Lanier, 1988).

Reflection-

The practitioner who is reflective can take herself out of a situation, consider that she has to construct an answer in the moment, and draw simultaneously on sources of knowledge and experience. As Argyris, Putnam and Smith (1985) state, "this reflection-in-action is a way of making explicit

some of the tacit knowledge embedded in action so that the agent can figure out what to do differently." The construct of reflection will be examined on two levels for this study: 1) the ability to be reflective about the mentor's own teaching practice to make her knowledge accessible to the novice and 2) the ability to be reflective about the mentor's work in preparing a novice for the practice of teaching.

Guided practice

Guided practice is the form of interaction which Academic Learning advocates. Guided practice differs from the traditional connotation of supervision. The nature of supervision implies that one is evaluator who is judging the performance of another. Guided practice is more consistent with Academic Learning's definition of mentor as a guide who models continual learning and thinking about problems of practice. Within this conception, guided practice has a reflective dimension. The mentor or guide tries to help the novice actively consider various perspectives in order to make instructional choices. As Ross (1990) stated, guided practice should "help novice teachers learn how to think about teaching in ways that enable them to make rational and ethical choices and to accept responsibility for those choices" (p. 43).

SIGNIFICANCE OF STUDY

This study has potential value for both classroom teachers and university teacher educators. The significance of this research lies in the fact that the study simultaneously explores several areas which hold promise for improving the preparation of teachers. Specifically the study 1) inquires into how these mentors think about their role in helping prospective teachers learn about teaching; 2) focuses on classroom teachers as school-based teacher educators working within a Professional Development School context to weave

together sources of theory and practice; and 3) investigates the content of classroom teachers' reflection about their work with prospective teachers.

The experienced teacher potentially brings to a learning situation a wealth of practical knowledge which is constantly growing based on on-going, daily, current experience within the classroom. In the past, investigations have primarily focused on understanding the discourse, knowledge and beliefs of prospective teachers and university field instructors (Putnam, et al, 1988; Zeichner and Tabachnick, 1982; Zeichner and Liston, 1985). However, little literature has focused on understanding classroom teachers' work with prospective teachers (Carter, 1988; Feiman-Nemser, 1992; Little, 1990). By examining what knowledge mentors draw upon, and how they proceed in their work with prospective teachers, it will be possible to document information that could be helpful in both educating and supporting mentor teachers.

METHODOLOGY

In order to capture the mentors' perspectives about their role in helping novices learn to teach, this research study will draw on data collected through interviews, stimulated recalls and observations. These qualitative data sources allow for access into teacher thinking and teacher knowledge. Qualitative design allows for systematic inquiry within a natural setting. This research focuses on studying the meanings in action of the actors involved. The data collected was analyzed using the constant comparative method (Glaser and Strauss, 1967). This method allowed for comparison across the subjects for the purpose of understanding one subject in light of another. From the data, descriptive categories evolved, which synthesized the major themes of the participants' words. Data reporting and analysis combines the use of cases, frequency counts, and visual representations to describe and analyze how five

classroom teachers make sense of their role as mentors in support of helping novices learn to teach.

OVERVIEW OF THE DISSERTATION

The chapters of the dissertation which follow are arranged in the following fashion: Chapter II presents a review of the literature relevant to this study; Chapter III presents a richer description of the context of the study from the perspective of participants who helped to conceptualize the Academic Learning mentor teacher component and Brown Professional Development School; Chapter IV presents the design and methodology of the study, including a description of the design, participants in the study, procedures used to collect data, and the methods of data analysis; Chapter V presents the findings related to a description and analysis of how five classroom teachers make sense of their role as mentors in support of helping novices learn to teach; Chapter VI presents implications this study may have for future restructuring efforts in teacher education which seek active involvement from classroom teachers.

CHAPTER TWO

REVIEW OF THE LITERATURE

The purpose of this chapter is to provide a review of the literature relevant to problems and issues introduced within the first chapter. The review of literature will be organized around the aims of this research, which include becoming better informed about the ways which classroom teachers as school-based educators in a Professional Development School make sense of their role; how mentors use beliefs about learning and sources of knowledge to help prospective teachers learn about teaching; and the nature of reflection fostered by university faculty and classroom teachers in university and field-based experiences. In order to pursue these goals, the literature review will be divided into three sections. The first section of the review will describe the theoretical framework, including literature on social constructivism, teacher thought and reflection. Second, literature about teacher preparation and field experiences will be explored. Third, a review of the literature on forms of guided practice during field-based experiences will be provided.

THEORETICAL FRAMEWORK

The context of many teacher preparation programs today focus on a constructivist orientation which views a teacher as a reflective professional. This differs from earlier reliance on behaviorist views of teachers as technicians, and information processing views of teachers as decision makers. Since many university educators are now advocating approaching teaching and learning from a constructivist perspective, it is possible that classroom teachers might also come to embrace this theoretical framework in support of students' and prospective teachers' learning. In order to understand the theoretical framework which guides this dissertation, literature on behaviorist, information processing and social constructivist theories of

learning, teacher thought and reflection will be examined.

Many classroom teachers have limited exposure to more innovative preparation programs (Goodman, 1986) which emphasize the social constructivist view of learning and teaching. In addition, despite university preparation which is grounded in the theoretical framework of social constructivism, prospective teachers are not typically supported by university professors or classroom teachers in the development of critical, reflective dispositions which could transfer to a classroom context (Livingston & Borko, 1989). Since both prospective and experienced teachers often feel ill-prepared to talk about and critique theories about teaching and learning, research findings indicate that prospective teachers abandon the more liberal notions proposed in the university for the more conservative practices in schools. (Goodman, 1985, Tabachnick, Popkewitz & Zeichner, 1979-80).

The behaviorist view of learning

Behaviorist theories of learning are concerned more with how behavior, rather than knowledge, is acquired. According to Phillips and Soltis (1991), "to the behaviorists, learning was a process of expanding the behavioral repertoire, not a matter of expanding the ideas in the learner's mind. (Mind, after all, was a subjective and nonpublicly observable entity, and thus had to be avoided by science)" (p.23). The focus of behaviorism is placed not on how one learns and understands an idea, but how he/she can be lead to behave in a way that leads to performance of a task. The behaviorist model focuses on observable, objective and public data, and "...the private world within the skin is not clearly observed or known" (Skinner, 1974, p.31). Watson (1924) argued that psychology deal only with observable, scientific behavior in order to be accepted as an objective science. That which was observable, according to psychologists at this time, was behavior (Schunk,

1991). Experiences and ideas that lie in a learner's mind, according to behaviorism, are not relevant.

Skinner has written several texts which apply behaviorist views to teaching. For example, his 1968 book *The Technology of Teaching* focuses on how principles of behaviorism can help instruction and motivation. According to behaviorists a teacher is viewed as a technician, whose job is to shape student behavior to reach certain objectives. "Teaching is simply the arrangement of contingencies of reinforcement" (Skinner, 1968, p. 5).

The behaviorist view has been challenged by many, including Phillips and Soltis (1991) who ask, "Are the events taking place in the mind of the learner of no relevance to the psychologist, and perhaps even more importantly, are they of no relevance to the work of the teacher?" (p.30).

The Information Processing view of learning

Another perspective in learning also emerged within the twentieth century. Where the behaviorists viewed teachers as technicians, the information processing psychologists viewed teachers as decision makers. Information processing theories are concerned with how one attends to, encodes, stores and decodes information. Advances in communication and computer technology influenced the information processing theories, for according to this view, functions of a computer (receiving, storing and retrieving information) are similar to the functions of humans (Schunk, 1991). Even though information processing theories are concerned with communication, one of the criticisms is that the theories do not help people to understand everyday communication in all its complexity and with all of its personal meanings (Conant, 1979; Littlejohn, 1983)..

Contrary to behaviorism, information processing researchers do focus on the internal processes involved in decision making. In fact, the

information processing theories view teachers as decision makers. Shavelson (1973) said:

> "Any teaching act is the result of a decision, whether conscious or unconscious, that the teacher makes after the complex cognitive processing of available information. This reasoning leads to the hypothesis that the basic teaching skill is decision making" (p.18).

The information processing theories have acknowledged the value of how the mind makes decisions. Yet, within the information processing view, the root metaphor is a computer, with the notion that thinking is computational. In contrast, the social constructivist theory holds as its root metaphor a conversation, where thinking is dialogic (Gavelek, 1992).

The social constructivist view of learning

Within the context of this study, Academic Learning program faculty are working to remedy the problem of disparity between learning models promoted within traditional preparation programs by introducing both classroom and prospective teachers to the social constructivist view of learning and teaching. This view is advocated by the program as a way to conceptualize learning and teaching.

Social constructivism is grounded in the premise that people understand and act upon the world by interacting with others. This perspective is rooted within a socio-historical context, where learning is affected by construction of meaning based on perspectives which participants bring to a particular experience. Consistent with the social constructivist approach is the idea that learners play an active role in making sense and shaping their environment. According to D. Barnes (1979), Bruner (1960/1982), and Vygotsky (1978) learners make sense of new knowledge based on their prior knowledge. Meaning is constructed and in constant evolution, and involves a continual process where learners re-define knowledge as they are influenced by

past/present experiences, their context, and interaction with other individuals. The social context, then, influences what and how an individual learns (Erickson, 1982). Vygotsky (1978) describes this evolution on two planes; the interpsychological plane (social interaction between individuals) and intrapsychological plane (within an individual).

- Central to this theory is the idea that activities of school and home over the years are internalized to form an individual. The cycle of individual development begins with social interaction, including both written and spoken dialogue. Interactions lead to internalization of ideas, which in turn result in the formation of new mental structures (Davydov & Zinchenko, 1989). These mental structures are transformed within the individual as a private activity before they are then publicized and available for social discourse again (Vygotsky, 1978). Interactions facilitate the process of making implicit knowledge visible. Dialogue and coaching help participants unpack and discover meaning. Through interaction, participants begin to reveal the knowledge that was held in the intrapsychological plane, making that knowledge available on a interpsychological plane.

The vehicles used to mediate our sense-making during interactions are language (or some sign system) and thought. Social constructivists advocate that learners use tools and language in order to develop more sophisticated thought processes (Wertsch, 1985). Butt (1989) summarizes the relationship of language and thought as:

> "language always involves thought: thought is inherent in the very structure of the sign; similarly, one cannot conceive of thought except in the terms of a semiotic system - a community, public, system for meaning. So we might express it thus: Language ----------Thought" (p.28).

Butt (1989) claims that language is a tool used to help an individual understand him/herself. Through communication, a person builds his/her

sense of self, including beliefs, knowledge and skills (Laing, 1969; Littlejohn, 1983; McCall, 1987). These thoughts are affected, altered and/or maintained through subsequent interactions with texts, people and the environment. "The individual sense-making that goes on in a learning situation arises out of a social context that contributes to the meaning the learner constructs" (Rosaen, 1987, p.14). According to Campione, Brown, Ferrara & Bryant (1984), interaction with a more knowledgeable person facilitates internalization of more sophisticated thought processes. Consistent with this model, the more knowledgeable person supports the learner in movement through the zone of proximal development. Within this zone, learners are moved from a place where assistance is necessary to a place where problems can be solved independently.

Further, social constructivists posit that people internalize implicit theories about the world through interactions with others. Hidden voices are consulted frequently in attempts to make sense out of experiences. Through gradual internalization of ideas from exposure to different contexts (e.g. the classroom, the school) and interactions with individuals associated with these contexts (e.g. the students, colleagues, administrators, parents) people form beliefs, values and knowledge which drive their participation in a culture. People learn standards for appropriate behavior, role expectations, power, and develop shared meanings for verbal and nonverbal communication (Rommetviet, 1980; Swales, 1990; Wertsch 1990).

Within the social sciences, scholars are beginning to see the value of considering the "meanings of actions for the participants worthy of scientific explication" (Rommetveit, 1980). Consistent with the social constructivist perspective, researchers interested in pursuing inquiry framed within a social constructivist perspective need to examine 1) participants as they

interact *with their context* (in this case, how classroom teachers help prospective teachers learn about literacy instruction) and 2) what *implicit theories* guide participants' visions of their role (in this case, a classroom teacher's role as mentor to a prospective teacher). According to this view of learning, a researcher cannot simply study an individual, but needs to understand the individual in interaction with others within the context in which a certain role is being enacted.

Teacher Thought

As described within the previous section, scholars have relied on various metaphors to describe the cognitive work involved in the practice of teaching. These metaphors emerged in parallel with a shift away from a behaviorist orientation which viewed the teacher as "technician" to an information processing orientation which viewed the teacher as "decision-maker" toward the current constructivist orientation which views the teacher as a "reflective professional" (Clark & Peterson, 1986). The social constructivist view values the role of thought and hidden voices which inform this thought in teaching and learning.

The shift from a focus on behavior to a focus on cognition lead to the exploration of teachers' implicit theories. Lee Shulman, in a meeting of the National Institute of Education (1974) claimed that "it will be necessary for any innovation in the context, practices and technology of teaching to be mediated through the minds and motives of teachers." Building upon this idea, according to Vitz (1990), "moral deliberation is usually a social not a solitary process. Even when one deliberates alone, moral reflection is often an internalized conversation among the various voices of one's conscience..." (p.715). This internal dialogue with the voices of one's mind is also social in nature. Since social constructivists value thought as an

integral part to construction of reality, there have been more efforts to examine the internal dialogues of teachers. Research on what has been labeled "implicit theories" (Clark and Peterson, 1986) continues to develop as researchers gain a deeper understanding of the role of social interaction in making the invisible visible. The first studies of this sort were efforts to probe the implicit theories of an individual teacher through methods that focused on the individual. Currently, the focus seems to be shifting to examine how individual teachers make their knowledge and beliefs explicit through interaction. Investigations now include efforts to view teachers' conversations as means to getting closer to identifying teachers' beliefs and knowledge (Witherell & Noddings, 1991).

Consistent with the current metaphor which describes teachers as "reflective professionals", Clark and Peterson (1986) believe that reflective practitioners would be ones who have taken steps toward making explicit their implicit theories and beliefs about learners, curriculum, subject matter and the teachers' role. Clark and Peterson (1986) say that reflective practitioners would: "Reflect on and analyze the apparent effects of their own teaching and apply the results of these reflections to their future plans and actions" (p.292). This conception of reflection is similar to the work of Schon (1983, 1987).

Although research is growing in the area of teacher thinking, there has been little effort to study or test models of reflection empirically (Calderhead, 1989). The process of reflection, according to Schon's (1987) model, involves the ability to make implicit theories, knowledge and beliefs explicit. What has not been studied, is the content of these reflections. Nor has the notion of a "reflective" mentor been examined. A possible conception of a reflective mentor could be one who has the capacity to explain what she knows and how she came to know this substance of knowledge about the

practice of teaching. A reflective mentor could also talk about how she uses her knowledge to help a prospective teacher learn to teach.

Reflection

Reflection is a construct which is becoming increasingly popular in the field of teacher education (Calderhead, 1989; Zeichner, 1990; Zeichner & Liston, 1990). Although teacher education programs use the word reflection in their programs, there is very little shared meaning about what this construct means. In addition, "there appears to be even less agreement about what characterizes the content of reflective inquiry and on what kinds of contexts tend to foster such a process" (Grimmett, 1988, p. 6). However, teacher educators do to agree that this construct called reflection is worthy of inclusion within teacher preparation. Emphasis on reflection in teacher education indicates an effort to provide preparation experiences which involve critical analysis and meaningful deliberation about issues and practices in schools (Denton, 1983; Erdman, 1983).

One example of efforts to make this construct concrete comes from Zeichner and Liston (1987) who claim that field experiences should support prospective teachers "to reflect on the origins, purposes and consequences of their actions, as well as on the material and ideological constraints and encouragements embedded in the classroom, school, and societal contexts in which they work" (p.23). Another example comes from Valverde (1982) who believes that reflection includes examination of "situation, behavior, practices, effectiveness, and accomplishments" (p. 86). Reflection, according to Valverde, calls for a subject to ask questions such as, 'What am I doing, and why?' According to Schon (1987), reflection includes the ability to think critically about issues of teaching practice instead of relying solely on technical knowledge to guide actions. In order to facilitate the development of

a reflective disposition, Dewey (1916) suggests that situations need to be created for prospective teachers that provoke reflection. These situations can evolve from the act of teaching, where "rather than behaving purely according to impulse, tradition, and authority, teachers can be reflective--they can deliberate on their actions with open-mindedness, wholeheartedness, and intellectual responsibility" (Cruickshank, 1987, p. 8).

One of the most widely relied upon models of reflection is that developed by Schon (1983, 1987) whose ideas were inspired by Dewey. The works of Schon and Dewey will be used as a beginning frame to study how the five mentors work in a Professional Development School context with prospective teachers.

The drawback of most models of reflection is that the *process* of reflection gains more attention than what the *content* of reflections should include. Building upon Schon's more process-oriented framework, the purpose of this research is to examine the content of reflections as well.

Dewey

According to Dewey (1933), reflection arises when a person is deliberating about choices within a situation. Wrestling with feelings of uncertainty, surprise and doubt often leads to reflection. Dewey's conception of reflection includes "active persistent and careful consideration of any belief or supposed form of knowledge in light of the grounds that support it and the further consequences to which it leads" (Dewey, 1933, p. 9). Dewey maintains that reflection helps practitioners "know what we are about when we act" (Dewey, 1933, p. 17). According to Dewey, developing a reflective disposition requires one to acquire attitudes of open-mindedness and wholeheartedness, and skills of reasoning (Calderhead, 1989).

Dewey distinguishes reflection from behavior or information

processing theories, and points toward a constructivist view of knowledge.

Grimmett (1988) describes Dewey's orientation toward reflection as enabling

> "reflection to stretch the mind beyond mere information towards the accumulation of wisdom. The acquisition and storing of information does not require reflection; rather, it draws heavily on memory. Transforming such information into knowledge...is the hallmark of reflection and wisdom is its fruit. Such wisdom causes thoughtful persons to be heedful, circumspect, and given to scrutiny rather than rash, unwary, and perfunctory" (p.7).

Dewey's description of reflection has helped educators clarify differences between reflective and routine action. Reflective teachers are able to deliberate about their actions, rather than acting on impulse and tradition (Cruickshank, 1987). Dewey's definition, however, eludes the question of content of reflections. As Zeichner and Liston (1990) say: "After we have agreed that thoughtful teachers who reflect in and on action, are more desirable than thoughtless teachers who are ruled by tradition, authority, and circumstance, there are still many unanswered questions" (p. 24).

Schon

Schon builds upon the work of Dewey and grounds the construct of reflection within a constructivist view of learning. Other voices from which Schon builds his thinking include Vygotsky and Wittgenstein, both advocates of constructivist theories (Schon, 1988). Schon is concerned with reflection as the reorganization or reconstruction of experience (Grimmett, 1988). As participants are engaged in the reconstruction of experience, Schon believes they will begin to articulate theories of knowing that had previously been held implicit. While Schon emphasizes the significance of tacit knowledge, Shulman (1988) takes the importance of what is tacit one step further. Shulman argues that teacher education programs need to be concerned with supporting teachers in making the tacit explicit. He also

argues that the content of reflection include both matters of practical experiences and synthesis from theories.

> "Teachers will become better educators when they can begin to have explicit answers to the questions, "How do I know what I know? How do I know the reasons for what I do? Why do I ask my students to perform or think in particular ways?" The capacity to answer such questions not only lies at the heart of what we mean by becoming skilled as a teacher; it also requires a combining of reflection on practical experience and reflection on theoretical understanding" (Shulman, 1988, p. 33).

According to Schon, many practitioners realize that real-world problems of practice are not always structured, easily definable or able to be systematically solved. Rather, real world problems are "messy, indeterminate situations" (Schon, 1987). In order to frame a "messy" problem, reflective practitioners draw on their practical knowledge, use this knowledge to select what in the current situation they will attend to, organize this prior and in-action knowledge, and select a way to act. This is called reflection-in-action. Teachers who are reflective have the capacity to use improvisation within a teaching moment, framing, reflecting and acting within the situation at hand. It is these zones of practice, which include complexity, uncertainty and uniqueness that "escape the canons of technical rationality" (Schon, 1987).

Schon (1987) argues that preparation for professional work in many cases comes from being immersed in the practice of doing. This learning by doing, according to Schon, includes active involvement by a "coach" (the term used in this study for this participant is "mentor") that focuses on developing the ability within novices to problem solve and analyze their own learning. Schon says:

> "Through advice, criticism, description, demonstration, and questioning, one person helps another learn to practice reflective teaching in the context of doing. And one does so through the Hall of Mirrors: demonstrating reflective teaching in the very process of trying to help the other learn to do it" (Schon, 1988, p. 19).

Schon (1987) advocates use of the reflective practicum to help prepare novices for the "complex and unpredictable problems of practice." He believes that novices need to develop the capacity to be reflective before they are able to wisely take action in cases where established theories do not apply. The idealized view of a dialogue between the mentor and the novice within a reflective practicum includes several stages. First, the mentor tries to understand what the novice already knows and where the novice is encountering difficulties. Based on this information, the mentor can then demonstrate some aspects of teaching which the mentor thinks the novice needs to learn. The mentor manages this task by first offering herself as a model to be imitated. Then, the mentor asks questions, and offers instructions, advice and/or criticism. During the episodes of demonstration, the mentor is modeling reflection-in-action.

After demonstrations by the mentor, the novice tries to analyze the mentor's demonstrations, and then applies what she has learned to further teaching experiences. Through dialogues with the mentor and through the action of teaching, the novice illustrates what sense she has made of the mentor's demonstration. If successful, both the mentor and the novice become conversant in reflection-in-action. In order for this to be possible, the mentor needs to have established some criteria of what competent teaching looks like, in order to guide the novice to this level of achievement.

Criticisms and cautions

Schon has been criticized for portraying technical and reflective work as dichotomous (Shulman, 1988). Shulman cautions that teachers do not typically fall into neat, extreme groups who advocate only technical means of

teaching or reflective measures. "Indeed, most teachers are capable of teaching in a way that combines the technical and the reflective, the theoretical and practical, the universal and the concrete that Schon so eloquently seeks" (Shulman, 1988, p.33).

In order for reflective practicums between prospective and mentor teachers to work in a way consistent with the conceptualization of reflection outlined above, several factors need to be in place. The purpose of a reflective practicum is to support a prospective teacher in developing the capacity and habit of reflecting on teaching actions. This disposition, once internalized, could then allow the novice to begin reflecting in action, during the teaching moment. An important question to be raised, then, is, who is to coach the prospective teachers? Since university faculty typically only visit prospective teachers a handful of times, the logical "coach" is the cooperating teacher (Gilliss, 1988). But what characteristics should these cooperating teachers hold, and who will support the development of these characteristics? According to MacKinnon and Erickson (1988):

> "the most important condition is to be found in the ability of the supervisor to articulate and demonstrate a coherent perspective of teaching practice. This means that supervisors also must be able and willing to reflect on their own practice as well as that of the student and try to make explicit some of the underlying beliefs and principles ...that directs their own practice" (p. 133).

A final question to consider is that of content of reflections. As university faculty, classroom teachers and prospective teachers are encouraged to reflect, a clear focus for what kind of reflection is desirable needs to be in place. Is all reflection counted as wise reflection? Or is some reflection more likely to lead to critical analysis of teaching episodes and theoretical understandings?

The next sections of the literature review will examine the nature of 1)

teacher preparation programs and student teaching and 2) forms of guided practice provided during the student teaching experience. The section will focus on what field experiences and university preparation can contribute to teacher education. This literature will be examined in order to highlight issues about the nature, contributions and possible inadequacies of teacher preparation and field experiences.

TEACHER PREPARATION AND FIELD EXPERIENCES

Within this section, literature regarding teacher preparation and field experiences will be examined. Teacher preparation programs historically contain field-based experiences, affording prospective teachers opportunities (in varying degrees depending on the program) to spend time within a school setting prior to student teaching. Many prospective teachers view time in the field, including student teaching, as the place where learning of teaching occurs (Clark, 1988; Evertson, 1990; Koerner, 1992). Concern remains whether the nature of field-based experiences actually support development of teachers who are thoughtful and critical about teaching and the context surrounding teaching practice (Zeichner, 1987), or whether field experiences contribute to more passive acceptance of existing norms and strategies of classroom teaching (Goodman, 1986).

Few experienced or prospective teachers will deny the value of field-based experiences in teacher education programs. Time in the field is acknowledged for providing teachers with practical skills necessary for teaching. How much time in the field is necessary and desirable remains a dilemma. In addition to the issue of duration, questions have been raised about the substance of field experiences. According to Lortie (1975) and Jackson (1968), prospective teachers often conclude through field experiences that teaching is learned through trial and error rather than through critical

reflection using a variety of sources including theory and experience. Researchers argue that field experiences often have limited value because prospective teachers are not adequately prepared by the university to learn from time in the field (Lanier & Little, 1986; Tabachnick et al., 1979-80). Finally, instructional support during field experiences has historically been inadequate. University instructors visit schools infrequently, and classroom teachers are rarely given time or training (Hart, 1989; Richardson-Koehler, 1988). Recent restructuring efforts (Carnegie 1986; Holmes, 1990) are studying and working to change the four problems in teacher preparation outlined above which will be examined within this portion of the literature review: 1) the duration of field-based experiences, 2) the composition of field-based experiences, 3) the value of university coursework and 4) the forms of guided practice provided in field-based experiences.

The duration of field-based experiences

Teacher preparation program participants are advocating that novices spend time in the field in addition to student teaching. The argument for increased time in the field is that prospective teachers need more on-site training in order to be better prepared for the practice of teaching (Beyer, 1984). Though most would agree that providing more field-based experiences could provide many benefits, researchers are finding that increased opportunities in the field does not necessary equate with increased opportunities for learning that is educative (Goodman, 1985; Feiman-Nemser, 1983).

An illustration of what is meant by educative follows. Dewey (1904/1965) has warned that if placed too early in a classroom where they are expected to teach, novices will be forced to focus on classroom management rather than on subject matter and principles of education. According to

Dewey, novices would be provided with no alternative if thrust into field experiences too soon, for they need to be in control of the classroom, and this means that the novices will attend to the outward behavior rather than to the mental life of the students. Dewey (1904/1965) states that novices would adjust

> "not to the principles he is acquiring but to what he sees succeed and fail in an empirical way from moment to moment; to what he sees other teachers doing who are more experienced in keeping order than he is" (p. 14).

Dewey believes that if placed in field experiences too soon, novices will most likely learn to teach through imitation and trial and error, rather than through principled reasons.

Research on early field experiences show that the value of time in the field prior to student teaching is determined by how carefully the university and school coordinate the experiences (Staton & Hunt, 1992). During early field experiences, prospective teachers are often not provided with enough feedback to help them move from reinforcing existing beliefs to being reflective about teaching practice (Goodman, 1986; McIntyre & Killian, 1986; McDiarmid, 1990).

Reports prepared within the 1980's by both the Carnegie Forum on Education and the Holmes Group echo concern about the field-based portion of preparation. The Carnegie and Holmes groups have proposed the development of new structures for the preparation of teachers that both intensify and extend novices' time in the field (Teacher Magazine, 1992). Restructuring efforts initiated by the Holmes Group are attempting to intertwine issues of both quantity and quality of field-based experiences.

The composition of field-based experiences

Educators agree that field experiences are a vital part of teacher preparation, and that more time within schools could provide benefits for prospective and experienced teachers (Holmes Group, 1990). Efforts to conceptualize substantive experiences include developing and experimenting with characteristics of what educative goals for field experiences should be (Denton, 1983; Erdman, 1983; Goodman, 1986).

Dewey (1904/1965) argues that the substance of field-based experiences include a practical component. He discusses two models that work to meet the need of providing practical knowledge for teachers. On one hand, there is an apprenticeship model, where novices learn techniques of instruction and management, achieving an immediate goal of readying novices for handling a classroom. In contrast, a laboratory model has as its goal a slower process of developing not just someone who can complete a task, but one who learns theories, philosophies, and methods that drive action. Within the laboratory model, theoretical study of subject matter and philosophy are worked with in depth.

Dewey maintains that field experiences are necessary for teacher learning, but that the model determines the kind of learning which may occur. He advocates preparation that begins with a laboratory model and then moves to an apprenticeship model. According to this view, field-based experiences are forums used to observe practices and reflect on these experiences. After developing a reflective disposition within a laboratory model, then novices would be ready to work with focus students and small groups in an apprenticeship model. Prospective teachers would be continually encouraged to link their university study to their clinical work. Only after connections are made would the novice be ready to begin formal

instruction. Then technical aspects of teaching could be attended to during instruction, but with different emphasis. Formal instruction would occur within a context of understanding the mental life of the children, and not only focusing on outward behavior. In essence, Dewey believes that attention to technique in teacher preparation is necessary, but that emphasis and placement of the laboratory and apprenticeship models within preparation programs need to be re-examined.

One goal which consistently appears in discussions of substance is supporting prospective teachers in development of reflective dispositions (Calderhead, 1989; Cruickshank, 1987; Zeichner, 1987). Most teacher preparation programs dedicated to reflection agree to a general conception that reflection is a disposition involving continual inquiry about one's teaching practice and the contexts within and surrounding that practice (Zeichner, 1987). Programs vary, however, in respect to at least two concerns. First, teacher preparation programs vary in their level of concern about how university-based and field-based components of the program might either prohibit or encourage development of a reflective disposition (Adler and Goodman, 1986; Yinger and Clark, 1981; Zeichner and Liston, 1987). Second, teacher preparation programs vary in their level of concern for creating specific criteria for the components of what constitutes reflective thinking and practice (Beyer, 1984; Korthagen, 1985; Zeichner, 1987).

There are several undergraduate preparation programs working to develop substantive field experiences with the goal of helping novices become reflective practitioners. These programs include efforts at Washburn University (Goodman, 1986); Ohio State University (Cruickshank, 1987), and University of Wisconsin-Madison (Zeichner, 1987)

Washburn University's teacher preparation program has begun to work

to connect university coursework and field experiences by providing more opportunities for novices to reflect upon university and field activities. To conceptualize a new experience for the prospective teachers, university faculty drew on Dewey's suggestion that laboratory experiences occur before apprenticeships. Laboratory experiences should be designed to "foster reflective criticism within students towards the nature of instruction, curriculum and the purposes of education" (Goodman, 1986, p. 114). Also important to Dewey's description of a laboratory experience is support in helping novices analyze experiences. Thus, Washburn set up a "block experience" with three components. First, two university courses exposed prospective teachers to multiple resources and methods for teaching social studies in the elementary and middle school classroom. Novices were also introduced to ways to integrate the arts in the curriculum. The second component of the block was a supervised nine week practicum in an elementary/middle school. Novices were in the school for three afternoons each week. The third component was a weekly seminar lead by a university supervisor in which "students reflected upon and integrated the knowledge gained from the other components of the block" (Goodman, 1986, p. 113). Reflection was an integral part of this experience, for throughout the experience students were encouraged to critically examine their experience in the schools and relate these experiences to study in the university.

Another program that is working to embrace Dewey's suggestion to fuse the apprenticeship and laboratory model of teaching is Ohio State University's Reflective Teaching procedure (Cruickshank, 1987). Reflective teaching at OSU is a 60-75 minute exercise that has been developed, piloted and now is a part of teacher preparation at OSU. The reflective teaching procedure involves prospective teachers teaching a common lesson to an audience of

instructors and other prospective teachers. Following the lesson, the designated learners fill out learner satisfaction forms. Then the designated teachers engage their audience in a group discussion that promotes "reflection-on-action" (Schon, 1987), Reflection-on-action helps the designated teachers to reconstruct and reexamine their teaching actions and results (Trumbull, 1986). The purpose of the laboratory method of reflective teaching is to "help teachers become wiser and to encourage them to become life-long students of teaching" (Cruickshank, 1987, p.39).

University of Wisconsin-Madison's preparation program is also designed to encourage critical reflection (Feiman-Nemser, 1990). Within this program the type of reflection advocated is defined. Reflection should be able the moral and political structures of schools and the implications these structures have on classroom practices (Zeichner, 1981-1982). The student teaching portion of the program includes the prospective teacher taking gradual increase of responsibility in the classroom, while simultaneously being involved in an inquiry project. The inquiry project weaves the context of the classroom where the novice is teaching to larger questions about the culture of schools. A weekly seminar for the prospective teachers invites opportunities to "broaden their (prospective teachers) perspectives on teaching, consider the rationale underlying alternative possibilities for classrooms and pedagogy, and assess their own developing perspectives toward teaching" (Zeichner & Liston, 1987, p.32).

Each of the programs mentioned above has operationalized reflection in a manner consistent with Dewey and Schon's definitions. Within each of the programs, there in an underlying rationale that support is needed to help think about a variety of knowledge sources including the classroom, theories and methods of teaching, and contexts of schooling. Yet all three programs

emphasize support from *university* instructors to help novices make connections and reflect. These efforts to engage students in reflection may improve the substance of preparation. However, educators caution that in order to help novices develop reflective dispositions, reflection needs to be included in all aspects of a teacher preparation program (Zeichner, 1990).

The value of university coursework in teacher preparation

There are several problems which have plagued the university portion of teacher preparation across the decades. First, the university culture largely perceives teacher education courses, housed mainly within Colleges of Education, as non-rigorous and non-intellectual (Lanier and Little, 1986). Second, there has been a lack of agreement about what knowledge and skills are necessary for teaching. An inability to articulate a knowledge base adds to growing skepticism that something of value is being taught in education courses. Yet, there are some who argue that there *is* a body of knowledge relevant for prospective teachers to learn (Shulman, 1987, Wineburg & Wilson, 1988). Third, because prospective teachers have also been students for at least 12 years, formal teacher education coursework often has limited impact on shaping novices beliefs about teaching and learning. Lortie (1975), who labels this experience in school as an "apprenticeship of observation" cautions that novices often teach as they were taught in schools. This informal preparation often has a more powerful impact then does formal university preparation (Feiman-Nemser, 1983).

In addition to these dilemmas, there are various viewpoints about the relationship of university preparation to field experiences. Researchers have spent time deliberating about why there is disparity between university and field experiences. One point of view holds that field-based experiences "wash out" what has been learned from university-based preparation (Zeichner &

Tabachnick 1981). Typically, neither university faculty nor classroom teachers help novices to develop the disposition to be critical of what they see in schools, nor to conduct inquiry about their own and others' practice (Livingston & Borko, 1989). Because of the structure and content of many university courses, novices often implicitly learn to passively accept the more traditional patterns of schools (Beyer, 1989).

Another viewpoint holds that the impact of university based preparation can be strengthened by field-based experiences if the experiences are constructed in a way that they compliment each other and the learning of the prospective teacher (Tabachnick & Zeichner, 1984). Since teacher preparation, as a total experience of university and field, involves both university faculty and classroom teachers, more university faculty are interested in including teachers in decision making and planning (Cochran-Smith, 1990; Holmes, 1990; Meade 1991; Roth, Rosaen & Lanier, 1988). This involvement plays out in a variety of ways.

One way educators blend university and field preparation is by helping classroom teachers speak the same language as university faculty (Cochran-Smith, 1990; 1991). However, by placing a higher value on the wisdom of the university-based educators, it is argued that school-based educators' wisdom is not afforded equal value (Stoddard 1992). She says:

> "A high quality teacher education program is more than a highly orchestrated on-campus experience organized around a conceptual frame. Research and development requires a tightly structured program, meticulously applied, and carefully evaluated. Doing this in a real-school setting requires collaboration in which all participants are involved in making decisions and endorse the principles on which the program is evaluated. If the university dictates the conceptual frame, is this a collaboration? A shared vision of pedagogy must be developed" (Stoddard, 1992, p. 27).

Stoddard's (1992) call for a "shared vision" resonates with literature on

characteristics of discourse communities. Cochran-Smith (1991a) also calls for a vision of "mutually constructed learning communities" (p 109) where all participants feel power and voice. According to Markova (1990), the quality of dialogue within a discourse community is mediated by "immediate, intentional perspective-taking, shared socio-cultural experience and mutual knowledge between participants" (p. 6). Others agree that there needs to be a cluster of knowledge and ideas that have shared understanding among a community's participants in order for a group of people to be called a discourse community (Herzberg, 1986; Swales, 1990). Teacher preparation programs that include both school and university-based personnel in decision making are attempting to widen the community who typically makes decisions about substance of university and field experiences. Complexities emerge as the community widens.

Cochran-Smith (1991a) provides a framework for looking at various efforts to blend university and field preparation. Cochran-Smith (1991a) argues that preparation programs are structured based on certain assumptions of knowledge. That is, some programs assume the knowledge for teacher education comes primarily from the university, and some believe that preparation programs should evolve from mutually constructed knowledge between participants at the university and the school. She believes that little time has been spent investigating the relationship between the university and the school, or to expose the way power is implicitly controlled in the ways university-based educators involve school-based educators in organization, implementation and supervision of field-based experiences (Cochran-Smith, 1991a). Cochran-Smith categorized three themes which describe knowledge, assumptions and power of different models for restructuring teacher preparation. These are called consonance, critical dissonance, and

collaborative resonance.

The consonance model has as its goal "accord based on common application of effective-teaching research" (Cochran-Smith, 1991a, p. 106). Within the consonance model, the university and school-based portions of preparation work to be consistent with each other. The university-based preparation program supports prospective and classroom teachers to speak the same language. Participants are encouraged to use the results of research to frame common problems of the classroom (McNergney et al, 1988). The drawback of this model is that knowledge in the discourse community is seen as derived from the university participants, with neither classroom nor prospective teachers as contributors (Cochran-Smith and Little, 1990).

The second model, critical dissonance, has as its goal "incongruity based on a radical critique of teaching and schooling" (Cochran-Smith, 1991, p. 106). This model proposes to make university and school-based preparation incongruous enough to prompt participants to challenge knowledge learned from different sources. This model originates from a perceived problem with student teaching that university preparation inspires a liberal feeling that evaporates within the context of a conservative school culture (Goodman, 1986; Richardson-Koehler, 1988). The goal of this model is to help prospective teachers develop critical skills necessary to critique and challenge the school culture (Katz, 1974). The problem with this model is that a derogatory message about the knowledge of school-based educators is conveyed. This message includes the idea that university-based educators are the ones who help create and maintain a critical lens for novices, and that classroom teachers' wisdom does not necessarily have value in creating knowledge for teaching. Cochran-Smith (1991a) says that this model may set up "many cooperating teachers to be exposed in university courses and may convey the message that many

teachers' lived experiences are unenlightened and even unimportant" (p. 109).

The third model, collaborative resonance, has as its goal "intensification based on the co-labor of learning communities" (Cochran-Smith, 1991a, p. 106). The philosophy behind this model is that both school and university faculty and prospective teachers mutually construct experiences in learning to teach. The emphasis in this model is on co-labor between prospective, classroom and university participants. Building on ideas within the dissonance model, prospective teachers are prepared to examine critically the context and practices in schooling. The emphasis in this model is on collegiality rather than trial-and-error (Little, 1987), valuing knowledge from university and classroom sources, and creation of a disposition for life long work to continue to improve teaching and learning.

The idea within the collaborative resonance model is that:

"student teachers, cooperating teachers, and teacher educators alike are involved in efforts to learn from, interpret, and ultimately alter the day-to-day life of schools by critiquing the cultures of teaching and schooling, researching their own practice, articulating their own expertise, and calling into question the policies and language of schooling that are taken for granted" (Cochran-Smith, 1991a; p. 110).

One difference in particular is highlighted within the collaborative resonance model. The difference is that, according to the collaborative resonance model, teacher preparation should be a shared responsibility among the participants involved (Holmes Group, 1990; Meade, 1991). Within this model, teachers are encouraged to play an active role in shaping teacher preparation, and are even invited to take part in university-based methods courses. Cochran-Smith's (1991a) model also advocates involving prospective and experienced teachers and university faculty in collaboratively conducting seminars about teaching. Necessary for enactment of this model is a certain

type of school environment (Koerner, 1992; Meade 1991). The Holmes Group (1990) hope that the conception of Professional Development Schools will work to promote goals of mutually constructing teacher preparation. As participants work inside these sites, issues of shared vision, language and power remain for further study. As Koerner (1992) states: "It makes sense that cooperating teachers want to have a voice in the process and not be regarded simply as silent partners in the experience" (p. 54).

Guided practice in field experiences

This review of literature focuses on teacher preparation and student teaching. The first part of the review examined the nature of field-based experiences in terms of duration, composition and relation to university-based preparation. The second section of the review of literature will examine the forms of guided practice provided in the field. Two topics will be reviewed, university and school based guided practice.

Guided practice is a relatively new way to think about the purposes of field experiences and student teaching. The term "supervision" stems from an evaluative and not an educative function. Congruent with goals of helping prepare novices to become reflective practitioners, the function of the role of an instructor is to guide more than to supervise. As Stoddard (1990) said,

> "If field-based teacher education programs are to contribute to
> the development of thoughtful and reflective teachers we must
> begin to focus our concerns on the quality of these experiences
> as they are actually implemented in the field and develop a better
> understanding of the process of guiding practical teaching
> experience" (p. 3).

University Instruction and guided practice

The university instructor during field experiences is typically a representative from the university-based portion of a teacher preparation

program. There are typically several dilemmas faced by university instructors. These include: 1) the status of field instruction in higher education; 2) the limited number of visits possible within university supervision; 3) the kinds of dialogue promoted between university and prospective teachers; and 4) the more influential role of the cooperating teacher.

Instruction of prospective teachers in the field is not an attractive option for most university professors. According to Meade (1991), "we may have created publications and other markets for scholarship pertaining to this area (supervision), but the fact of the matter is that field instruction is not highly regarded in higher education" (p. 668). In fact, supervision is often the responsibility of graduate students and adjunct faculty who may not be intimately connected with coursework, or have a long-term commitment to the advancement of a teacher preparation program.

Because the university representative visits the novice infrequently, it is difficult to establish relationships with the novice and the cooperating teacher, or to become a part of the culture of the school and classroom (Richardson-Koehler, 1988; Zimpher, DeVoss & Nott, 1980). A general scenario for university instruction is that the instructor enters the novice's classroom, observes a lesson, provides comments (ranging in detail), and discusses the comments with the novice. Hopkins (1985) explains that this kind of supervision "generally, places the students in a reactive role where they are subject to advice and criticism without being involved in the process of establishing judgement" (p. 137).

Earlier within this review, an argument was made that prospective teachers need assistance in developing dispositions that will help them be critical of practices within the schools. This remains a problem if university

supervisors are not engaging prospective teachers in dialogues that push them to question and critique practices and surrounding contexts.. As H. Barnes (1989) said:

> "the capacities needed (in initial teacher preparation) appear to be primarily intellectual in nature and do not merely result from training in the technical aspects of teaching. Rather, they involve learning to see, to judge, and to act appropriately in situations that cannot be precisely anticipated. Developing these capacities is complicated by the fact that often the knowledge that may be most critical for an individual beginning teacher can be identified during their pre-induction experiences, but is seldom fully developed during typical student teaching experience" (p. 17).

Despite the call for support in helping prospective teachers bring a critical disposition to experiences in the field, university instructors typically provide limited feedback, and few provide feedback that helps inspire analysis, criticism and connections from university coursework (Shulman, 1987; Staton & Hunt, 1992). There are some exceptions, however. There have been findings that cooperating teachers consult with university instructors for information and guidance (Tannehill, 1989). University instructors can provide information about coursework expectations that can help cooperating teachers feel more informed, and more willing to allow a novice to experiment with a new idea. By providing support, university instructors can have a positive influence on the school (Emans, 1983; Hollingsworth, 1989). It has been suggested that by clustering prospective teachers together in a school, the university supervisor could feel more a part of the culture, and build a support group with the supervising classroom teachers in the school (Koerner, 1992).

In order to bridge the gap between the university and classroom, some teacher preparation programs specifically work to educate their university instructors, with varying degrees of success, to conference with prospective

teachers in a manner which is congruent with program goals (Zeichner & Liston, 1985; Zeichner & Tabachnick, 1982; Putnam, Hoerr, Barger, Murdoch, Johnson & Johns, 1988). Zeichner and Liston (1985) studied discourse of conferences between university instructors and novices in order to see if there was congruence between expressed goals of a teacher preparation program and what was being enacted in actual discourse between university supervisor and prospective teacher. The results of this study indicated that although programs emphasized particular forms of discourse, the program goals were enacted in varying degrees by each supervisor and prospective teacher.

Zeichner & Tabachnick (1982) investigated ways which university instructors approach their work with prospective teachers. The examined the intentions, motivations and beliefs which guided the supervisor to enact his/her role. Their results indicated that there were differences in what supervisors said their intentions and beliefs are, and what was actually enacted in their work. Putnam et.al. (1988) also emphasize that the instructors need to enact their role in ways which are congruent with program goals. They advocate that the conception of teaching promoted within the program direct the aims and purposes of the supervisor. Zeichner and Tabachnick (1982) call for more research to focus on the ways which supervisors interpret their work.

Although the university instructor is usually the person ultimately responsible for formal evaluation of the prospective teacher, the university representative plays a secondary role to that of the classroom teacher who supervises the novice (Boydell, 1986; Friebus, 1977; Staton & Hunt, 1992). It is the classroom teacher who has been cited as the most influential agent in teacher preparation (Bunting, 1988; Karmos & Jacko, 1977; Koerner, 1992;

McIntyre & Morris, 1980)

School-based instruction and guided practice

Although classroom teachers have been credited with much of the preparation of novices in the field, there are several inadequacies within current practices. Issues which will be examined include: 1) the selection and training of classroom teachers for instructional roles; 2) the form and substance of dialogues between classroom and prospective teachers; 3) classroom teachers as "mentors" of prospective teachers; and 4) classroom teachers as teacher educators.

Selection

Classroom teachers who are selected to work with novices are not typically screened rigorously. There is little evidence that the teachers selected are well prepared to be mentors, or are even necessarily good classroom teachers. Teachers are not usually selected for their ability to reflect about underlying rationales that guide their decision-making (Lortie, 1975). Even if perceived as an effective teacher, educators should not make the assumption that because a teacher is good in the classroom, he/she would automatically be able to support the learning of a prospective teacher (Koerner, 1992; Little, 1990). Since classroom teachers receive little formal support, they are often left to "invent their roles as they go along" (Hart, 1989, p. 24). Because classroom teachers do potentially have a significant impact on novices' learning, Livingston and Borko (1989) recommend that teachers who mentor be selected based on commitment to take on the role of teacher educator.

Training of school-based educators poses additional problems. Because typical teacher preparation programs devote time ranging only from a few hours to a few days for training, there is very little support provided for

helping classroom teachers learn this new instructional role. This lack of training could have negative implications for novices, as classroom teachers try to deal with the learning of an adult along with the learning of children in the classroom (Veenman, 1984). According to Thies-Sprinthall (1986) "school systems cannot expect that experienced teachers will be able to provide effective assistance to beginners in a systematic way. There is simply no evidence to support such a view" (p. 13).

Without communication about course content and expectations, classroom teachers are not likely to be able to support novices in making connections from university-based preparation. Without involving the classroom teachers in preparation, chances are likely that novices will feel pulled between the "two worlds" of the university and classroom (Feiman-Nemser & Buchmann, 1985). Mounting evidence shows that novices cannot easily apply what is learned in the university and the classroom (Calderhead & Miller, 1986; Grossman & Richert, 1988; Rovengo, 1992). University instructors have not encountered much success in supporting novices to connect these ideas (Zeichner, 1978; Thies-Sprinthall, 1986) and leaving classroom teachers in the dark about preparation expectations only serves to exacerbate the problem.

Form and substance of dialogue

The second issue to be examined is how school-based educators talk to novices about teaching. Classroom teachers frequently encounter difficulties critiquing the teaching practice of a novice (McIntyre & Killian, 1986; Parker, 1990) which can prohibit the novice from developing a critical disposition. In addition, classroom teachers tend to focus on practical and immediate problems of practice, rather than thinking about teaching in a larger context (Calderhead, 1988; McIntyre, 1988). Subject matter knowledge is treated in a

variety of ways, including subject matter in reference to student thinking, and classroom management. Findings from one study indicated that rarely were there substantive conversations about the meaning of the content in teaching (Feiman-Nemser & Parker, 1990).

Congruent with the goal of current restructuring efforts in teacher preparation, educators are becoming more interested in fostering an environment where novices are supported in developing the disposition to be reflective about teaching practice. Zeichner (1990a) calls for studies which analyze how supervisors are helping novices to reflect, and what the content of these reflections include.

Schon believes that it is possible for a practitioner to work with a novice to develop the disposition to be reflective. He describes a certain form of dialogue called a reflective practicum which embraces the ideas mentioned within this review of 1) making the knowledge-in-action of the mentor explicit for the novice to see and learn from; 2) helping the novice develop a disposition to reason through and question decision-making about teaching. Schon (1987) argues that much can be learned in the doing of teaching if that doing is supported with proper supervision. He advocates mentoring that focuses on developing the ability to problem solve and analyze learning.

Classroom teachers as mentors of prospective teachers

Third, the conception of classroom teachers as mentors of novices will be addressed. Classroom teachers who work with novices have through the years been provided a range of titles and responsibilities. Among these titles are "cooperating teacher", "supervising teacher" and "mentor." With these titles come varying role conceptions and responsibilities, ranging from simply providing a classroom for a student to practice teaching, to little interaction with student teachers, daily contact, unstructured supervision, and

daily work with student teachers in collaboration with university faculty. As mentioned earlier, the form of work most congruent with the desired outcome of helping novices become reflective practitioners is guided practice (Stoddard, 1990). Those who assign the term "mentor" to professionals engaged in guided practice presume that these practitioners have some sort of wisdom which can be shared with others (Little, 1990). The role conception of mentor contains "the expectation that the mentor can make this knowledge accessible to a novice through a process of critical analysis and reflection" (Stoddard, 1990, p 3). Classroom teachers who mentor are often assumed to be experts who can support the prospective teacher in developing competence (Little, 1990; Stroble & Cooper, 1988; Zimpher & Rieger, 1988). However, many teachers who themselves are competent practitioners "lack the ability to articulate the basis for their expertise and skill" (Berliner, 1986, p. 7).

Classroom teachers who work with novices are assumed to be experts who can guide novices to competency. In order to work with novices, classroom teachers are required to have a certain number of years of experience. According to Berliner (1986) some people do not believe that experience necessarily correlates with expertise. However, he does not provide a way to separate experience and expertise in teaching. Berliner does provide criteria, however, for an expert pedagogue. In order to be an expert pedagogue, a teacher needs to be able to readily access two domains of knowledge: subject matter knowledge and knowledge of organization and management of classrooms (Berliner, 1986, p. 9).

Study of "expert pedagogues" has uncovered the finding that "experts possess a special kind of knowledge about classrooms that is different from that of novices" (Berliner, 1986, p. 10). Livingston and Borko (1989) also agree that experts and novices differ in knowledge, thinking and actions. They talk

about three expert-novices differences in schema, pedagogical reasoning and pedagogical content knowledge. The "cognitive schemata of experts typically are more elaborate, more complex, more interconnected, and more easily accessible than those of novices" (Livingston & Borko, 1989, p. 37). Pedagogical reasoning is a complex cognitive skill involved in a teacher's schema. Pedagogical reasoning involves the ability to transform subject-matter knowledge in a variety ways to meet the needs of diverse learners (Shulman, 1987). According to Feiman-Nemser and Buchmann (1987) pedagogical reasoning is unique to teaching and takes time for novices to develop. Pedagogical content knowledge is also unique to teaching, and involves weaving content and pedagogy for instruction (Shulman, 1987). Learning to teach involves developing schema for pedagogical reasoning and pedagogical content knowledge (Livingston & Borko, 1989).

Berliner (1988) argues that having expert knowledge of subject matter and classroom organization does not automatically lead to effective mentoring. He concluded that although mentors need to be competent, they

> "need not be experts themselves, rather they must be articulate
> analysts of teaching...They may have needed to be more analytic
> then those who were naturals at the game. They may have
> learned to articulate the reasons for doing this or that, a quality
> that could make for an expert coach" (Berliner, 1988, p. 29).

Berliner's distinction calls to question the issue of expertise. If a mentor is to talk about decisions made in teaching, should that mentor be talking about decisions that are rooted in expertise in subject matter and knowledge of classroom organization and management? There is some debate whether classroom teachers who mentor need to be experts in teaching *and* experts in talking about teaching decisions. In order to be able to model and provide examples for novices, teachers do need to be competent in the classroom (Berliner, 1986). Berliner agrees that mentors need to be

competent, but qualifies that expertise in unpacking decisions made is a more necessary quality for mentoring.

Schon (1987) agrees that effective coaches (or mentors) need to be able to articulate reasoning for decisions in order to model reflection to novices. Schon believes that novices can learn to reason through teaching decisions by observing their mentors articulate knowledge used to make decisions. He agrees that it is difficult for practitioners to bring to the surface what they know, and argues that knowing is embedded in actions. "Our knowing is ordinarily tacit, implicit in our patterns of action and in our feel for the stuff with which we are dealing" (p. 49). Stoddard (1990) adds that making knowledge accessible involves "a whole new way of thinking about one's instructional knowledge and skill" (p. 3).

Teachers have implicit theories that guide their teaching actions. Included within teachers' implicit theories are their knowledge and beliefs about teaching and learning to teach. Within the body of research on teacher knowledge, research on teachers' practical knowledge has begun to focus on the complexities of teaching and the knowledge of practice which evolves from reflection-in-action (Carter, 1990; Munby, 1989; Schon, 1987). By assigning experienced teachers to work with prospective teachers, it is implied that there is some knowledge that experienced teachers possess that can help novices learn about the practice of teaching. Investigations are beginning to look at how teachers do make their knowledge visible (Clark & Peterson, 1986). To date, few studies have focused on the knowledge which *mentors* perceive as necessary to support novices' learning (Koerner, 1992).

Classroom teachers as teacher educators

There may be two different roles educators are asking mentors to play, that of teacher and teacher educator. Feiman-Nemser and Buchmann (1987)

say that "just as becoming a classroom teacher involves making a transition from person to professional, so, too, becoming a mentor involves making a transition from classroom teacher to teacher educator" (p. 271). Koerner agrees that:

> "Often the dual goals of educating children and student teachers in the same classroom seem at cross purposes. The purpose of schools is to provide an education for students, not for student teachers. Teachers are hired to achieve that goal. If schools accept responsibility to educate future teachers; however, they may have to make a commitment of time and resources that extends beyond simply accepting the student teachers" (Koerner, 1992, p. 54).

In order for classroom teachers to be able to take on a role of teacher educator, a certain environment is necessary. The context for effective mentoring needs to be a place where university and school faculty collaborate and share meanings for what constitutes quality teaching. This school should be one where critical reflection is modeled and fostered (Little, 1982). According to Livingston and Borko (1989), "the creation of 'professional development schools' (e.g. The Holmes Group, 1986) may be one means of ensuring this type of learning environment" (p. 41).

SUMMARY

Within this literature review, educators have described different layers involved in helping novices learn to teach. Many agree that teaching involves an element of learning by doing. Since this is agreed upon, teacher preparation programs are increasing time spent in the classroom. Second, educators are becoming increasingly interested in the role of reflection in learning to teach. Programs are emphasizing learning by reflection as a means to consider the rationale and knowledge bases which guide teaching decisions. Third, consistent with Dewey's conception of a laboratory approach, teacher educators are concerned about providing guided practice for learning

about teaching. Programs are attempting to involve educators from both the university and school to support novices in their learning by doing. The form of support provided in the field which is advocated is that which fosters a reflective disposition.

The Academic Learning teacher preparation program at Michigan State University is working to remedy problems in preparation discussed within this review of literature. With the opportunity to enact Academic Learning's mentor teacher component goals in a Professional Development School setting, university faculty are hoping that mentors will feel more equipped to enact a role of teacher educators, and be partners in helping novices learn to teach. Chapter Three will describe the Academic Learning university program faculties' beliefs and goals for the mentor teacher component of the preparation program.

CHAPTER THREE

THE CONTEXT OF THE STUDY

The purpose of this chapter is to describe the background of the study. In order to capture the perspectives of participants who helped to conceptualize the Academic Learning teacher preparation program, the mentor teacher component, and mentoring within the professional development school context in which this study takes place, the three coordinators of the Academic Learning program were individually interviewed. Their perspectives of the preparation program and mentor teacher program will be described. First, a description of the Academic Learning program and specifically the Academic Learning Mentor Teacher Component will be provided. Second, a description of mentoring within a professional development school context will be characterized. These explications will provide background information needed to understand descriptions and analysis of the perspectives of the mentors as they enact their role within the contexts of the Academic Learning program and a Professional Development School.

Academic   Learning   Teacher   Preparation   Program

The Academic Learning teacher preparation program is a two year undergraduate program for both elementary and secondary education majors. Academic Learning is one of five alternative programs at Michigan State University. A central goal of the program is to study subject matter in a way which will support pupils' conceptual understanding. University courses promote prospective teachers' development of understanding academic disciplines. Prospective teachers are encouraged to use their understandings of disciplines to build multiple representations of content to facilitate pupils' understanding (Wilson & Shulman, 1987). Faculty within the program work to facilitate the novice's transition to pedagogical thinking (Feiman-Nemser & Buchmann, 1985). This pedagogical thinking includes the ability to "draw on the research base about the teaching and learning process as well as on practical experiences" (Roth, Rosaen & Lanier, 1988, p. 10).

Another goal of the program is to prepare teachers who will reflect on their own learning and on the practice of teaching (Roth, Rosaen & Lanier, 1988). In an effort to encourage reflection on both university and field experiences, program faculty worked to involve classroom teachers more integrally into the preparation of their novices. Prospective teachers are placed with a "mentor teacher" at the beginning of the two year program. During each of the three terms of the academic year, term field assignments are carried out in this mentor's room. Within the second year of the program, student teaching takes place in the mentor's classroom for one term (ten weeks). Field assignments are designed to provide opportunities for program faculty and mentors to help the novices link concepts taught in university courses with classroom practice (Feiman-Nemser, 1989).

Academic Learning Mentor Teacher Component

Approximately 65 area teachers are involved in the Academic Learning mentor teacher component each year. Teachers who mentor are drawn from six school districts surrounding Michigan State University. Within one school district there are two schools, an elementary and a high school which are part of the Michigan Partnership for New Education as Professional Development Schools.

Three faculty involved in constructing the current version of the Academic Learning mentor teacher component were P. Lanier, C. Rosaen and K. Roth. Each of these professors was individually interviewed during October, 1991 about the goals for the mentor teacher component, the criteria for selection of mentor teachers and beliefs about possibilities for the mentor teacher component in a professional development school setting. The interview protocol was piloted with another faculty member within Academic Learning. After clarifying some of the questions, the interviews with the three principal faculty members were conducted. Following are excerpts from the interviews that describe the perspectives of the university faculty who created and continue to enact the mentor teacher component (see appendix C for a list of the interview questions).

Goals

Originally, the mentor teacher project was conceptualized in reaction to problems which Academic Learning program faculty felt were persistent in teacher preparation. The three problems which Academic Learning attempted to tackle were 1) what the substance of field-based experiences should include; 2) how the program could foster integration of university and field experiences, and; 3) how the program could improve the form of guided practice provided in field-based experiences (Roth, Rosaen & Lanier, 1988).

The first goal of the mentor teacher project was to build a closer connection between what prospective teachers were studying in university courses and what they were doing in the field. Roth (1991) said that the idea was not simply that novices take the theory that they have learned out to the classroom, but that mentors could help support that:

> "there would be an equal valuing of what students could learn from practice and from theory, and that maybe at times those two different forms of learning would become more interactive instead of being two separate things--one of which they value and one of which they don't"

Another original goal of the mentor teacher project was that by arranging for mentors to participate in seminars each term and work with prospective teachers over a two-year period, perhaps it would not be necessary to have a university representative in the field to supervise student teaching. According to Rosaen (1991):

> "The idea was that we (university program faculty and classroom teachers) would work together closely enough and share enough of a knowledge base and language that we would construct tasks that students would do in the field. And the mentors would support the students in the field while we supported the students at the university. That was our original intent" (p.1).

As a part of this goal, it was assumed that university faculty would construct the substance of field experiences together with classroom teachers. During the first and second year of the project[1], mentor teachers were involved in the design of field assignments. A university professor would present a field assignment to the mentors and elicit feedback about how realistic and helpful the mentors perceived this assignment to be. Rosaen provides the following example of how the mentors worked with university faculty:

> "We were working with the term pedagogical content knowledge,

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[1]The mentor teacher project was piloted in 1987, revised in 1988, and now has become a regular component of the Academic Learning program.

trying to help our students see that teachers may have a different kind of knowledge. Well, that meant that we had to talk to the mentors about what that term means so that they would understand how we were handling it in class and then what we hoped the students would see. So, we would watch a video tape together and say, now here's the kind of sense we would hope our students would make if they watched a lesson like this in your classroom" (Rosaen, 1991.)

Definition and criteria for selection of mentor teachers

In efforts to restructure field-based experiences, the Academic Learning program sought to involve classroom teachers in a new role. Rather than merely providing a classroom for prospective teachers to observe and teach, program faculty hoped to involve classroom teachers in design, revision and implementation of field assignments, and in study of the Academic Learning program goals and research base (Roth, Rosaen & Lanier, 1988).

The Academic Learning program faculty selected to label classroom teachers who work with novices as "mentors." According to P. Lanier, teachers were identified as "mentors" because the general connotation of mentor is that there is some caring and responsibility for another. The term mentor was selected over the term coach because:

"Coaching is so affiliated with sports. And it's not necessarily thought of as on-on-one; you usually coach a team. Seldom does a coach only have one client. The other reason mentor was selected is that with the word mentor comes the connotation of support (Lanier, 1991.)

Supporting students includes helping novices see the usefulness of what they were studying in their courses. This idea of support guided selection criteria, for according to Roth (1991) "the key thing we were looking for in the mentors is that they would be learners themselves and be open to reading and considering some of the ideas talked about in courses" (Roth, 1991.)

In addition to support, modeling was another part of the conception of mentoring. According to Lanier (1991), mentors can model how to "get at" student understanding. He hopes that modelling will include "getting inside students' heads, getting at what they understand, what they're sensing, what they're feeling. That is what I would like to see mentors model for a beginning teacher" (Lanier, 1991.)

Program faculty also feel that the mentor's role includes helping the novice see the mentor's thinking and understand the decisions that guide teaching actions. These decisions include planning, implementation of instruction, and how the larger context of the school and state influence teaching (Rosaen, 1991; Roth, 1991).

According to the goals of the mentor teacher component, a mentor would be one who would think about how to help a novice learn to teach. So far within traditional teaching contexts, this has had limited results. Lanier (1991) says:

> "Among our mentors (65 total including elementary and secondary) or among teachers in general, there is not a lot of thought given to how to help someone learn to teach. The general feeling is that you learn to teach from experience, and that feeling still prevails."

Even though program faculty outlined characteristics of an ideal mentor, the faculty never created an ideal model nor expected to find 65 mentors who teach in ways that exemplify all the ideas listed above (Roth, 1991). (The actual criteria for selection of mentors is provided in Chapter four). The Academic Learning faculty feel that teachers who are mentors need to be competent, but do not necessarily need to be exemplary teachers. Rosaen (1991) explains:

> "I don't think it's realistic to set up mentors as exemplary teachers. I think we all have aspects of what we do that are exemplary but I think that label intimidates teachers and creates

a division between them. ..Ideally, a good mentor helps the students become privy to her thinking and understand why she does what she does."

Professional Development Schools and mentoring

The conception of a Professional Development School has been designed by a consortium of over 100 universities across America. The Holmes Group (1991) defines the professional development school as an elementary, middle or high school that promotes learning for all students. These schools work in partnership with a university to develop and implement instruction and to prepare teachers. In these efforts, teachers are provided with opportunities to enact new roles, as they work to become researchers and teacher educators.

One of the major agenda items of the Holmes Group is to create settings where teacher education becomes the responsibility of schools as well as the universities. Authors of Tomorrow's Schools (1990) agree that teacher education programs traditionally have not helped novices to apply principles of theory to practical experiences in the classroom. Part of the problem, defined by the Holmes Group, is that educators have not agreed upon a form of preparation that "draws on and integrates the disciplines and the practical wisdom" (Holmes Group, 1990, p. 47) of teachers who work with novices in teacher education. In addition, few preparation programs have tried to work with schools to develop shared meanings between university and school about what is important in learning to teach. Therefore, "prospective teachers are left alone to integrate knowledge, to puzzle through applications, and to resolve contradictions, ambiguities, and tensions" (Holmes Group, 1990, p. 48).

This study

Three years ago, an elementary and high school within the same district became Professional Development Schools affiliated with Michigan State University. Small groups of students from Academic Learning were

placed at these two schools. The subjects of this study mentor prospective teachers within the elementary professional development school (PDS) affiliated with Academic Learning. Academic Learning program faculties' description of the culture of Brown school (pseudonym) and their perceptions of benefits for student teachers mentored in this context will be summarized within this section.

This dissertation takes place during the third year of Brown being a PDS. Rosaen believes that Brown is "evolving into a professional learning community." Rosaen has heard several teachers, university faculty and the principal comment that the substance of talk has become more focused on inquiry about teaching and learning. This talk includes "people saying, 'listen to what this kid said today in class about math'. People are more excited about teaching and learning, they're more engaged in it as a genuine question" (Rosaen, 1991.) The teachers seem to feel that collaboration is a positive method for learning. She feels that the PDS experiences are:

> "getting the teachers more engaged in what it means to learn to teach. They have begun to view themselves as learners. I think the fact that any teachers would volunteer their lunch hour to go to a brown bag to talk to student teachers about language arts is real indicative of professional commitment. I think the PDS opportunities to be engaged in inquiry, to be involved in projects has kind of revitalized some of the passion for learning that they probably all started their career with."

Roth adds that involvement in professional development work affords potential advantages for student teachers. She believes that what the mentors at Brown Elementary School can potentially model for the Academic Learning students is much different from what the mentors in other schools can model since they have experiences asking harder questions of themselves about issues of teaching and learning. Through PDS experiences, the mentors at Brown have had access to time and resources which have allowed for

collaboration and dialogue about different ways to think about teaching practice. This is different from what Roth sees happening in a traditional teacher/student teacher relationship, where teachers "pretty much see their role as teaching their student how to do what they do" (p. 5). Within the constraints of traditional university/school relationships, it is difficult to find opportunities to engage in sustained conversations that can encourage teachers to develop themselves as learners, and as teacher of teachers. As Roth said,

> "You know one thing that I wish we could have worked on more with all the mentors was, what does it really mean to be a mentor and to besupporting someone who's learning to teach? We would always sort of make quick passes at that (at regular mentor meetings with all the mentors), but we never get beyond the level of tips--mentors swapping tips about working with mentor teachers...It just seems like the PDS teachers have a bigger picture of thinking about teacher education and feel more stake in it."

Lanier (1991) concurs that there are potential benefits of placing prospective teachers in professional development sites. He believes that in the long run, these schools will provide places where students of teaching can see "models of teachers who reflect on their practice, where they're expected to learn from their practice, not just some years, but all the time." Lanier believes that the emphasis on reflection will help prospective and experienced teachers move away from the notion that there is one way how to teach, to an inquiry approach to teaching. He believes that the strength of the PDS's could be in building the dimension of the "professional as inquirer, as a seeker and generator of knowledge ...I think the big difference will be how students are encouraged to make sense of their practice in teaching; to be able to be analytical about teaching will be important" (Lanier, 1991.)

This vision is consistent with goals of the Holmes Group for Professional Development Schools. According to the Holmes Group, the PDS's should be sites

where reflection, collaboration and inquiry are commonplace. University educators, classroom teachers and administrators would be responsible for the education of prospective teachers. Together these partners would "teach student teachers habits of thinking back on their work, questioning it, trying out and evaluating new ways of teaching-by themselves and with colleagues" (Holmes Group, 1991, p. 5).

SUMMARY

In summary, the Academic Learning mentor teacher component was originally designed in attempt to remedy problems persistent in teacher preparation. Program faculty involved in the Academic Learning teacher preparation program at Michigan State University identified three issues to work to improve: 1) what the substance of field-based experiences should include; 2) how the program could foster integration of university and field experiences, and; 3) how the program could improve the form of guided practice provided in field-based experiences (Roth, Rosaen & Lanier, 1988). While these problems were perceived as critical to enhancing both the university and field-based portions of teacher preparation, there have been difficulties in implementing a role for classroom teachers which encourages the teachers to develop themselves as learners and teachers of teachers. With the conception of a Professional Development School, program faculty have opportunities to work more closely with classroom teachers to enact the role of mentor. During this chapter, program faculties' visions and perceptions about the role of mentor have been described. Now study will move to the perceptions of the classroom teachers who mentor within an elementary professional development school and Academic Learning to understand more about how these teachers enact the mentor role.

CHAPTER FOUR

METHODOLOGY AND DESIGN

This study was designed to investigate, from the perspective of five classroom teachers, how they make sense of their role as mentors in a Professional Development School context. This chapter provides a rationale and description of the methodology and research design for this study. First, the research questions which guide the inquiry will be introduced. Second, the research design and rationale for design will be presented. Third, the subjects selected for study will be described. Fourth, the data collection instruments and procedures will be summarized. Fifth, the procedures for data analysis will be discussed. Sixth, the limitations of this research study will be examined.

Research Questions

The primary research question focused on learning about how five classroom teachers make sense and enact their role as mentors of prospective teachers within a context which promotes reflection about knowledge of teaching gained from both theory and practice. The primary research question is:

How do classroom teachers make sense of their role as mentors in support of novices as they learn to teach?

A second set of questions emerged from the data as the mentors were involved in interviews and stimulated recalls of conferences with their prospective teachers, as Academic Learning program university faculty were interviewed, and as relevant literature was reviewed. The second set of questions include:

1) How do the mentors talk about their theories of how novices learn to teach? (views of learning)

2) *How do the mentors use different sources of knowledge to help novices learn to teach?* (sources of knowledge)

3) *How do the mentors model and encourage critical reflection about issues and practices in teacher education?* (nature of reflection)

Research Design

The research design is an interpretive study which relied on stimulated recall interviews, structured interviews and observation. An interpretive research method was selected as the most suitable for this dissertation because the intent of the inquiry was to discover and describe the perspectives of the participants as they mentor prospective teachers within a Professional Development School context. The interpretive orientation has roots within a social constructivist framework, which focuses on studying the meanings in action of the subjects (Blumer, 1969) as they interact in their role as mentors. The researcher tried to understand the "conceptual world of the subjects" (Geertz, 1973) in order to understand "how and what meaning they construct around events in their daily lives" (Bogdan & Biklen, 1982, p. 33).

Qualitative design allows for systematic inquiry within a natural setting. Meaning is of central concern in qualitative research. Those who focus on meaning are interested in studying ways that different people make sense out of experiences (Bogdan & Biklen, 1982). The basic validity criterion within this approach focuses on the "immediate and local" meanings of the participants (Erickson, 1986). As Goodman (1988) said, "more than any other cultural characteristic, the perspectives of individuals who work in a given program determine its substance" (p. 49).

This investigation seeks to uncover and define categories for describing and analyzing how these five mentor teachers are making sense of their role. The constant comparative method (Glaser & Strauss, 1967) will be used to look

across the five subjects to define categories which reflect common themes of talk.

Subjects

The subjects for this study are five classroom teachers who work within a Professional Development School and the Academic Learning Mentor Teacher Component of Michigan State University's teacher education program. Given the five subjects are the entire population of teachers working as mentors of prospective teachers in this teacher education program and school, it is possible to study all subjects involved. All five teachers are willing to be a part of this study, and understand that their participation is completely voluntary. Anonymity is being protected by use of pseudonyms for teachers, prospective teachers, and the site.

All five of the mentor/prospective teacher dyads are female. The pairs are also all Caucasian. The classroom teachers range in age from upper thirties to upper forties. All of the teachers hold Masters degrees. The classroom teachers vary in the amount of time they have been mentors and the time they have been classroom teachers. The subjects range from 13-21 years of classroom teaching experience, and 1-5 years working with the Academic Learning Mentor Teacher Component. Some of the teachers have worked with student teachers before Academic Learning. The range represents a variety of teaching experience and perspectives. These differences in experiences are neither planned nor random.

The five classroom teachers were selected as mentors based on the criteria for selection devised by the Academic Learning teacher preparation program. The mentor teacher selection is based on the following criteria: 1) the teacher's commitment to teacher education; 2) the teacher's openness to learning about educational research and Academic Learning program goals

and willingness to support Academic Learning students; and 3) teachers with adequate time to devote to prospective teachers. The classroom teachers were recommended by the university faculty, principals, colleagues, and self-nomination. Each candidate filled out an application, was interviewed, and approved by the principal before accepted. Mentors are given a $500 per year stipend for the two year involvement with Academic Learning ·(Roth, Rosaen and Lanier, 1988).

There were two circumstances that affected the collection of data. One of the five subjects (Paige) was quite ill during the period she was mentoring. However, she kept in constant communication with her student teacher, and indicated continued interest in being involved in this inquiry. The opening interview with Paige was held at the same time as the other four mentors. Four stimulated recall and structured interviews were held with Paige at similar intervals as the other subjects.

Another of the subjects (Alexa) worked with a student teacher who was struggling. Alexa continued to work with her student teacher from mid-October through early February, when it was obvious to Alexa and the university instructor that the student teacher was not exhibiting competencies of the Academic Learning program. The student teacher was eventually pulled out out student teaching. This affected data collection, for only three of the six stimulated recall/structured interviews were possible. Alexa's opening interview was held at the same time period as the other subjects. Alexa continued to meet with the researcher to answer the structured interview questions for interviews four, five and six.

Data Collection Instruments and Procedures

Data collection tools included two forms of interviews with the mentors, and observation of interactions between the mentors and prospective

teachers. The two forms of interviews were stimulated recall and structured interviews. There were six stimulated recall and seven structured interviews (including the opening interview) held over a five month period.

The stimulated recall interviews asked each mentor to look at videotaped excerpts of conferences between the mentor and their student teacher. Each mentor/student teacher dyad was videotaped by the researcher eight times throughout the five month period. The researcher videotaped the entire conference between the mentor and prospective teacher. The first two conferences were videotaped in order to help the participants feel comfortable being videotaped. The six subsequent videotaped conferences were used as stimulated recalls. During the recall, each mentor viewed six different excerpts from her conferences. The purpose of each of the recalls was to provide a vehicle to help the mentor describe decision-making during the mentor/student teacher conferences.

The structured interviews were designed to learn more about the perspectives of the mentor teachers as they work with novices. Questions for the structured interviews were shaped by interactions with the mentors. Issues which emerged within a set of interviews influenced questions developed for subsequent interviews. Each mentor was asked the same questions. (The questions are listed in Appendix B.)

Observation data was collected from two different sources. The first source of data was collected from observation of the mentor/student teacher conferences. The second source of data was collected from observation of' seminars where mentors and prospective teachers within the building and university faculty from the affiliated teacher preparation program met to discuss issues of planning and teaching a unit plan for language arts. Six conferences were observed between the mentor/prospective teacher dyads.

Five seminars were observed. Three of the seminars focused on planning and teaching of language arts. Two of the seminars focused on reflecting on the student teaching experience. Field notes were taken during the seminars to record process and content of interactions among the mentors.

The interviews and observations were spaced throughout the five month period that the prospective teachers worked in the classroom with their mentors. The spacing was designed to provide opportunities for the mentors to build a rich variety of experiences from which to pull when talking about work with the novice in the classroom. Data collection was spaced over the entire five month period in order to capture a range of experiences including planning, teaching small parts of a unit, and full-time student teaching. Interviews were spaced approximately two-three weeks apart in order to provide ample opportunity for reflection between interviews.

Interviews

Opening interview

Initial entry to the site and the beginning of data collection began with a 45 minute interview with each of the five mentor teachers. This interview took place before the prospective teachers began their language arts field experience, so they were not yet in the classroom. The purposes of this opening interview were to 1) gather background data about the experience of the teachers; 2) begin to understand how the mentors conceptualize their role and; 3) from the conceptualizations form the questions which would guide the first set of structured interviews. The interview protocol was first piloted with a teacher in a comparable role at another school not affiliated with this study. After revision, the protocol was then piloted with another teacher in a comparable role. After two revisions for clarification and substance, the instrument was used to interview the five subjects of the study. (The opening

interview questions are listed in Appendix A).

There were several purposes for this opening interview. First, it was necessary to find out background information about each of the subjects to help the audience understand the different experiences and perspectives which each subject brought to this current mentoring experience. Second, before the mentors began working with this set of novices in the classroom, the researcher wanted to uncover the mentors' existing beliefs about what it means to mentor prospective teachers. Third, beliefs, questions and issues from the mentors' opening interview served as the basis for designing the first round of structured interview questions. Consistent with an interpretive approach to qualitative research, the research design is seen as a time in which "the researcher needs to get background information on the specific group(s) being studied before formulating more specific questions" (Jacobs, 1987; p. 22).

The opening interview was divided into five categories. The categories were: description of work with prospective teachers; previous mentoring experience; how, where and when the teachers learned to mentor; mentoring within the Academic Learning program and a Professional Development School context; beliefs about language arts instruction (See Appendix A for the entire interview protocol).

Structured interviews

The mentors were asked six sets of structured interview questions to uncover and describe their perspective about what it meant to mentor prospective teachers. Each of the stimulated recall and structured interviews were combined into one interview set, totalling six sessions of 30-45 minutes each per mentor. The format for the interviews was that the structured interview questions were asked first, then the mentors would watch the video

and answer the stimulated recall questions.

The questions for each of the six structured interviews evolved after study of data collected during the previous interview. From these interviews three research questions for this dissertation emerged. These research questions center around the mentors' views about learning, sources of knowledge and nature of reflection used to help novices learn to teach. This is consistent with the constant comparative method of qualitative research. As Strauss and Corbin (1990) state:

> "Data collection, analysis, and theory stand in reciprocal relationship with each other. One does not begin with a theory, then prove it. Rather, one begins with an area of study and what is relevant to that area is allowed to emerge" (p. 23).

The questions for the structured interviews are listed in Appendix B.

Stimulated recall

Stimulated recall is a method used to try to gain access to thoughts of participants during interactive work. With increased interest in helping teachers make implicit knowledge about teaching explicit (Clark & Peterson, 1986; Shavelson, Webb & Burstein, 1986), stimulated recall is being used as a method to tap into subjects' thoughts by looking at videotaped footage of their "knowledge-in-action" (Schon, 1987), and working to unpack this knowledge. Within this study, mentors will be asked to recall as much as is possible, what knowledge-in-action (Schon, 1987) guided their interactions with the prospective teachers. Typically the stimulated recall method is used to help subjects recall what they were thinking at the time of the interaction, but this form of data is self-report, tempered with time and added reflection about the event. To increase the validity of this data source, these data will be used more as retrospective reports of the mentors' perceptions of their thoughts rather than as an account of their interactive thoughts (Keith, 1988).

Research on cognitive processes relies heavily on self-report measures. However, these types of measures create some questions of validity and reliability (Clark & Peterson, 1986; Ericcson & Simon, 1980; Shavelson, Webb & Burstein, 1986; Yinger, 1986) for the simple reason that the measure relies on recall. Ericcson and Simon (1980) caution that the reliability of stimulated recall hinge on the timing of the recall. The most effective use of these measure place the timing as close as possible after the event. The stimulated recall interviews took place within 24 hours of a conference between the prospective and mentor teacher. The conferences were primarily focused on language arts planning and teaching, however, since elementary teachers are involved in instruction of other content areas, conversations often drifted to other areas of concern. Six conferences between each mentor/prospective teacher dyad were videotaped. Within 24 hours of each conference, the mentors were shown an excerpt from the video tape and answered questions about their decision-making during the conference. The questions were open-ended in order to allow the participant's freedom in capturing their own meaning for actions. The same questions were asked to each participant. Probes were individual to the participants' responses. The stimulated recall questions common to each participant at each of the six recall sessions were:

1) If you were to select the most important thing that you said to your student teacher in this conference, what would you choose? Why would you choose this?

2) Was there a point in the conference where you chose not to say something? That is, did you have something in mind to say, and then choose not to say it? On what basis did you make this decision?

3) During this conference:
a) what knowledge did you use to help you decide what to talk about?
b) What knowledge did you use to help you decide how to talk about this particular topic?

Observation

Observation allows the researcher to record what is happening in an event where participants are engaged in interactions (Goetz & LeCompte, 1984). The author of this dissertation observed and took field notes in seminars held at the Professional Development School. The field notes focused on the process and content of interactions among the mentors. The seminars took two forms.

In conjunction with the language arts methods practicum which was being taught concurrently on campus (fourth term of the program), mentor and prospective teachers at Brown Elementary professional development school were encouraged to attend three brown-bag lunch seminars help across the 10 week term to discuss issues of planning and teaching language arts. Two mentor teachers (Brooke and Paige) met with representatives from the university program faculty to plan themes for these lunches that would correspond with the language arts practicum. These themes were: 1) designing a central question for a language arts unit; 2) planning lessons of instruction; 3) implementing language arts instruction. Present at these seminars were five mentor teachers, four prospective teachers, the principal, and two university program faculty. The mentor teachers opened and facilitated the discussions.

The second type of seminar was held during the fifth term of the Academic Learning program. This was the term of full time student teaching. Four seminars were held across this term, two of which were observed. One of the mentor teachers, Brooke, volunteered to take responsibility to plan and facilitate these seminars. The seminars focused on helping the prospective teachers talk about, analyze and reflect on experiences in the classroom. Integrated in these sessions was the theme of developing and being able to

articulate a philosophy of teaching that was consistent with instruction. Talk was not limited to language arts instruction.

Field notes taken during these seminars influenced construction of the structured interview questions about the role of mentor. Specifically, one quotation from a seminar was used to probe the mentors' thoughts and reactions to another mentor's statement (See Interview 6, Question 2 in Appendix B).

Data Analysis

The form of qualitative data analysis used is commonly referred to as the constant comparative method of analysis (Glaser & Strauss, 1967; Strauss & Corbin, 1990). Within this framework, data reporting and analysis will combine the use of narrative cases, frequency counts and visual representations to describe and analyze how five classroom teachers make sense of their role as mentors to prospective teachers, and patterns and uniqueness among the five cases.

The constant comparative method of analysis

Use of the constant comparative method of qualitative data analysis (Glaser & Strauss, 1967) involves description, analysis and comparison of data across the five subjects of study. As interview data from the five subjects were examined, descriptive categories emerged which synthesized major themes of the participants' words. Similar data were grouped together and provided with conceptual labels based on interpretations of the data. Three categories were labeled and used to frame the research questions and analysis of the study.

Data analysis procedures

In order to uncover descriptive categories which represent the subjects' perspectives, the five classroom teachers were involved in an interview prior to the beginning of work with their student teachers in the language arts practicum (See Appendix A). This opening interview was framed around the primary research question to begin to understand how the classroom teachers make sense of their role of mentors in supporting novices to learn to teach. As the classroom teachers conversed in the interviews, the themes which occurred most frequently in the mentors' language were synthesized into three categories which were named: **views about learning, sources of knowledge, and nature of reflection.** The researcher developed these labels in order to provide similar names for what was evident in an interpretation of the data. The six subsequent interviews with the mentors were framed around these three categories in order to capture the mentor teachers' perspectives of their role. (For a list of the questions for the six interviews, see Appendix B). Since inquiry focused on the three categories listed above, three corresponding research questions were developed after the opening interview around these three themes. These questions are:

1) *How do the mentors talk about their theories of how novices learn to teach?* (views about learning)

2) *How do the mentors use different sources of knowledge to help novices learn to teach?* (sources of knowledge)

3) *What is the nature of reflection used by the mentors to help novices learn to teach?* (nature of reflection)

The results and analysis include evidence from the mentors' perspectives in answer to the three questions listed above. The three research

questions will help support overall purpose of the dissertation, which is to describe how five classroom teachers are making sense of their role as mentor.

Frame for Analysis

Figure 1 provides a visual synthesis of the frame used to analyze the data. The three categories of views about learning, sources of knowledge, and nature of reflection are represented. In addition to the three categories which emerged from the opening interview, many of the mentors spoke of similar themes which fall as subthemes beneath the main categories. These themes were labeled by the researcher, and capture the language of the mentors as closely as possible. After labeling the topics, they were placed under the category which most closely corresponded, in the teachers' words, to the category which the mentor was describing. The topics were used to describe data both in the cases and frequency counts.

Forms of reporting and analysis

Analysis includes various efforts to capture the mentors' perspectives of how they make sense of their work supporting novices as they learn to teach. There are three different forms of reporting and analyzing the data. Within each form of analysis, **views about learning, sources of knowledge and nature of reflection** are used to frame discussion. The three conceptual forms of reporting and analyzing data are 1) cases, which use the teachers' language to describe perceptions of their role, 2) frequency counts, which describe the number of times and extent to which each mentor discussed a category or theme and 3) mentor models, which were created by the teachers to visually represent perceptions of their role.

Interview data collected from the five mentor teachers across a five month period (October-December 15, January- March 15) serve as the primary

Source of Knowledge

Classroom Teaching

Academic Learning

Professional Development School

Views About Learning

seeing student teachers as colleague

connecting subject matter with children

matching philosophy with instruction

developing independent thinkers

helping university students learn to teach

helping elementary students learn

Nature of Reflection

reflecting about work with prospective teachers

reflecting about literacy subject matter

modeling & encouraging prospective teachers to reflect

making implicit knowledge explicit through interactions

FRAME FOR ANALYSIS

Figure 1

source of data. Videotapes of conferences between prospective and mentor teachers are used to clarify and support claims. Observation data is used for general information about attendance and participation in professional development school seminars.

Cases

The narrative cases use the language of the subjects to illustrate how these five elementary classroom teachers make sense of their role as mentors of prospective teachers in the teaching of language arts. Each teacher is described using the categories and topics identified within the frame of analysis (Figure 1). Each of the five cases is divided into three portions to match the three research questions. Within each of the three portions, examples provide evidence, from each teacher's perspective, of how she responds to the research questions. Analysis includes reflections on how these mentors are supporting the learning of novice teachers, and how the context of the study may have impacted the perception and enactment of the role of mentor.

Since the purpose of this study is to capture the participants' perspectives, their own words are used to illustrate how they respond to each of the three research questions. As J. Shulman (1991) said, "to call something a case is to make a theoretical claim that it is a "case of something" (L.Shulman, 1986) or an instance of a larger class of experiences." The purpose of writing about each of the five classroom teachers' stories separately is to provide five cases of teachers who work through their individual and collective struggles and celebrations to create and enact a role of mentor to novices who are learning to teach.

Frequency counts

The frequency counts draw on the same categories and topics evident in the cases, and provide numerical summaries of all of the interview data and display data across the five cases. Frequencies provide reports of how many times and to what extent each of the five teachers talked about a specific theme and category. The three categories of views of learning, sources of knowledge and nature of reflection used to help novices learn to teach also frame the frequency counts. The entire interview set (six interviews, including stimulated recall) for each case were first counted for the *number of times* (labeled "# of times" on the data reports) that each subject talked about a particular theme (e.g. developing independent thinkers). Then, each data set was re-examined for the *extent* or degree to which the subject talked about this theme (labeled "extent" on the data reports). The criteria used to code the frequency counts will be described in the following section.

The unit for analysis for teachers' responses to the interview questions was defined as a response to one interview question, including probes by the researcher. Each interview question was counted as one unit, regardless of the length or amount of probes to clarify the interview question. The interviews were chunked into units before frequency counts began. All data collected from the six interviews (or three interviews in the case of Alexa and Paige) were included in the frequency counts.

Interrater reliability: After the initial development of the labels for the extent or degree to which the subjects talked about the different themes, an interrater reliability check was employed. Interview sets from two subjects were independently evaluated by the primary researcher and a doctoral student in teacher education. After being given a brief description of the categories and themes (Frame for analysis, Figure 1), the second rater was

given a copy of the interviews on which content units had been indicated. The second rater was asked to code the interviews according to the themes, and to mark questions about clarity in phrasing the terminology in the themes. Once the second rater completed the scoring, the primary researcher and the rater met to arrive at consensus about clarity in phrasing of the terminology in the themes. Reliability was determined by dividing the number of agreements between raters by the total number of agreements plus disagreements. Interrater reliability was calculated separately for each of the three categories studied. Reliability for views about learning = .94 (the coders differed on Theme E); sources of knowledge = .93 (the second coder scored lower on themes A and B) and; nature of reflection = .96 (the second coder scored higher on theme A).

The frequency counts were used to examine the number of occasions and the extent to which mentors talked about certain themes illustrated within the narrative cases. Since the cases provide only excerpts from the whole interview set, the frequency counts provide a way to examine how much a mentor talks about a certain theme across the interview period. The frequencies also provided a vehicle for looking at patterns across cases, and provided additional evidence to support the mentor's perspectives outlined during the cases.

Mentor models

The mentor models are a third source of data used to describe and analyze how five classroom teachers make sense of their role as mentor. During the final month of interviews, the mentors were asked to design a visual representation of their conception of the role of mentor that they were currently enacting. The mentors were given freedom to design this model in any visual format that was comfortable. These models serve as another source

of data to describe how the mentors talk about the categories and themes represented in the three research questions.

Categories

The category system used to describe and analyze the data will be briefly explicated in order to help the reader understand the nature of each of the three categories: views about learning, sources of knowledge and nature of reflection used to help novices learn to teach.

Category I: How do the mentors talk about their theories of how novices learn to teach? (views about learning)

During the interviews the mentors voiced their theories of how they think novices learn to teach, and what their role should be in support of this learning. Five themes emerged within this category. After reading across the interview sets, the researcher labeled these themes a) developing independent thinkers; b) parallels between elementary students and prospective teachers as learners; c) matching philosophy with instruction; d) mentor/novice relationship and; e) connecting subject matter knowledge with children.

The themes

The themes emerged from the words of the mentors. After reviewing the entire data set several times (all interview transcriptions for the five teachers), there were themes which the teachers commonly talked about, in varying degrees. For purposes of providing numerical data to summarize the frequency which the teachers talked about certain topics, themes that were talked about were commonly labeled and placed within one of the three categories that fit with the mentors' talk. Within the cases, however, each of these themes is explored using the voice of the mentor and her *own label for the theme*, which may differ slightly from the common label. For example, one of the themes under the category "views about learning" used for the

frequency counts is commonly labeled "matching philosophy with instruction." Lisa's words used within her narrative case to describe this theme are "discovering your own voice and beliefs about teaching."

The frequency ratings

The frequency counts serve to summarize the *number of times* which each of the mentors spoke about particular themes and categories across the interviews. In addition, the frequency counts examine the *degree or extent* to which the mentors talk about a particular theme. The measures for the degrees to which a mentor talks about a certain theme were derived from the interview data.

Within each of the categories there were specific rules used for rating whether a response was a level one, two or three. These rules came from what the mentors actually said, and were designated after reviewing all of the data many times. Within the category "views about learning" judgments were made about responses based on the following criteria. For each theme, a level one response was scored when a mentor *merely made a general statement* that, for example, her goal was to develop independent thinkers, or that she thought about learning for elementary students and prospective teachers in similar ways, or that it was important to match philosophy with instruction. A level two response was scored when a mentor *specifically defined* the themes. For example, she would provide a specific definition of what it meant to help prospective teachers become independent thinkers, or what it meant to view learning similarly for elementary students and prospective teachers, or what it meant to match philosophy with instruction. A level three response was scored when a mentor *provided specific examples of how she was enacting* her beliefs about a theme. For example, how she was enacting her goal and definition of independent thinkers in mentoring, or how she was helping the

prospective teacher discover her own philosophy and match philosophy with instruction.

Following are the level one, two and three responses for each of the five themes under views of learning. The response are labeled by levels of 1) the lowest response given when the mentor merely made a statement about the theme; 2) the next highest response given when the mentor was more specific in defining the theme, and; 3) the highest response given when the mentor provided concrete examples of how this theme was being enacted in mentoring. The following themes fall under the research question: *How do mentors talk about their theories of how novices learn to teach?*

TABLE 1

Views about learning themes
Level 1,2,3 responses

A - Developing Independent Thinkers-
1= *saying* a goal is to help students become independent thinkers
2= *providing a definition* of what it means to this mentor teacher to help students (elementary and prospective teachers) become independent thinkers
3= *providing concrete examples* of how this goal and definition of independent thinkers is *enacted* in the classroom and/or mentoring

B - Parallels Between the Two Learners (elementary & prospective)
1= *saying* the ways that this mentor teacher thinks about learning is similar for both elementary students and prospective teachers
2= *defining* similarities in ways this teacher views learning for both elementary students and prospective teachers
3= providing *concrete examples of times in mentoring* when it is helpful and not helpful to draw parallels between elementary students and prospective teachers (there are occasions when the mentor feels she should look at the learners' needs differently).

C - Matching Philosophy With Instruction
1= *saying* that it is important for a prospective teacher to know the purpose of a lesson or unit so that the prospective teacher knows what she is doing and why she is doing this lesson/unit
2= *defining* the mentor's own philosophy and how her philosophy matches instruction (modeling without explaining her modeling to the prospective teacher)
3= linking #1 and #2 to provide *concrete examples of actively helping* the prospective teacher learn to discover her own philosophy and match her philosophy with instruction.

D - Mentor/Novice Relationship
1= *saying* there are similarities between a mentor/prospective teacher relationship and a relationship with a colleague in the building
2= *recognizing* that the prospective teachers do not have the repertoire of experiences that their colleagues have, and thus *differentiating* a collegial relationship from the mentor/prospective teacher relationship
3= *providing concrete examples* of differences between a mentor and a novice, and supporting those differences through mentoring *actions*

E - Connecting Subject Matter With Children (mentor's special knowledge)
1= *saying* it is important for student teachers to have someone to talk to who is connected with children in a classroom
2= *defining* the "special knowledge" that school-based educators hold and can share with prospective teachers
3= *providing concrete examples of* using this "special knowledge" to help prospective teachers be thoughtful in connecting instruction with children

Category II: How do the mentors use different sources of knowledge to help novices learn to teach? (sources of knowledge)

Throughout the interviews, as the mentors watched videotaped excerpts from conferences between the mentor and novice, and talked about their mentoring work, they described three sources of knowledge which they predominantly relied on for mentoring. In varying degrees, the mentors said that they used knowledge and experience with a) Professional Development School work; b) Academic Learning teacher preparation program; and c) classroom teaching. Within the cases, the mentors describe their perception of how each of these sources has (or has not) influenced their work with student teachers.

The themes

Themes for the sources of knowledge category were labeled for the three knowledge sources listed above. In this category "Professional Development School", "Academic Learning" and "classroom teaching experience" are used as labels to describe both the cases and the frequency counts.

The frequency ratings

The rules for rating level one, two or three responses for the frequency counts in the sources of knowledge category derived from how the mentors talked about the different themes. The levels differed from the ratings used for the views of learning category. Within the "sources of knowledge" category judgments were made about responses based on the following criteria. For the themes "Professional Development School" and "Academic Learning", a level one response was scored when a mentor said that a particular source of knowledge *has not played an integral role* in how this teacher mentors. A level two response was scored when a mentor said that a

particular source of knowledge *has played an integral role* in how this teacher mentors. A level three response was scored when a mentor *described specific qualities and/or habits she has gained through this source of knowledge.* The theme "classroom teaching experience" differed slightly from the two other themes, for no mentor said that this source has not played an integral role in how they teach. For this theme, a level one response was scored when a mentor *merely made a general statement* that classroom teaching experience was a valuable source of knowledge. A level two response was scored when a mentor *provided specific examples* of how she uses classroom experience as a source of knowledge. There were mentors who could not separate classroom teaching experience from PDS and Academic Learning experiences. So, a level three response was scored when a mentor *linked classroom and PDS/Academic Learning experiences* together as sources of knowledge.

Within the category sources of knowledge, if a mentor did not talk about one of the sources, such as Professional Development School, the interview was not rated. Scores were only given when the mentor mentioned one of the three sources of knowledge.

Following are the level one, two, and three responses for each theme under the category "sources of knowledge." The following themes fall under the research question: *How do the mentors use different sources of knowledge to help novices learn to teach?*

TABLE 2

Sources of Knowledge themes
Level 1,2,3 responses

A - Professional Development School project/research involvement

1= *saying that PDS work has NOT played an integral role* in how this teacher works as a mentor or a classroom teacher

2= *saying that PDS involvement HAS benefitted* this teacher in how she works as a mentor and/or a classroom teacher

3= *providing specific examples of qualities/habits this teacher has gained* through PDS experiences that are integral to the rest of their work (i.e. reflecting, believing that it is important to know your philosophy, understanding how prospective teachers learn)

B - Academic Learning mentor teacher component

1= *saying that Academic Learning work has NOT played an integral role* in how this teacher works as a mentor or a classroom teacher

2= *saying how involvement in the Academic Learning mentor teacher component HAS benefitted* this teacher in how she works as a mentor and/or a classroom teacher

3= *providing specific examples of qualities/habits this teacher has gained* through Academic Learning experiences that are integral to the rest of their work

C - Classroom teaching experience

1= *saying* that classroom experience is a valuable source of knowledge

2= *providing specific examples* of how the "special knowledge" of classroom experience is valuable for helping novices learn to teach

3= *linking classroom experiences integrally with PDS and Academic Learning* experiences in order to help novices learn to teach

III. What is the nature of reflection used by the mentors to help novices learn to teach? (nature of reflection)

One of the goals of this dissertation is to examine mentors' conceptions of reflection. Since the construct of reflection does not have an agreed upon operational definition in the educational community, the researcher wanted to find out how the teachers think about their role as mentors, and whether reflection is part of how they conceptualize their role.

The themes

After examining the data, three themes relating to reflection were evident. In varying degrees within each case the mentors were a) modeling and encouraging their prospective teacher to reflect; b) reflecting about work with their prospective teacher; and c) reflecting about literacy subject matter. Within the category nature of reflection, these three themes were explored to describe the ways which mentors used reflection as part of their role conception.

The frequency ratings

The three themes deal with aspects of the mentors' work which they focus on, in varying degrees, in working with their prospective teachers. Each of the three themes focuses on different purposes and content of the nature of reflection used by the mentors. The rules for rating whether the reflection responses were level one, two or three were unique for each theme.

The first theme describes how the mentors model and encourage their novice to reflect about teaching practice. A level one response was scored if a mentor *merely said* that it is important to encourage a novice to be reflective. A level two response was scored if a mentor *defined how she encouraged reflectiveness* by modeling. A level three response was scored if a mentor *described the content of reflections* that she modeled and encouraged.

The second theme describes how the mentors reflect about their work

with prospective teachers. On occasion, the mentors limited conversations to talk about *how well their prospective teacher was performing* during time in the field. This was scored as a level one response. A level two response was scored if the mentor moved beyond talk about performance to thinking and talking about what the prospective teacher *is learning* her time in the field. A level three response was scored if the mentor talked not only about what the novice was learning, but talked more *specifically about goals she had* for what she wanted to help the prospective teacher to learn and experience in the field.

The third theme which emerged from the data was reflection about literacy subject matter. There were three ways that the mentors worked through subject matter conversations with novices. A level one response was scored if the mentor talked only about *how the mentor herself would approach teaching a certain literacy concept or skill.* A level two response was scored if the mentor used her literacy knowledge *to begin asking questions to the prospective teacher about her literacy knowledge.* A level three response was scored if the mentor more *specifically talked about the content of reflections which* engaged the prospective teacher in questions that linked subject matter and pedagogical knowledge.

Following are the level one, two and three responses for each of the themes under the category "nature of reflection. The following themes fall under the research question: *What is the nature of reflection used by mentors to help novices learn to teach?*

TABLE 3

Nature of reflection themes
Level 1, 2, 3 responses

A - Modeling and Encouraging Prospective Teachers to Reflect
1= *saying* that it is important to encourage prospective teachers to be reflective about teaching practice, yet not talking about how this is being enacted, or what prospective teachers are encouraged to reflect about
2= *defining* how to encourage reflection by making implicit knowledge explicit to prospective teachers through modeling how the mentor reasons through a teaching decision and/or action
3= *content of reflection include:* encouraging prospective teachers to reflect through questions that challenge the novices to think about teaching plans and decisions, to understand the subject matter they are teaching and why this subject matter is important for children to learn. The mentor works through her own reasoning as a model, then encourages prospective teachers to use a similar think aloud model.

B - Reflecting About Work With Prospective Teachers
1= talking about prospective teachers in terms of how well they are *performing* in student teaching, not in terms of what they are learning or habits they are developing.
2= talking *in general* about what the prospective teacher is *learning* during student teaching
3= talking *specifically about goals* for what the mentor wants prospective teachers to know and be able to do by the close of student teaching, and how the mentor can help novices to develop the disposition to be thoughtful about her own teaching when there is no one in the room to be there to constantly talk with and question

C - Reflecting About Literacy Subject Matter
1= talking to the prospective teacher about differences *in how the mentor would have approached a concept or skill* versus how the novice approached teaching
2= *beginning a dialogue about what the novice knows about the subject matter (literacy),* and how that subject matter might be implemented with the children in the mentor's classroom
3= *content of reflection:* challenging the prospective teacher to think about what she knows about the literacy knowledge or skill she is teaching, why it is important for children to learn, what children already know about this literacy knowledge and skill, and how she will or has adapted this knowledge appropriately for the children

Limitations of the study

This is an interpretive study of five classroom teachers based largely on self report data and inferences made by the researcher. Because of the nature of the study, there are some limitations. The limitations are the 1) generalizability of the findings; 2) use of self report data; 3) bias in data collection; and 4) complexities of inferences. Each of these limitations will be discussed.

Generalizability of the findings

Although the five classroom teachers who mentor at Brown Elementary represent the entire population of mentors at this school, the population size is small and cannot be representative of the total teaching population. In addition, the context of this study is in many ways unique. Teachers at Brown Elementary are members of a Professional Development School where resources of time and money and support from a university differ from most typical elementary schools. Teachers at Brown have also worked exclusively with Academic Learning teacher preparation program for the last five years, and have not had student teachers from other programs in the building during that time. Because of the uniqueness of these experiences, the generalizability is limited.

Reliance on self report data

The primary source of data used to study the teachers' perspectives of how they make sense of their role as mentors to novices was self report. In order to capture the subjects' perspectives, their own words were encouraged, studied and analyzed. There is, however, a disadvantage of relying on self report data. Since the conferences between the mentors and prospective teachers were videotaped, and since the interviews between the mentors and the researcher were audiotaped, the subjects may have been more cautious

about their interactions.

In addition, the stimulated recall interviews asked the mentors to reflect on what they were thinking while talking to their prospective teacher in the conference. It is recognized that stimulated recalls are self reports, tempered with time. In this dissertation, stimulated recalls reflect retrospective reports of the mentors' perceptions of their thoughts rather than attempting to capture the mentors' interactive thoughts (Keith, 1988). In addition to the limitation inherent in the stimulated recall, as teachers talk about perceptions of their "knowledge-in-action" (Schon, 1987), it is recognized that "Often we cannot say what it is that we know. When we try to describe it we find ourselves at a loss, or we produce descriptions that are obviously inappropriate. Our knowing is ordinarily tacit" (Schon, 1983, p. 49). Often it is difficult for teachers to talk about what they know and believe about teaching.

Bias in the data collection

The author of this dissertation designed the interview protocol, videotaped the conferences between the mentors and prospective teachers, observed the mentors and prospective teachers in seminars, and interviewed the mentor teachers. The construction of the interview questions was supervised by a professor in teacher education and piloted with mentor teachers in another professional development school. Yet, the design of the interview protocol primarily reflects the interests and biases of the researcher.

Inferences drawn from the data

The purpose of this study was to capture the subjects' perspectives about how they were making sense of their role as mentors to novices. The researcher's conception of perspectives included a combination of the mentors' "beliefs, intentions, interpretations and behaviors" (Janesick, 1982).

Based on the self report data gathered from the mentors, the researcher drew inferences by categorizing the data by themes which emerged from the mentors' words. These inferences represent one researcher's approach to interpreting the data.

SUMMARY

Within this chapter the method, design and subjects of study have been described. The research questions which guide data collection and analysis were introduced. Analysis procedures have been described in efforts to guide the reader through the next chapter. Chapter Five describes and analyzes how five classroom teachers make sense of their role as mentors.

CHAPTER FIVE

HOW FIVE CLASSROOM TEACHERS MAKE SENSE OF THEIR ROLE AS MENTORS IN SUPPORT OF NOVICES AS THEY LEARN TO TEACH

How do the mentors talk about their theories of how novices learn to teach?
(views about learning)
How do the mentors use different sources of knowledge to help novices learn to teach? (sources of knowledge)
What is the nature of reflection used by the mentors to help novices learn to teach? (nature of reflection)

The previous chapter described the methodology used to collect data. The purpose of this chapter is to present and discuss the data in pursuit of answering the research questions listed above. The first section of this chapter is devoted to five case studies of the five classroom teachers who mentor at Brown Elementary PDS. Anonymity is protected with the use of pseudonyms for each of the teachers. The second section of this chapter will discuss the patterns and differences across the five cases. Following are the cases of Lisa, Kimberly, Alexa, Paige and Brooke.

The case studies are divided into three parts. First the teachers' theories of how novices learn to teach will be discussed. Second, the sources of knowledge the teachers use to mentor will be described. Third the nature of reflection used to help novices learn to teach will be examined. Within each of these three parts, narrative from the mentors and frequency counts will be used. At the close of each mentor's case is a description of the visual representation which they designed.

LISA

Lisa[1] _is a first grade teacher at Brown Elementary. Lisa has been teaching for 19 years. She holds a Masters degree in Educational Psychology, plus 30 additional credits. Lisa has worked with four student teachers as a part of Academic Learning's mentor teacher component. She also had one student teacher in her classroom before working with the Academic Learning program. Lisa became involved in a project with Michigan State prior to Brown officially becoming a Professional Development School. Within this project she and another first grade teacher (Alexa) were observed and involved in stimulated recall interviews with video tapes. Lisa attributes the development of a habit to be reflective to this project called "TDOC"(Teacher's Development and Organizational Change). Lisa also believes the success of TDOC lead to the agreement that Brown become a PDS. Within the last three years since Brown has become a Professional Development School, Lisa has been a member of the "DAC" group (Developmentally Appropriate Curriculum). Lisa is also on the Coordinating Council of Brown PDS. Lisa regularly attends seminars associated with Academic Learning's language arts methods held at Brown PDS._

Lisa's theories of how novices learn to teach
(Views about learning)

There were two themes which Lisa talked about as important areas to emphasize when helping novices learn to teach. Lisa's theories of how to support her student teacher Shelly in learning to teach include the themes that Shelly 1) discover her own voice as an independent thinker, and uncover her own beliefs about teaching and learning; and 2) develop the special knowledge of classroom teachers that would help Shelly connect subject matter knowledge to children. Lisa also describes other views about learning which influence her mentoring which will be discussed as well.

Discovering your own voice and beliefs about teaching

When Lisa began working with her student teacher Shelly as part of Academic Learning's language arts practicum two mornings a week in October, Lisa was concerned that she was telling too much information to Shelly. As she watched excerpts from videotaped conferences between Lisa

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[1]Lisa is a pseudonym.

and Shelly, Lisa began to focus on the issue of helping Shelly develop her own voice instead of mirroring Lisa's actions and ideas. From the beginning of her work with Shelly in October, Lisa talked about her goal to help Shelly begin to question herself, although this theme does not play out in conference conversations until months later. In early October she said:

> "A lot of working with student teachers is getting them to try and develop a teacher perspective and to see things, *to become perceptive and to tap into their own intuition and to learn how to challenge themselves to think about what's going on* as opposed to just lining up the teacher's editions, planning lessons, and then finding strategies to implement them." -italics added-

Later in October Lisa again reinforced her belief that she wanted to help Shelly learn to become an independent thinker. As she thought about her perception of what the mentor's role in helping novices reach this goal, she said:

> " school-based educators have to know a lot about how to help a student teacher learn all that (knowledge about teaching) in a way that's not just telling it. Because they've got to learn to question and think and put it all together themselves. So it's a way to kind of like step aside and guide them."

Research on student teaching shows that often prospective teachers take on the beliefs and values of their cooperating teacher (Friebus, 1970; Seperson & Joyce, 1973; Zeichner, 1980). Some cooperating teachers show their view of teaching as *the* way to learn to teach (Staton & Hunt, 1992). Lisa repeatedly emphasized that she did not wish to tell information to Shelly, rather, she wanted to question and build knowledge together with Shelly. However, Lisa's view about helping Shelly learn to question and challenge herself was not enacted in conferences videotaped early in the language arts practicum (October and November). Instead, Lisa dominated the conversations. Following is an excerpt from a November conference between Lisa and Shelly which illustrates Lisa's early style of mentoring.

Within this episode, Lisa and Shelly are discussing Shelly's language arts lessons that are focused around teaching the concept of personification to Lisa's first grade students. Shelly is describing her lesson plans to Lisa, and asking for input. Although Lisa does ask questions which could probe Shelly's subject matter knowledge of personification, she does not allow Shelly an opportunity to voice her own understanding.

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Shelly: I want to talk about the concept of same and different and have them (the children) talk about them in cooperative groups. I was going to read both of the stories today (there are two different stories about bunnies), and then I was going to read the stories over again tomorrow, and then send them off into cooperative groups to do their same and different things. Should I do it like that?

Lisa: Maybe there's a way to review the stories on the board. Or if during today's lesson, after you have listed the characteristics of the bunnies, then maybe if you could keep the predictions up on the poster, then read the books today and write a few notes together after, so that the next lesson when you want them to discuss same and different, you could get that poster out to save some time tomorrow...

-later in the conference-

Lisa: When you're asking them same and different, what do you mean?

Shelly: I want them to see that there are different kinds of personification

Lisa: I think it would be interesting to challenge them so that when they are in their small groups they could be talking about the concept of personification. Along with same and different, you could talk about in what ways were the bunnies personified in this book, then they're actually focusing on personification...asking about same and different is the beginning step in comparing those two books, but maybe you can challenge them to compare the personification in those two books. So, I'm trying to think of how you can challenge them by asking them a question about personification? Like, go into your groups and write on your chart about how they are same and different, and then pose a different question, like, which of those ways that are same and different are personification-I don't know, in a way that's appropriate for first grade vocabulary. ..Let's think about that. I think that would be a good challenge

for them

-*End of conference*-

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After viewing the video tape of the above conversation, Lisa was very frustrated with the way she handled the conversation. She realized that she was not enacting her role in a way that was consistent with the philosophy of mentoring which she voiced during early interviews. She said:

> "I have to practice that a lot, to not just tell. Because, my way works so good for me! For me. You know and I just think oh, if I just told them how...and I really don't want to try and develop student teachers who are carbon copies of me. I really don't. And I, and I sometimes sit back and see myself in them too much and I wish there wasn't so much of myself sometimes...because sometimes they kind of take on my personality in the classroom or the way I interact with kids."

Lisa was uncomfortable with how Shelly was talking about same and different as part of personification. She wanted to push Shelly to think more about her conception of personification. However, Lisa did not provide Shelly with an opportunity to work through her literacy knowledge. Rather, Lisa took the lead in the conversation, and ran out of time before she could ask Shelly questions to probe her knowledge.

In order to encourage Shelly to think about her own knowledge and beliefs, Lisa began to question Shelly in a way which allowed Shelly the chance to experiment with articulating her ideas. Within the following conference, which occurred during full time student teaching in January, Lisa has begun to adopt a style of questioning that is different from the the telling and sharing of ideas more common at the beginning of Lisa and Shelly's relationship. At this point Shelly and Lisa had been working together for approximately three months, so Shelly had gained some experience from working in the classroom. This style of questioning was new to Shelly, and she

visibly struggled to think through ideas on her own. Through this style of conference, Shelly learned that she did have knowledge and beliefs about the instruction of language arts that were valid and valuable.

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Lisa: What I want to do is touch base about our language arts program--how you feel about it, ideas you have to enrich and expand the program--*I don't want to say much more until you have a chance to talk.*

Shelly: Well, I really want to talk about reader's and writer's workshop. Well, I guess the writer's and reader's workshop are going fine, but lately I'm feeling that I'm not getting to as many kids as I want to and work with them in individual conferences, and I'm concerned that I'm not getting to all the kids...they've been writing, I feel good that they've been writing, but the reader's workshop is where I'm more concerned, and I don't know how much I should be doing assessing of their reading, I guess I have an idea of who's reading and not, but I don't feel like I've really been able to know who and exactly what is going on with each individual student, who is reading, who is just looking at pictures, and who needs the most help...I'm just feeling inadequate in my reader's workshop, you know, knowing what's going on...and I just don't know what to do. Should I set up a system like yours? I just feel like I don't have a good grasp on it.

Lisa: It sounds like you're concerned with individual assessment, is that right? (Head nod from Shelly). In an ideal situation, if you could restructure the day any way you could, get any resources and time you need, *what kind of things would help you know who is reading, and what's going on?*

Shelly: Ideally, if I could get a good assessment now, I could put them in small roups and pull them aside and work on specific needs. I notice that some kids are just looking at pictures, and that's OK, but I want to be able to move them forward. I'm thinking of Corbin with the Dinosaur book... I just wish there was some other way that I could see the kids practicing on books that would be a challenge to them, and that's something that I think I could do in a small group with a number of them. But that's all I've heard. I mean,this is all so new to me... we've read about the different structures and that's all I've heard, to narrow in on some.

Lisa: OK. what you're talking about is based on your having a better assessment of the kids. *What would you have to do with the kids to take that next step?*

Shelly: Make sure in the next 2-3 days that the kids read to me...But I don't know if I should let them use a familiar book, or introduce them to a new book and see how they use the context, I

don't know, they like the security, but we need to push them, so actually I'd like to have a little conference with each of them in the next few days and then think about some small group activities to help figure out how to put them in small groups. But I've never done that before.

Lisa: So *what would you need to think about to form the groups?*

Shelly: I could just let them start reading,or I could do some instruction first, you know, show them some strategies that I notice they need, looking at pictures, sounding out letters

Lisa: What I hear you talking about, is giving yourself 2-3 days to really individually talk to kids. Do it based on what you know about these kids and how they are reading--you know these kids well enough that your assessment will be accurate. *Can you think of ways to document that assessment so that it will be helpful to you in the future? To have a written record?...* (conversation continued with Lisa probing and Shelly thinking through her teaching decisions). -italics added

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As Lisa became more comfortable with a style of mentoring that balanced support and challenge, she began to shift her style from telling - to asking questions - to then making Shelly aware of the kinds of questions she should begin to ask herself. She was working consciously to try to enact her belief that Shelly need to develop a disposition to question herself rather than to ask for answers. After watching the videotape of the conference excerpted above, Lisa said:

"I think there was a moment in there (the conference excerpted above) where she (Shelly) looked at me and said, 'well, how would you do that', and I said, 'well, how do you think you would do that?' you know, something like that and I think that was the significant shift in the conference ... And I could have, I could have so easily when she said 'how do you think you could have done that', I could have so easily have said well, 'like this', you know, and thought I was being very, very helpful. But I was just thrilled to just wait quietly and watch her do it. I thought that was significant for both of us. For both of us."

Lisa became more assertive with a conferencing style that pushed Shelly to think about her beliefs and practices. During a stimulated recall interview in late February, Lisa watched a video tape of a conference between

Lisa and Shelly, and seemed very pleased with the interaction. Lisa was much more confident about her goal and enactment of her goal during the conference. She said:

> "You asked me what I wanted Shelly to learn from the discussion regarding the central question. And I wanted her to *match what she explicitly had stated with what she really wanted to accomplish and see if there really was the match there or if she hadn't thought deeply enough to realize there may be a discrepancy there.* So that's what I was trying to get her to decide.

The special knowledge of connecting subject matter to children

In addition to helping Shelly develop a teacher perspective and challenge herself to think about what she is teaching, Lisa feels there is another important layer of learning involved in her role as mentor. A classroom teacher, Lisa believes, has a special kind of knowledge of how to connect knowledge to children in the classroom. Lisa distinguishes the knowledge fostered at the university from that which she focuses on in her mentoring in the classroom.

> "There is a special kind of knowledge that teachers bring; because at the university, they're focusing on the sequence of four lessons and what's logical order and how do you develop that which is not, which you need to do before you try and walk into the room and do it but then you're right, when they get to the room then there's another whole set of considerations to think about and to be aware of."

According to Lisa, this special kind of knowledge can only be learned when you're in the classroom with "25 live children." She views an important piece of her role in helping novices learn to teach is to help novices learn about children in the classroom. Lisa said:

> "I think absolutely everything you learn at the university is valuable and important and the more you can learn there the better teacher you'll be and then you'll bring that wealth of knowledge to the classroom, and *then you start to learn something new, which is how to implement all that.* And so I think the job while the student teachers are here is to learn how

to learn about children and...begin to learn how children learn."
-italics added-

Lisa feels that it is her responsibility "when she brings it (the lesson) to me", to help the novice "link it (the lesson) to connect it with kids, so I think...that's what I'm looking for is how much thinking she's done about how she's going to take first graders into account in implementing this lesson."

Theories about learners

Lisa's view of learning includes a firm belief that a school-based educator's role is to ask the sort of questions that will provoke a learner to think hard about the purposes, content and implementation of instruction. In addition, a goal of Lisa's is to promote independent thinking and the desire to question. On these two points, Lisa sees parallels between the way she views both her elementary students and her prospective teacher as learners. Lisa says:

> "I see a lot of constant parallels all the time between the way I interact and treat the kids and I interact and treat the student teacher.
> First, I respect that they can do it and that they're capable. And, then in establishing a relationship where they know I believe in them and I care about them and then providing them the basic structure of knowledge that they need , but then, to not tell, to, to, even with my first graders it's very important for me to have them realize that they are personally responsible, they have choices, they have control over what happens and that the, the outcome depends on what choices they make..."

There is one marked difference between the way that Lisa views her elementary students and the way she views Shelly. This difference could cause potential problems in the ways in which Lisa interacts and in what Lisa expects from Shelly. Lisa talks about Shelly as a colleague rather than as a novice. For instance, experienced teachers have a more sophisticated sense of pedagogical reasoning. Pedagogical reasoning involves the ability to transform subject matter knowledge in a variety of ways to meet the needs of diverse learners (Shulman, 1987). Pedagogical reasoning takes time for

novices to develop (Feiman-Nemser & Buchmann, 1987). Yet Although Lisa talks about the special knowledge she holds in transforming subject matter to her students, Lisa does not discuss the development or differences in pedagogical reasoning with Shelly. However, Lisa does seems to be conscious of one of the pitfalls that could result in an assumption that Shelly is a colleague instead of a student of teaching. After watching a videotape of a conference between Lisa and Shelly in late November, Lisa reflected:

> "I was surprised about how much I was telling her to do the first time. I was really taking ownership in her project and saying, oh yeah, we could do this and this.. and you know, Alexa and I work as co-teachers a lot, and we just, we just go with it like that, and Shelly's good enough that I have that relationship with her where we kind of co-plan and I forget that she's still such a beginner that I could overwhelm her with that at times or that I could like, not give room for her voice, and so I think that that's what I sat back and watched, is how much room am I giving Shelly for her voice and how important that is. I mean I believe that. I believe that a mentor role has to be to get them to think, and question them, but I get real excited about the lesson plans and I think I have a tendency probably to say well, we could do this and what about this and I, you know, at the end of the, at the end, I always say, now, I don't care how you do this, I'm just trying to give you some ideas. But I think I need to maybe...not overwhelm with so many options and hold back and see how they expand with maybe fewer of their own options, maybe a little more space for that."

Frequency counts- views about learning

Of all the themes apparent in Lisa's theories or views about learning, the theme of developing independent thinkers was most dominant. Eleven different times within the six interviews[2] Lisa talked about this theme as important to her philosophy of mentoring, as she works to question Shelly and foster her own voice. During these eleven occasions, Lisa focused mainly on providing concrete examples of how her goal and definition of independent thinkers was enacted in her mentoring of Shelly, which is a level three

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[2]The unit of analysis was one complete response including probes. This means that Lisa referred to the theme "developing independent thinkers" eleven times-with a total of 37 interview chunks.

response displayed on the frequency coding table (Table 5. 2). Her total score for the extent to which she talked about developing independent thinkers = 2.8 out of 3.0.

Consistent with the theme of independent thinkers is the idea that a prospective teacher should be able to think through and articulate her purpose in teaching a lesson. Lisa talked about this theme six times during the six interviews, mostly focusing on helping the prospective teacher learn to discover her own philosophy and match her philosophy of instruction. This is a level three response. Her total score for the extent to which she talked about matching philosophy with instruction = 2.8 out of 3.0.

Lisa talked on several occasions about her view that classroom teachers have a special kind of knowledge which is different from the knowledge held by university professors. She talked about this theme, labeled implementing instruction with children, nine times within the six interviews. When she spoke about this theme, she mostly centered around describing the special knowledge that school-based educators hold and can share with prospective teachers. This was a level 2 response. Her total score for the extent to which she talked about implementing instruction with children= 2.2 out of 3.0.

Across the six interviews, Lisa talked only a few times about the mentor/prospective teacher relationship (two times during the six interviews) and how she thinks about parallels and differences between elementary students and prospective teachers as learners (three times during the six interviews). When she talked about either of these issues, it was at a level that did not distinguish many differences in needs or goals. She does not believe that there is much of a difference between the mentor/prospective teacher relationship and a relationship with a colleague in the building (extent score= 1.5 out of 3.0). Neither does she feel there is much difference between

elementary students and prospective teachers as learners (extent score= 2.0 out of 3.0).

Lisa's theory of how people learn is consistent between her students and her student teacher. With both sets of learners she tries to help them become independent thinkers and value their own voices. She feels that she acts in a way that is consistent in supporting both learners. She does not make any distinction between children and adults as learners. However, she does distinguish that her job with Shelly involves helping her learn teacher knowledge rather than disciplinary knowledge.

The sources of knowledge Lisa uses to help novices learn to teach (sources of knowledge)

Lisa's mentoring seems very much affected by professional development opportunities she had with Michigan State University. Lisa attributes the development of a reflective disposition to work with a project called TDOC (Teachers' Development and Organizational Change) and more recently DAC (Developmentally Appropriate Curriculum). This reflectiveness links with how she approaches work with Shelly, and how she thinks about and has used knowledge from Academic Learning during the four years she has worked as a mentor teacher with the program. Lisa says that the Academic Learning teacher preparation program at Michigan State has influenced how she thinks about curriculum. She credits involvement in the program as an aid to her while working with Shelly, for she thinks there is a beginning common knowledge base between the university faculty, classroom teacher and prospective teacher. The purpose of this section of the case is to provide illustrations to support Lisa's claim that Professional Development School work, Academic Learning program and classroom teaching experiences blend together to provide the sources of knowledge used to mentor and teach

students.

Professional Development School as a source of knowledge

The dominant themes that Lisa discusses when talking about working in a Professional Development School are "reflection" and "thinking about new knowledge". These themes transcend into Lisa's work with Shelly as she encourages Shelly to be reflective and thoughtful about teaching decisions and actions. One of the parallels Lisa sees between the way she thinks about learning through professional development work and helping a novice learn to teach is illustrated in the following example:

> "The experience with PDS and the opportunity to have articles to read and a group to discuss it with opens me up to so many more options and I think that's the, one of the most important things is to have somebody else across the hall work with you and try new ideas and you get to watch them and you get to compare you know, what went well and why and..what like didn't work and why. And I think...that and then *learning the whole process of being reflective,* which is...which is really closely tied. Because it's not that the university came out and said, and taught us. You know, not seminars or anything. But just the whole process of the action research, *where you're asking questions, and then when you ask the questions, suddenly you have the motivation to dig up the answers. Whereas if before, if somebody handed you the answer in a nice little pamphlet, you had no, I had no desire or motivation to read that* because I had this stuff to do and this is what's important and I know that's important to you but I can't bother because I have these obligations and, and commitments. And so, by having like an action research where you become reflective and begin to ask those questions, then it was like, do you got any articles on...can you get me anything on, and then we really, and all of a sudden, we made the time for it then. Then we could create the time to read those because we needed to."- italics added-

Lisa's talk about "becoming reflective" and "asking your own questions" versus being provided with answers resonates with her talk about views of how people learn, and how she hopes to help Shelly learn to teach. Professional Development School opportunities have provided Lisa with a desire to question and learn, and a desire to foster this disposition within her

student teacher Shelly. This is consistent with the Holmes Group (1990) goal
that PDS's are places where "mutual learning and inquiry" (p.3) are fostered
between prospective, experienced and university teachers.

In addition to helping novices learn, Lisa talks about ways in which PDS
work has directly benefitted her in the classroom.

> "We both (Alexa and Lisa) improved at the process of asking
> ourselves reflective questions and then, because we had been
> more reflective for so many years, I think we have more wisdom
> about first grade children and how they learn and what we do
> and why we do it. So that I have more wisdom and help to
> consciously share with, with Shelly. Ideas like centers. Or like
> integrated thematic units...*we know how to do them, we know
> how to set it all up, but we also understand, we know why we want
> to do that.* We know...the kids like to learn that way... But we also
> know that it gives them more opportunities to problem solve and
> make decisions and cooperate..." -italics added-

Academic Learning teacher preparation program as a source of knowledge

As Lisa interacts with Shelly, she uses language of "central question,"
"concept map," and "curriculum chart." These concepts are part of the
language used by program faculty involved in the Academic Learning teacher
preparation program at Michigan State University. Lisa attributes Academic
Learning for providing her with conceptual knowledge that both helps
improve her work as a teacher and enables her to speak in a common
language with the university and prospective teachers. She says that she
shares "a common knowledge when they (student teachers and university
faculty) talk about concept mapping and when they talk about some other
vocabulary." Lisa continues:

> "I didn't know about concept maps before (work with Academic
> Learning)and I didn't work a lot with a curriculum chart. I
> basically used to adopt the district's curriculum chart... So I think
> there's a stimulus just from the knowledge (from Academic
> Learning)..."

Lisa also feels that both she and the university program faculty involved with Academic Learning share a commitment to developing learners who are independent thinkers. She feels that she has input on field assignments, and that the instructors listen to classroom teachers' needs.

> ..."I think it's so valuable that we get to have a three-way dialogue with the instructors. That we get to give them feedback and say this worked well and this didn't and maybe if you did this it would have worked better ... The instructors work to get the student teachers to think on their own and challenge them--this very directly addresses what I have been talking about as my goals."

In addition to common goals and vocabulary, Lisa sees another advantage in working with Academic Learning. She compares her work as a mentor with Academic Learning to one year when she had a student teacher from another preparation program.

> "Comparing it to that one student teacher that I had where there was no guidance from the University, it does help to have meetings where they (university instructors) have a format for feedback. And they have, they keep us really well informed on what those student teachers are doing in their coursework and what they're expected to do and how we can help them. I think that provides the initial structure for how we learn to be mentor teachers but then I think the real substance of how we learn it is just the experience with them and then having someone to share the problems with. Also when there have been the really difficult moments with student teachers, there's always been someone there at the University that's willing to listen and be available"

Although Lisa seems satisfied that university faculty are making efforts to involve mentors in the university portion of preparation, Lisa does not seem to feel like a partner in planning and implementing the university or field-based portion of the program, and believes the responsibility for preparation at the university lies with university faculty as they "keep us really well informed" about "what they're (student teachers) expected to do". Although Lisa appreciates opportunities to provide feedback at mentor meetings, she does not feel like the meetings for mentors provide substantive ideas and focus

about how to actually work with the novices in the field. In fact, one assignment in particular continues to bother Lisa.

> "The assignment that the juniors come in and do that's on schemata and pedagogical knowledge and all that..I just hate that assignment..I just hate that and I don't see that that's an advantage. I think that those terms mean something and that there are much, much clearer ways to speak about those things. But that's the only assignment that I'm referring to with that ."

Classroom teaching experience as a source of knowledge

As Lisa talks about the sources of knowledge she uses to mentor Shelly, she continues to distinguish between what knowledge university faculty provide and the the special kind of knowledge that she as a classroom teacher can help Shelly learn. Holding onto these differences in the roles school and university-based educators play in learning to teach may account for the way Lisa distinguishes a sort of "us and them" rhetoric when talking about Academic Learning. She speaks about what Academic Learning has brought (new ideas, vocabulary) and what the mentors have brought to Academic Learning (feedback about assignments), but does not talk about what the two together could do as partners in creating programs together. This does not seem to be part of Lisa's agenda. She does feel, however, that the two components serve their own important functions. At the end of October, Lisa said:

> "Being in this setting provides me the opportunity to ask them (novices) different questions whereas I think in the university they're in the content based more and so they have the opportunity to ask questions based on structure of knowledge and organization of lesson plans and that whereas I'm in the situation where I have the opportunity to ask a lot more questions about strategies and implementations. Because, they've got the live students right there."

Lisa uses her classroom experience as a source of knowledge to help guide the prospective teachers in "how you adapt all that knowledge into

actual use with the students."

Frequency counts-sources of knowledge

Lisa talked about Professional Development School experiences and Academic Learning teacher preparation program affiliation as a source of knowledge she uses to help prospective teachers learn to teach. Together, she talked about these sources a total of sixteen times across the six interviews. As she talked about Professional Development School experiences (eight times), she provided some specific examples of qualities and habits that she has gained. Lisa attributes PDS experiences for helping her continue to develop a reflective disposition. Her extent score for PDS as a source of knowledge = 2.6 out of 3.0.

Lisa also talked about Academic Learning as a source of knowledge eight times within the six interviews. When talking about Academic Learning, Lisa was not as specific about ways which Academic Learning has benefitted and helped Lisa develop as a mentor and teacher. Her responses centered around discussion of general benefits of exposure to a common knowledge base, and involvement in meetings where university faculty tell mentors what the prospective teachers will be doing in the classroom (level two response). Her extent score for Academic Learning as a source of knowledge = 2.3 out of 3.0.

Lisa described her classroom knowledge as something separate from what is taught in Academic Learning. She talked about the special knowledge of teaching five times throughout the interviews, and primarily talked about how the special knowledge of classroom experience is valuable for helping novices learn to teach (level two response). She seemed to feel that Academic Learning and classroom teachers have separate jobs and separate sources of knowledge, and did not see that classroom experience was a source linked directly with what she had learned from Academic Learning and Professional

Development School experiences. Her score for classroom experience as a source of knowledge = 2.2 out of 3.0.

The nature of reflection used by Lisa to help Shelly learn to teach (Nature of Reflection)

Lisa has used the stimulated recall experience as a way to think hard and analyze her work as a mentor who is supporting the learning of a novice. She believes she has begun to look at the role of mentor in different ways over the six months of data collection. Throughout the project, she has worked to shift the enactment of her role; from someone who 'tells' a lot, to someone who leaves her student teacher with a lot of 'final questions' and a means of internalizing a reflective disposition. Lisa has described her beliefs about mentoring, and reflection about her work with Shelly has become a large part of her role. Within this section examples of how Lisa reflected about work with her prospective teacher, and how Lisa modeled and encouraged Shelly to reflect will be provided.

Reflecting about work with prospective teachers

Throughout the duration of this study, Lisa struggled to think about how she could really help Shelly develop a habit of reflectiveness that could carry on in the future, independent of Lisa. For the first time, according to Lisa, she began to think about her role in terms of having a responsibility for preparing this novice to teach thoughtfully in the future, rather than to just perform competently in Lisa's classroom during student teaching. This realization struck Lisa in January, when she began to conceptualize her idea of sending the student teachers "off with some questions instead of sending them off with some final statements." She said:

> "I've always kept my mouth running, and I think there's a way for me to pose some questions and then be quiet and kind of let them go with that but it's still, some guidance in that direction. And I, maybe that's, maybe that's the difference is to get, kind of

send them off with some questions instead of sending them off with some final statements."-italics added-

Within that same interview, Lisa began to flesh out what she meant by these words.

> "Today we (the researcher and Lisa) started talking about another level that you can move to, where, where...I get her (Shelly) to think about...this internalizing. That I can fade to the point in my coaching where...I don't leave her out there on her own yet, it's not like I'm completely gone and she completely has to rely on her own resources, but *I'm almost just a whisper* or something, or a inner conscience, not inner conscience, that's not the word I want either but the idea of helping her move to that next step, where I can actually talk with her and help her and *guide her into how to internalize that and how to start thinking about what questions do you ask yourself to keep yourself on track and to continue to reflect and to question where you need to go next.* I've never even thought about this before (before this conference and interview) ...I don't think I've really thought about it to this point where how do I, how do I fade to the extent where they internalize it but I'm still guiding them in that?" -italics added-

Equally important as Lisa's belief that there is value in the process of reflecting on teaching are her thoughts about what the content of such reflections could include. Lisa is beginning to think and talk about *"what kinds of questions do you ask yourself to keep yourself on track and to continue to reflect and to question where you need to go next."* She believes that the content of reflections should include questions such as: What is the purpose of your lesson? What is the central question you are trying to answer, and are you reaching your goal? How are you connecting this subject matter to first graders? and What do you want first graders to learn about this subject matter?

Within the January interview Lisa began to construct an analogy which she later introduced to Shelly. This analogy captured the essence of what Lisa was thinking when she talked about the choices of leaving a student teacher with final statements or final questions.

> "When they (student teachers) reach the point where they are

ready to go out on their own and try this (teaching), I have two opposing analogies, and one is, they kind of reach the end of the pier, or the dead end, and there's a wall that they have to just jump over blindly by themselves and they will either sink or swim. And when you leave them there at the end of that dead end, you leave them there and you leave them some final statements. You impart some of your best knowledge that you have. It's, you're still telling them things. As opposed to the analogy where they reach the end of the pier and there's not that wall that they have to jump over with but you send them out in like this small sailboat and..and *instead of sending them off with final statements you send them off with final questions.* And even though they have to go out on their own and they're by themselves and they're out there in that vast...vast sea or ocean or something, you, they still have your support because they have this ship, they have this little sailboat that they're in that you gave to them as a parting gift. So even though you're not there, *you still are providing them with support and that came from having given them some final questions to go off with as opposed to some final statements. They know, in other words, they know what questions they need to ask themselves to draw on their own knowledge instead of just being left at a dead end with the last of your knowledge. So it's that real internalization.*" -italics added-

Lisa is explicit about her desire to help Shelly become independent in her ability to reflect about teaching practice. The content of these reflections would include the questions which Lisa has continued to ask Shelly during student teaching. For the first time this year, Lisa views a part of her role as mentor to be responsible for helping Shelly develop a capacity and habit of reflectiveness.

Modeling and encouraging prospective teachers to reflect

Lisa voices a goal that she wanted to encourage Shelly to develop a reflective disposition as Lisa had through her professional development work. During the conference from which an excerpt was displayed (page 109), Lisa was working to model the sorts of questions that she hopes Shelly will begin asking herself. This is an example of the way that Lisa was thinking about how to encourage Shelly to be reflective. She said:

"Well, I had some great answers, you know, I mean you could well, okay, you could do this and this and this or you could do this and

this... but I've really got to pull out and let her have it be her classroom... *one thing that helps me is I try to pretend that this is really her first year of teaching and I'm not there, and I'm more her inner conscience, and I think, what questions does she have to ask herself to be able to figure this out?* And I try to think of that a lot. Like, well, what is it you want to know about the kids and what is it, actually, that question I just asked would be a good one to back up to and ask her even that. So, and I tried to do that a little bit this morning, like, okay, Shelly, I hear you saying that you're concerned about the individual assessment and you want a better assessment. What would you have to do to get that? "
-italics added-

As Lisa reflects about the actual questions she asked Shelly, she takes an additional step and explicitly thinks about how she can support Shelly in developing the ability to ask these sort of questions for herself. Although she did not always include probes in her questions, Lisa was regularly asking questions which covered areas of subject matter, learners, teacher knowledge and teaching environment. Lisa pondered:

> ..."What questions can I ask to help them learn to ask their own questions or to help them to internalize their own, drawing on their own sources of knowledge and thinking about what knowledge it takes them, what knowledge they need to teach or what knowledge they need to deal with or work with or make progress or make sense of any situation they come up with. For example, Shelly's feeling that she needs better assessment of the kids. You know, and when there isn't somebody there to ask her the right questions, how could she learn to ask herself that question. *What questions can I ask that help her learn to ask herself the right questions? Without just modelling, you know, without saying you could ask this or this or this or this, but maybe go deeper to make explicit something that's usually very implicit.*" -italics added-

Frequency counts- nature of reflection

Throughout the course of data collection, Lisa was using the stimulated recall interviews as an opportunity to think about her work as a mentor. During the interviews, Lisa focused her talked more on how she would like to work with her student teacher, rather than what she was actually modeling and encouraging her student teacher Shelly to do. Six times during the six interviews Lisa talked about how she was helping Shelly to reflect about her

teaching. During these conversations, Lisa talked at times in general about the importance of helping Shelly reason through teaching decisions (level two response). Other times, she talked more specifically about occasions when she challenged Shelly to think about reasons for teaching plans and decisions (level three response). As Lisa struggled with the issue of how much to tell a novice later in her mentoring (January-March), she shifted the way she used modeling. She shifted from using modeling to give ideas and answers to modeling to give questions that Shelly could internalize and ask herself. Her extent score for modeling and encouraging Shelly to reflect= 2.4 out of 3.0.

On eleven occasions during the six interviews, Lisa concentrated on reflecting about her work with Shelly. During these conversations, Lisa sometimes talked in general about what she thought Shelly was learning from the student teaching experience (level two response). On other occasions, (primarily during the third and fifth interview) Lisa talked more specifically about goals she had for what she wanted Shelly to know and be able to do by the close of student teaching. Within late January (3rd interview) and late February (5th interview), she talked about ways she could help Shelly develop the disposition to be thoughtful about her own teaching when there is no one in the room to be there to constantly talk with and question (level three response). Her extent score for reflecting about work with prospective teachers= 2.6 out of 3.0.

Lisa focused Shelly on a literacy subject matter issue during each conference which was videotaped. Six times during the six interviews Lisa talked about how she was helping Shelly work through subject matter issues and ideas. Her conversations varied between beginning to dialogue about what Shelly knew about the literacy subject matter she was teaching (level two response), to really challenging her about why this knowledge is

important for children to learn, what children already know about this literacy knowledge and skills, and how she will or has adapted this knowledge appropriately for the children (level three response). Her extent score for reflecting about literacy subject matter = 2.5 out of 3.0.

A visual model of mentoring

Each mentor was asked to design a visual model which represented her conception of the role of mentor. Each of the mentors was asked at the fourth conference, held in early February, to either bring the model to the next stimulated recall interview (so they would have until the next day to design the model), or to draw the model during the stimulated recall interview time. Lisa chose to draw her model on her own time, and described her model to the researcher.

Lisa drew a picture creating an analogy of the mentor as a gardener and the prospective teacher as a plant. She differentiated the role of the student teacher and mentor by labeling the mentor as the gardener who helps the student teacher, as the plant, to grow and blossom. The analogy that Lisa talked about in January, of supporting the student teacher by diminishing to a whisper is evident in this new metaphor. Within this representation, Lisa is very specific about what responsibilities a mentor has in supporting novices. As a mentor, she plans to nurture and help the plant grow, but sends the message that the novice has ultimate responsibility in how she, as the plant, will flourish. Nowhere explicitly on this map, however, is mention of the final questions versus final statement dilemma, though this map was constructed after the interview in which this idea was constructed.

Within Lisa's model of mentoring, she spoke about sources of knowledge as an integral part of her role. Within these sources, Professional

Development School activities such as reading, seminars, having conversations, reflection are evident. In addition, Lisa speaks of Academic Learning as an integral part of the mentor's work with the novice, as the university and school personnel "communicate and work to provide enriched foundation", and as the student teacher (plant) receives nourishment from the roots, which include Academic Learning coursework.

Sources of Knowledge

draws on and consults with

- readings
- seminars
- conversations
- models

- experience
- colleagues
- knowledge
- reflection

observe, then assess according to emergent developmental phase, look for discrepancies between present state and goal, choose most appropriate sources to give in areas of need

Lisa

gardener (mentor)

Mentor Model
Analogy

roles & responsibilities

1. nurture
2. meet needs (give what they need)
3. watch w/thoughtful observation
4. assess and adjust
5. allow them time to grow
6. create best environment possible
7. enrich the soil

Communicate & work with MSU to provide enriched foundation (knowledge & attitude)

Storm (natural reality "hardships")
Regardless of mentor's help, student teacher must withstand hardships to become stronger (discipline problems, work overload, complexity, limited experience)

plant (student, teacher)

GOAL
to learn how to
TEACH:

roots (solid foundation):
1. Prof/Academic Learning (courses)
2. disposition to learn (attitude, self-concept, confidence, motivation, commitment
3. personal academic background and knowledge base
4. physical health, strength, stamina and wellness, emotional wellness

Figure 2

Summary

Lisa used the stimulated recall interviews as an opportunity to examine and discuss her role as mentor. As she articulated her views about learning, she watched to see whether these views were enacted within interactions with her student teacher, Shelly. After watching videotaped interactions, she began to discuss how she could shift her interaction style to match her beliefs about helping Shelly develop a teacher perspective and challenge her to think about what she is teaching.

Lisa believed that reflection was an important part of her work as a mentor, both as she learned more about herself as a mentor and as she encouraged Shelly to be reflective about her teaching. Lisa frequently talked about how she, as a school-based teacher educator, could prepare Shelly for teaching in her own classroom. Consistent with other themes discussed, the teaching for which Lisa hoped to prepare Shelly would include the internalization of a reflective disposition, which would enable Shelly to think through decisions and ask herself critical questions. Lisa captured this goal in her mentor model, where she used the metaphor of herself as a gardener who supports the flowers development, and who is reaching toward the goal of helping this flower be able to grow on its own.

KIMBERLY

Background

Kimberly[3] *is a first grade teacher at Brown Elementary. Kimberly has been teaching for 13 years. She holds a master's degree in reading. This is Kimberly's first year of involvement in Academic Learning's mentor teacher component. She had two student teachers previous to this year, at schools other than Brown. Kim helped create the agenda for the Brown Professional Development School Math Study Group, and was the charter teacher involved in the project. She continues to remain active in the math group, and collaborates with a university professor who co-teaches math weekly in Kim's classroom. She did not attend Academic Learning's language arts methods seminars held at Brown PDS. She did attend most of the student teaching seminars held in conjunction with Academic Learning at Brown PDS.*

Kimberly's theory of how novices learn to teach
(Views about learning)

Kimberly believes learning by doing is the most valuable form of learning for elementary students and student teachers. She feels that people learn best by trial and error and repeated experience. These views dominate her conversations with her student teacher, Betsy. Kimberly's theories of how to support Betsy in learning to teach include the themes that Betsy: 1) learn by first hearing stories and later answering questions about classroom experiences; 2) learn by talking about teaching decisions made in the classroom; and 3) learn about children by observing and working in the classroom.

Learning by doing: Hearing stories and answering questions

Early in the language arts practicum (October-November), Kimberly did not ask Betsy many questions about her work in the classroom. According to Kimberly, "right now I think I'm still in the providing as much information to her as possible mode, rather than asking her to pull it out of herself, which I'm going to be doing as she gets more experience teaching ...I'm going to be

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[3]Kimberly is a pseudonym.

asking her to pull more of that information out of herself." Kimberly believes that her role is to provide Betsy with stories about experiences, and examples of practices before asking Betsy questions about what she is seeing and doing. She consciously adapted her role conception of mentor as Betsy gained more experience in the classroom.

Kimberly believes that a teacher must have sufficient "doing" experience before she should be questioned about reasons that guide her instruction. Kimberly did not ask questions regarding purposes of instruction and content of lessons until close to the end of the language arts practicum in late November.

Once Betsy had more teaching experience in the language arts practicum (late November), Kimberly began asking more questions about Betsy's instruction. Often these conversations centered around the literacy subject matter Betsy was teaching. Though Kimberly stimulated conversations about subject matter, the conversations lacked probes which could elicit Betsy's understanding and focused largely on issues of management. Within the conferences it was often unclear whether Betsy understood what she was teaching and why this knowledge or skill might be important for children to learn. Following are excerpts from two different conferences. The first is in late November during the language arts practicum, and the second takes place in late February during full time student teaching.

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(Conference following the teaching of a lesson in late November in which Betsy introduced the reading comprehension strategy "QAR" to the first grade students)

Kimberly: How did you feel about your lesson yesterday compared to today?

Betsy: I realize I introduced something entirely new to them yesterday, with the QAR, and I seemed to lose them quite a bit yesterday.

Kimberly: Do you think that was the lesson or the kids yesterday?

Betsy: (laughs) The lesson.   They had no experience with this at all.

Kimberly: Where do you think you lost them?

Betsy: Going page by page.   Like maybe I should have read quite a bit of the book first...like I tried today.   It worked a lot better, cuz they're not used to listening to each other.

Kimberly: Well, I really don't think it's that, because you've seen many times when they listen quite well to each other.   I really think it was going page by page, especially with a book they are familiar with, and as you said, you tried it again today with reading a large portion of a book and looking for those things...I think that was the difference.   (pause) I wasn't expecting you to use the QAR yesterday.

Betsy: Oh, no (embarrassed)

Kimberly: I was expecting you to just say, "what did you hear on that page that   tells you about the character." I didn't know you were going to do that kind of   approach, especially the 'in your head, on the page' kind of thing--That would   have been real appropriate for just a quick discussion.   But I think you really   hit on it when you said reading a longer section.

   -end of discussion on this topic-

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Within the conference, Kimberly focused Betsy on procedural issues of how to manage the lesson, whether the book be read page by page or in a longer selection.   Although Kimberly frequently began conversations by focusing on the subject matter being taught, Kimberly did not pursue questions about the subject matter itself.   The following excerpt is from a conference in February where Kimberly is reviewing Betsy's plans for the following week.

-    -   -   -   -   -   -   -   -   -

Kimberly: You are going to do a reaction paper.   Explain a little bit more about what that means to you.

Betsy: A reaction paper is a, I guess I just wanted them to react to

the essence of the story.

Kimberly: Is this after the whole story is done?

Betsy: Uh-huh, like if I read them Peter Rabbit, then I would want them to react to it. Like, I'd ask them if they learned a lesson from reading this, how the story made them feel, what parts they like and why they liked these parts.

Kimberly: You're going to give them all these ideas, and they can pick from any of these?

Betsy: Right. And even if they want to write about why Beatrice Potter might have chosen to write a story about a rabbit in a garden.

Kimberly: OK. Would you do that just verbally, or would you have those questions out so they could realize they could choose, and go back and refer to those. So that they know they could respond to any of these questions...Do you think that would be helpful?

B: Yes, very.

(end of conversation on this topic)

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. Kimberly began this conversation by asking Betsy to describe her conception of a reaction paper, but the probes stopped there. After Kimberly watched the above excerpt on video tape, she was asked to talk through her thinking during the conference. Kimberly said:

"Well, first of all, when she said a reaction paper, sometimes I think people hear about it in their literature class and they really haven't thought what that's going to be like at all or what should it be and just think,well, I should do a reaction paper. *And so I just wanted her to clarify in her own mind what she meant by that for this particular reaction.* Was she...was she going to frame questions to them, was it going to be very open-ended, how are they going to respond and in what kind of format did she want. You know, I just wanted her to clarify it all more in her own mind. And also for her to clarify for me what she meant. And *then when she started to get into, you know, her different ideas I, I could immediately see that..the children were going to need more structure than just her verbally saying all that. So I wanted, very much wanted her to discover that the children needed to have something visual there to refer to.* While the children are at the stage where, when they see it in writing, that, they can read it now. Most of our first graders can go back up and our second graders, can certainly go back up and read all those things and how helpful it is to have that for students to

refer to. So I wanted her to come to that realization also in her own mind, without my just saying it." -italics added-

Although a subject matter issue was raised as a focal part of discussion initially, once again Kimberly's goal in asking what knowledge or skill Betsy was teaching seems to be so that Kimberly can figure out the management of the assignment rather than the substantive issue of what a reaction paper is and what Betsy hopes the children will be able to learn by engaging in this project. Betsy was beginning to articulate the purpose of her lesson, but seemed pushed more to focus on issues of management rather than content.

Through the five months Betsy was in Kimberly's classroom, different patterns of interaction surfaced. First, Kimberly wanted to provide Betsy with a lot of time in the classroom to observe and hear stories and reasons from Kimberly's perspective, rather than articulating her own ideas about what she was seeing. After Betsy had almost two months of experience in the classroom, Kimberly began asking questions about the procedures and management of literacy lessons. During the last months (February and March) of student teaching, Kimberly began to shift toward a goal of having Betsy articulate her own ideas and dilemmas of teaching. This was a conscious shift by Kimberly. In October, Kimberly had said that after Betsy got more experience in the classroom, then she would shift and ask more questions.

Learning by doing: Talking about teaching decisions

Kimberly talked during the later stimulated recall interviews (February, March) about her desire to help Betsy become an independent thinker. As student teaching progressed, Kimberly began to let Betsy struggle more and more with teaching dilemmas rather than provide her with examples and ideas. For example, one day Betsy was frustrated with a vocabulary lesson where there were many children around her asking questions. Betsy felt that she had done something wrong, since so many

children wanted help. Kimberly let Betsy sort through the episode and asked her to think about the advantages and disadvantages of the situation. In addition, during this episode, Kimberly asked Betsy to think about what her goal for the lesson was, and whether she had met this goal. After viewing the videotape of this conference, Kimberly said:

> "I knew that Betsy was going to feel frustrated about that many children around her and I really wanted her to make that, to make that choice (pause) *Because she needs to make the decisions about her teaching (pause). To start questioning herself.* Yeah. And that's going to be hard for her for awhile. As we get more and more into that side of things. I'm afraid at this point in time she's going to try to be, to do just what I do and I want her to find some of her own ideas and some of her own style." -italics added-

By the close of student teaching, Kimberly was beginning to let Betsy talk through her dilemmas on her own. As Kimberly noted in the above excerpt, it was difficult for Betsy to begin questioning herself, especially since for the majority of their relationship Kimberly had been giving information rather than asking Betsy to think and talk about purposes for her instruction.

Learning by doing: Understanding children as learners

Kimberly feels that her job as a mentor is to help prospective teachers learn about children and about establishing an environment where learning is possible. According to Kim:

> "I think they (student teachers) need to realize how much nurturing (of children) actually happens and takes place and what a large role that is in setting the environment for learning to take place in the school."

Consistent with her philosophy of mentoring is the notion that a mentor's role is different than that of educators at the university. She said:

> "I think my role is to help them (student teachers) be more aware of what's going on with children and children's thinking and what the children need...I won't spend much time focusing on content, that's the university's job, so when they come here (to the classroom) we balance with emphasis on the job."

Kimberly believes that the best way for Betsy to learn about children is through direct contact with the children and the classroom. She repeatedly emphasized "...you learn the most by doing it...", "...you learn by jumping right in there and getting your feet wet...by trial and error, there's no doubt about that."

Theories about learners

Kimberly's view of learning includes a firm belief that a mentor's role is to provide a prospective teacher with as much experience as possible teaching and observing children in a classroom. Kimberly feels it is important to encourage students to have a desire to learn. Later in the relationship, (February) she indicates that she feels it is important for prospective teachers to find their own style of learning and interacting that is comfortable. According to Kimberly, there are many parallels between the way in which she views the learning of her first graders and the learning of student teachers.

> "I think to be a mentor means to make sure that they have examples and have thought about ways of teaching children and ways of learning themselves. I'm not going to give them all the knowledge they need to know...but more, to give them the desire to want to find out how to do it (teaching) and want to explore new ways and try new things with children and learn themselves what's going to work. And so, I mean, I guess it's just like with the children, you're never going to teach them everything, but hopefully you'll give them a desire to want to learn. And so the same way that as a teacher you would want to give them the desire to want to teach and to find ways to do that that fits their style."

Kimberly feels that there is one marked difference between how she views her students and her student teacher. She feels that Betsy is a colleague, and she likens their relationship to interactions with other teachers in the building.

"It's more, like you're, it's almost more like you're working with an equal, you know, and *so you're not teaching them things like you might be teaching the kids figuring that there's some new things for them to learn or some knowledge that they don't have yet, but it's almost like making some suggestions or helping them think about their work and, you're doing that to a person that is your equal but that wants that input,* you know, another teacher in the building, we had, peer coaching here, and if somebody asks for that, that's exactly the same kind of thing you're doing when mentoring." -italics added-

Kimberly's conception of her role of mentor does not seem to include the idea that a classroom teacher plays a part of helping prospective teachers work through issues of subject matter knowledge. Kimberly feels her job is to provide a novice with a place to practice teaching and learn about children, and a person to talk to about ideas and strategies.

Frequency counts - Views of learning

Of all the themes apparent in Kimberly's theories or views about learning, the theme of connecting subject matter to children was most dominant. Consistent with Kimberly's belief that the learning of teaching occurs in the classroom when immersed with the children and their daily activities, she spoke about this theme ten[4] times during the six interviews. Most of her responses focused on describing the special knowledge that classroom teachers have and can share with prospective teachers through years of experience (level two response). Her extent score for connecting subject matter to children= 1.9 out of 3.0.

The other theme which re-occurred frequently was discussion of how her mentor/novice relationship with Betsy was similar to a collegial relationship. Kimberly mentioned the collegiality she felt with Betsy five times during the six interviews. Her responses contained both examples of 1) how the mentor/novice relationship is similar to a relationship with a

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[4]The unit of analysis was one complete response including probes. This means that Kim referred to the theme "connecting subject matter" ten times-with a total of 32 interview chunks.

colleague (level one response), where one shares experiences and resources, and plan ideas together, and 2) realization that Betsy does not have the repertoire of teaching experiences that Kimberly does (level two response), and therefore should not be asked questions about her instruction until she has had enough experiences in the classroom. Her extent score for mentor/novice relationship= 1.6 out of 3.0.

Kimberly did not seem to distinguish Betsy as an adult learner, different than other sets of learners she works with (experienced teachers, elementary students). Twice within the six interviews, Kimberly said that she thinks about learning in similar ways for both elementary students and prospective teachers, and did not distinguish any different needs (level one response). Both, she said, need nurturing and experience of doing to gain confidence. Her extent score for parallels between elementary and prospective teachers as learners = 1.0 out of 3.0.

The two remaining themes, developing independent thinkers and matching philosophy with instruction were mentioned infrequently. Three times (in the latter interviews) Kimberly talked about developing independent thinkers, and talked about a definition of what it meant to Kimberly to help Betsy developed such a skill (level two response). Her total score for developing independent thinkers= 2.0 out of 3.0. Kimberly talked about matching philosophy with instruction twice during the six interviews. Once she voiced that it was important for Betsy to know the purpose of a lesson or a unit (level one response), and once she talked about modeling her own philosophies to help Betsy see an example of talking about what you know (level two response). Her extent score for matching philosophy with instruction= 1.5 out of 3.0

The sources of knowledge Kimberly uses to help novices learn to teach (sources of knowledge)

Kimberly believes that most of the knowledge used for teaching comes from experience, trial and error and having time in the classroom. She believes that one could be both an effective mentor and teacher without involvement in Professional Development School work. Collaboration with a university professor and study group in mathematics has provided Kimberly with many new ideas and approaches to teaching. However, Kimberly feels that student teachers often get a rose-colored portrait of teaching from methods courses, and is disconcerted when the university professor working in her classroom provides only highlights of their math teaching in the Academic Learning math methods course. This is Kimberly's first year working with Academic Learning as a mentor teacher. She does not feel like Academic Learning work influences her work with student teachers, and she does not feel involved with the program.

Professional Development School as a source of knowledge

Kimberly is glad to work in a Professional Development School where opportunities for learning about new approaches to teaching are possible. She is active in studying mathematics and integrated teaching through PDS. There has been a "huge benefit", says Kimberly in working in a PDS. Now she is shocked when she hears about someone whose day includes "passing out workbooks and doing three pages and then doing a little song and then passing out the phonics workbook and doing two pages."

Kimberly is less willing to attribute PDS for supporting the role of mentor. She does not believe that involvement in PDS necessarily helps one be a better mentor She said:

> *"You could probably be a very good mentor and not be up on the current research.* I think you, I think that is a possibility.

Because people that have taught for a long time find out what works with children and I think that's, all that research has done is they've gone around and found out what works with children and therefore their research is, you know, then they start saying, this is what works well. And so I think a teacher certainly could be doing that on her own without being up on the latest research. But it is very nice to be able to give them some strategies, like KWL and things like that, and a concept map, and all those things that are, you know, they make sure that they're tying, they're tying in. It's just kind of a little something to hold on to. So that's nice to be able to have that, that knowledge to give the student." -italics added-

When asked to clarify her thinking, Kimberly continued:

"I'm just saying that I certainly don't (pause) think, I think we're fortunate that we're in a PDS school that gives us all this research and keeps us up on what's going on and that's wonderful but just, if you're..if you haven't had someone provide that to you, and certainly you hardly have the time to go out and do all that on your own, *that doesn't mean that you couldn't also be just as good a mentor."* -italics added-

As Kimberly talks about her involvement with PDS experiences, she talks about PDS "giving us research", and refers to the people in PDS who "provide that" (research) to Kimberly. She does not view PDS experiences as co-construction of knowledge that includes teachers as well as university educators together engaging in research. She talks as if PDS is supplemental, but not integral to her work, and may not be necessary to help her be a more effective mentor.

This view of PDS as research brought to the teachers may account for the reason why Kimberly has a view that research takes a back seat in helping students learn to teach. Time in the classroom continues to be the most powerful source of knowledge for Kimberly.

Academic Learning teacher preparation program as a source of knowledge

This is Kimberly's first year as a mentor for Academic Learning. She elected not to attend the five brown bag seminars where mentors, prospective teachers, the principal, and university faculty met to discuss issues of

planning and teaching language arts. She attended a mentor meeting held at the beginning of the school year, but did not attend the end of the year meeting. One of the mentor teachers at Brown (Brooke) co-coordinated four seminars during student teaching with university faculty. Kimberly attended most of these seminars.

Kimberly seemed puzzled when asked for her thoughts about involvement with the Academic Learning teacher preparation program. She said:

> "I guess I don't feel that involved with Academic Learning. I mean I think it's a neat program that the students are able to go through in the fact that it's small and that they all get to go through as a group and get to know each other but as far as what Academic Learning and I have to do with each other is very little. We have a meeting and the professors gave us a brief overview of assignments, but as for what's going on in the classrooms or, or what they make us aware of, it's very little...Now, maybe the fact that...PDS is out here and Academic Learning is involved with that specifically gives us a chance to have discussion groups here in the building, or gives us a chance to have groups that meet after school in a language arts forum kind of thing..."

Kimberly has not had the chance to learn much about the philosophies of Academic Learning since she did not choose to attend the language arts seminars, nor all of the mentor teacher meetings. She may also be confused about the differences between "PDS" and "Academic Learning" since she has not interacted much with program faculty and other colleagues in the building who are more actively participating in teacher preparation experiences through Academic Learning. University preparation and field preparation seem to be separated in Kimberly's conception of learning to teach. She believes that student teaching, where novices are engaging in doing, is where most of the learning for teaching occurs.

> "I think they learn some very useful things to try with children (in the Academic Learning program), but student teaching is still the most important part. There's no doubt about that because then they go and they try all of these things... and often times it's

not nearly as easy as it sounds to do. I'm thinking in particular of math methods,and my PDS work with Patty Smith in math. I've got other student teachers in the building coming in and saying, 'wow, what you're doing in math is unbelievable!' But they're only hearing about the high point and thinking the whole week goes like this...so sometimes I think it looks too easy in the methods classes."

Classroom teaching experience

Kimberly continues to maintain that the primary source of knowledge she uses while mentoring Betsy is classroom knowledge. Although she agrees that her knowledge of teaching has been enriched by Professional Development School experiences, she does not think about weaving together different sources of theories from her own practice and theories that she has read about other people's practice. She maintains that:

> "How I'm mentoring is my example as a teacher at this point in time... What I'm giving to Betsy is just teacher knowledge...What's appropriate for children, what experiences children gain more from than other experiences, and...that's what I think, (pause) and how to reach the most children and, I mean that's just experience I guess."

As Kimberly works with Betsy, she focuses on using her experience to guide Betsy to see what organization she feels is best for the children. During a conference in January, Kimberly was telling Betsy that she thought the children needed more structure during a particular lesson. After viewing the conference on videotape, Kimberly was asked why she decided to focus the conference on the issue of structure. She replied:

> "How did I know the kids would need more structure? Okay. Because the same thing, it's happened to me. That, you can give, how much more successful my lessons are when I do it both ways (a lot and a little structure). [Interviewer :From experience. Of trying both ways?] "Yes. Yes. Certainly it's by trial and error, it's that she's, just noticed wow, the kids are really, know what they're doing and then you realize it's because you did it both ways."

Kimberly chose to respond to the question not by explaining why she focused on structure rather than content, but to talk about her experience of

knowing the sort of structure that would work best for children in this context. Betsy is learning a lot about what Kimberly's experiences have shown her, but is being provided with a context-specific, idiosyncratic view of teaching that may limit Betsy's view of teaching once in her own classroom.

In addition, by emphasizing the role of learning by doing as the primary method by which Betsy's learning is structured, Kimberly may be sending a message to Betsy that teaching is learned through trial and error. This is a message that Jackson (1968) and Lortie (1975) say is often sent to novices. Given this philosophy, prospective teachers often conclude that learning occurs through experience rather than through critical reflection which relies on a variety of sources including experience, but also including theories and practices of other educators.

Frequency counts: Sources of knowledge

Kimberly talked about classroom teaching experience as the dominant source of knowledge used to help Betsy learn to teach. Nine times during the six interviews, Kimberly reinforced her belief that classroom experience is the most valuable source of knowledge in supporting Betsy's learning (level one response). She also provided specific examples of ways which experience in the classroom, and Kimberly's knowledge of experience with children could be valuable (level two response). Her extent score for classroom teaching experience as a source of knowledge = 1.6 out of 3.0.

Kimberly does not feel that Professional Development School has played an *integral role* in how she works as a mentor (level one response). Four times during the six interview Kimberly spoke about PDS experiences, either at a level one or level two response. Although she feels that PDS work has not played an integral role, she does feel that she has benefitted from involvement

in PDS (level two response). Her extent score for Professional Development School as a source of knowledge= 1.75 out of 3.0.

Similarly, Kimberly does not feel that Academic Learning has played an integral role in how she works as a mentor (level one response). Although she feels that Betsy and she benefit from involvement (level two response) with a small program that emphasizes student understanding, she does not feel involved in the program. Her extent score for Academic Learning as a source of knowledge= 1.6 out of 3.0.

The nature of reflection used by Kimberly to help Betsy learn to teach (Nature of Reflection)

Kimberly's conversations with Betsy focus on the immediate teaching episode at hand. Interactions typically involve Kimberly asking a series of questions which seem to lead Betsy to a certain conclusion. She believes that it is important for Betsy to reflect about ways to engage kids and manage instruction.

Reflecting about work with prospective teachers

Kimberly conceptualizes her role as mentor as a support to help Betsy gain as much experience and learn as much about first graders as possible. She believes that she should, at appropriate times in the student teaching experience, ask Betsy questions about her teaching decisions.

Later in the student teaching experience (February), Kimberly began to talk about Betsy's learning in a larger context than just in Kimberly's classroom. She began to voice concern and ideas that Betsy learn to make her own teaching decisions. She said:

> "It's got to be what feels right for her. Absolutely. The way she gets up there and teaches hopefully will be very different from mine. You know, I'm hoping that that will happen. *Because, Betsy is, I'm afraid at this point in time she's going to try to be, to do just what I do and I want her to find some of her own ideas and some of her own style.* But you know, that may, sometimes it takes

years to get back into feeling comfortable with what's truly right for you even as many times as I will tell her." -italics added-

During the latter months of student teaching in February and March, Kimberly expressed a desire to let Betsy take a leadership role in recognizing, discussing and solving problems which emerge from practice.   She realized that she has taken a dominant role in defining problems which Betsy and Kimberly discuss.   In February she said:

> "The hardest thing for me to adapt is to just keep my mouth shut and let her have problems.   So, and, then make it as a chance to talk about those problems and when she's experienced the problems.   That's why it's good for me to get out of the classroom so *she can experience those problems and then come up with her own solutions*." -italics added-

Although Kimberly stated that her goal was to support Betsy in making her own decisions, she did not talk about ways which she could help Betsy develop the capacity to be able to make independent decisions, weigh alternatives and question herself about subject matter, students, environment and pedagogy.   Similar to traditional cooperating teacher/student teacher interactions, conversations revolved around practical and immediate problems of practice, rather than thinking about teaching issues in a larger context than this one classroom (Calderhead, 1988; McIntyre, 1988).

Modeling and encouraging prospective teachers to reflect

Kimberly believed that by the close of student teaching, she is asking Betsy to reflect about what she is teaching.   She describes the nature of this reflection as follows.   She feels that one of her goals is:

> "...primarily *helping her to learn by reflecting on her own teaching* and then occasionally bring in an anecdote of something I, you know, how I felt about that or, or you know, share an experience so that she doesn't feel like she's the only one in the world that's done that and that I, you know, and *what I learned from it.   Ask her what she learned from it*." -italics added-

Still grounded in experience, this conceptualization of reflection seems to imply that Kimberly believes that reflection involves sharing of experiences and discussion of what each participant learned from these experiences. She believes that she is modeling herself as an experienced teacher who talks about what she learns from experience, and encourages Betsy to do the same.

Frequency counts: Nature of Reflection

Four times during the six interviews, Kimberly talked specifically about her work with Betsy and what she felt was happening during the student teaching period. Some of these conversations centered around how well Betsy was performing in student teaching, emphasizing what a good job she was doing (level one response). On other occasions, Kimberly talked in general about what she felt Betsy was learning through student teaching, and how she wanted to support that learning as a mentor (level two response). Her extent score for reflecting about work with prospective teachers= 1.5 out of 3.0.

Kimberly used her experiences of teaching to model for Betsy how an experienced teacher works through issues of teaching. She talked about modeling reflection to Betsy four times during the six interviews. At times she acknowledged that it is important to encourage prospective teachers to reflect (level one response), and on other occasions she talked about helping Betsy by making her own (Kimberly's) knowledge of teaching explicit (level two response). Her extent score for modeling and encouraging prospective teachers to reflect= 1.75 out of 3.0.

Twice during the six interviews Kimberly focused specifically on reflection about literacy subject matter. She began dialogues about what Betsy knew about an aspect of literacy (level two response) and began to challenge her about what she knows, and how this knowledge can be connected to

children (level three response). Her extent score for reflecting about literacy subject matter= 2.5 out of 3.0.

A visual model of mentoring

Each mentor was asked to design a visual model which represented her conception of the role of mentor. Each of the mentors was asked at the fourth conference, held in early February, to either bring the model to the next stimulated recall interview (so they would have until the next day to design the model), or to draw the model during the stimulated recall interview time. Kimberly chose to draw her model on her own time, and described her model to the researcher.

Kimberly's model of mentoring uses the metaphor of a spinning wheel to capture the constant movement, and sort of "spinning" feeling that Kimberly associates with student teaching. Experience is highlighted as the primary source of knowledge used to help Betsy learn to teach. Credited also are outside sources that have been used as resources and tried out in the classroom, and conversations with others (perhaps in the student teaching seminars). The relationship between Betsy and Kimberly is characterized not by the term mentor, but by the label co-worker and friend. Both of these labels remove connotations of expert and novice, of teacher and learner. The goal of Kimberly's mentoring is to provide Betsy with "an honest view of teaching", one that is provided through the lens of Kimberly's experience as a teacher in the classroom. "An" honest view denotes reference to one person's view of teaching. Responsibilities focus on goals for student teaching, not for developing habits of teaching outside of this experience. The focus of these responsibilities, celebrating successes and accepting failures, emphasizes the performance during student teaching.

A spinning wheel came most readily to mind, with Betsy at the center. The student teaching experience must seem like perpetual motion. Also, I'm sure I'm expected to say mentor or advisor as part of our relationship, but with Betsy the other descriptors are more accurate.
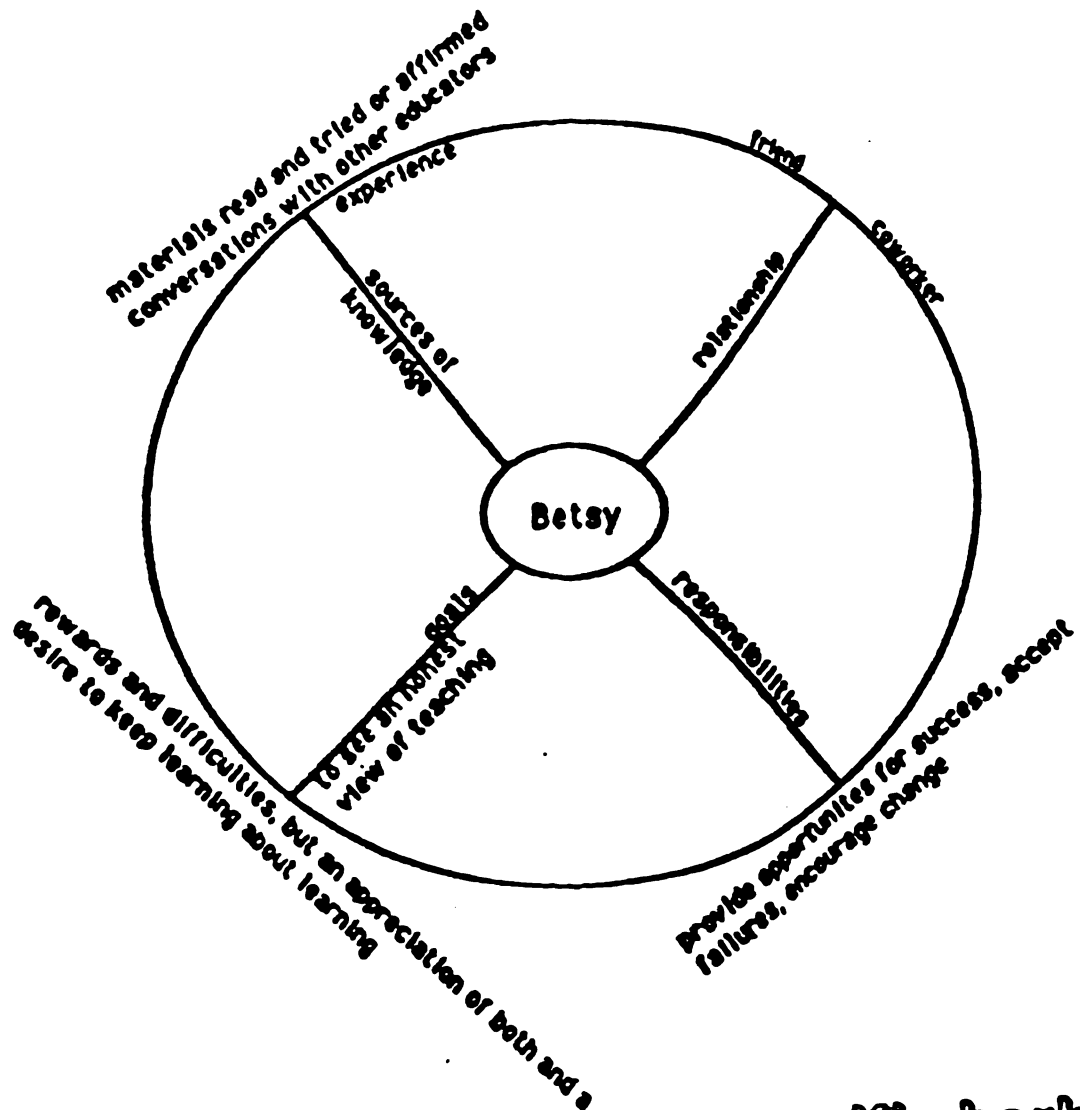
Figure 3

Summary

Kimberly's believes that classroom teaching experience is the most valuable way to learn and the most valuable source of knowledge for teaching. These views are evident in her language, frequency counts and mentor model. She frequently refers to her belief that learning by doing is the most valuable approach to helping novices learn. She believes that it is her responsibility to provide Betsy with as much information as possible about her own classroom teaching experiences before it is fair to ask Betsy to think through her own teaching decisions.

ALEXA

Background

Alexa[5] is a first grade teacher at Brown Elementary. Alexa has been teaching for nineteen years. She holds a master's degree in Educational Psychology plus 30 additional credits. Alexa has worked with five student teachers in Academic Learning's mentor teacher component. She also had one student teacher in her classroom before working with the Academic Learning program. Alexa became involved in a project with Michigan State prior to Brown officially becoming a Professional Development School. Within this project, she and another first grade teacher (Lisa) were observed and involved in stimulated recall interviews with video tapes. Alexa attributes the development of a habit to be reflective to this project called TDOC. (Teachers' Development and Organizational Change). Alexa is also a member of the DAC (Developmentally Appropriate Curriculum) PDS project. Alexa regularly attends mentor teacher meetings, language arts forums held both as brown bag lunches and after school seminars, and student teaching seminars.

Alexa's theories of how novices learn to teach
(views of learning)

Alexa is encountering a new situation with her fifth Academic Learning student teacher. Alexa's student teacher, Kate, is struggling in the field, and is eventually pulled out of student teaching in February. Throughout the language arts practicum (October-December) and the beginning of full time student teaching (January), Alexa has her own inner struggle as she adapts her style of mentoring and even somewhat her philosophy of how people learn in order to try to meet Kate's needs. One of her primary goals is to help Kate develop as an independent thinker, but when she is not very successful, Alexa analyzes the situation and comes up with new possibilities for what she as a mentor can help Kate understand by the close of their time together. Alexa's theories of how to support Kate in learning to teach include the themes that Kate: 1) understand and be able to communicate the purpose of lessons and units of instruction; 2) learn about the needs of various children and adapt curriculum to meet children's needs. Alexa also describes other views about learning which influence her mentoring which

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[5]Alexa is a pseudonym.

will be discussed as well.

Understanding and communicating purposes of instruction

Very early in the language arts practicum, Alexa became worried that her student teacher Kate did not understand the subject matter she was teaching, and had trouble developing and teaching instruction in literacy. Since Alexa had many previous student teachers from Academic Learning, she was used to a certain level of conceptual understanding about subject matter, and realized quickly that Kate was struggling to understand what she was teaching. During conferences in October, Kate would come with a list of questions, and would dominate conversations by asking Alexa "What would you do if..." questions. Kate would meticulously write down Alexa's responses. Alexa did not realize for a few weeks that Alexa's responses were the primary data Kate used to make teaching decisions. Previously, Alexa had begun relationships with student teachers by giving suggestions and ideas, knowing that the student teacher would adapt and add to make the idea her own. This was not the case with Kate.

At a Professional Development School/Academic Learning brown bag language arts seminar in late October, Alexa watched Kate interact with other mentor teachers. It was at this seminar that Alexa learned that her suspicions about Kate were on target.

> "..It was really insightful for me that day, that brown bag lunch to watch Brooke ask her (Kate) those questions, and I thought Brooke knows her already(through co-teaching language arts methods) cause, you know, *she was just so quick to not answer her questions* I figured through classes and stuff she's already gotten through all that and knows this is what she has to do. *So to watch Brooke ask her questions I just, I thought, it was very insightful for me to know that yes, that's, my insight was right.* .." -italics added-

What intrigued Alexa most at the seminar was how Brooke responded to Kate's questions. She saw that Brooke did not answer Kate's questions. Rather,

she probed Kate for her understandings. Alexa's fears that Kate did not understand what she was teaching were justified by watching Kate in interaction with another mentor.

After attending the brown bag language arts seminar. Alexa began a strategy similar to what she had watched Brooke engage in with Kate. In November she began trying to ask questions that pulled knowledge instead of giving answers. She says that she thought Kate was aware of this shift in strategy.

> "There was a time when she (Kate) wanted to ask me something about what she should do about her central question, you know, an activity she wanted to do and I didn't answer her. And I was asking her every way I could think of to help her come up with the answer herself and she couldn't do it. And I said Kate, 'you know what I'm trying to do don't you?' And she goes 'Yeah, I know what you're trying to do.'..."

Alexa credits the brown bag seminar for helping change her approach with Kate. Alexa became very concerned with helping Kate articulate what she knows, and be able to talk about how her goals match actual instruction. This is evident in the following excerpt, which is from a conference between Kate and Alexa following the teaching of a lesson in language arts in late November. Kate was working on developing a language arts unit plan which she began to teach during the practicum and would complete during student teaching.

> Kate: The lesson overall, I felt went real well, except that it was kind of long.
>
> Alexa: *What was your main idea or purpose today? What did you want them to learn?*
>
> Kate: To see a different setting, a continuation of what I did the first day. Show them how that was a setting in the bedroom, and this is taking place in the woods. and to see how they felt in the woods, to really experience the setting
>
> Alexa: *Do you think they understand what a setting is?*

Kate: I think they understand what a setting is...

Alexa: *Do you think they understood from your lesson today what you wanted them to learn?*

Kate: I honestly don't know, cuz I felt that I was rushed at the end.

Alexa: Because what you're telling me today, you didn't say that, and all that stuff that you just said to me would have been really important to tell them. You still haven't come out and told them what a setting is...put it in a definition they can understand...you have to just be so clear with first graders, you have to learn to be real explicit...(she saw that Kate was getting upset, so she switched gears and gave her some positive feedback about her affect with the kids. When Kate looked receptive, Alexa began again to ask questions.)I wasn't sure what your purpose of them drawing a picture in the woods was. Ok, you reviewed what they did last time, that setting was in the bedroom, then today you said, 'we're going to read the Ghosteyed Tree book, right now you're going to draw a picture of yourselves in the woods'.

Kate: I said, it takes place in the woods, so I want you to draw a picture in the woods.

Alexa: *For what purpose?*

Kate: The purpose was to put them in the setting. I guess I wanted to see how they perceived the woods before I read the book, because if I did it after I would probably get all frightened pictures, and I wanted them to think that the woods aren't necessarily scary.

Alexa: Yeah, and I thought, I'm not sure that they made the connection again, about *why they were making that picture* it comes down to again, being very explicit about "today we're going to draw a picture in the woods...this book, the Ghosteyed Tree was in the woods, and this author and this illustrator drew the setting this way, so if you were going to draw a setting in the woods, so today you're going to be the author and the illustrator, and you are going to create a setting." Then, all the other things you said are good, like "what are you feeling?" and all those questions you asked will help them, but *you constantly have to let them know why you are doing what you're doing so that you're communicating the purpose of what you're doing.* My feeling is that most of he children thought they were just drawing a picture of the woods and they were enjoying drawing the picture, but that's it. I don't think many of them made the connection that this was a setting. And today you didn't bring in the night at all (which is in the central question), and I didn't know whether you wanted them to draw it at night to stay consistent. Just, *you have be more clear when you're doing a lesson what it is, and you have to know yourself--what is it that I want them to learn today?*

Why am I teaching this today? And your central question, the things you want them to learn are.. (looked at Kate)

Kate: Well I want them to really feel the setting,to get the point that there are different settings, that authors use different settings, there are settings in the bedroom, and settings in the woods, and a night setting in the bedroom is not usually as scary as the woods...

Alexa; So, when everything's done from these four lessons that you're teaching, you want them to understand what a setting is?

Kate: What a setting is, and that there are characters, and different types of settings, not all are at night, and not all are spooky

Alexa: So you want them to know what a setting is, and that all settings aren't the same, and then you said something about characters.

Kate: Just to know that there are characters, just to touch on that.

Alexa: You want them to know there are characters, or what are characters?

Kate: Basically, that there are, well I guess both, and that they can be a character.

Alexa: When you come back on Thursday, how can you review this for the kids? (Kate talks about what she might say, emphasizing how the students feel about the different settings). I guess what I was trying to get at was, that the setting makes you feel a certain way, and that the author purposely makes the settings in a certain place, and the characters in that setting to make you feel a certain way. And I guess I'm worried that when you're just always asking them (the children) how they feel about a story, you need to also talk about why the author, maybe the author wanted you to feel that way, that doesn't mean that's the way you always have to feel in the woods or in your bedroom, it's that particular story. The setting can influence how the reader reacts to the story, and how the characters act, I don't know. *The main thing is that you need to stop and ask yourself why am I teaching this and what do I want the kids to learn when I'm all done. You have to be really clear in your mind what you want them to learn.* Not just that Ms. Jones read us three stories and we felt scared in this one and happy in the other.

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As Alexa watched this excerpt on videotape, she talked about her thinking during the conference. She emphasized that she wanted to find out what Kate was thinking about her instructional choices. She said;

"I thought I was telling her too much, that I wanted her to start, *I wanted to find out what she was thinking*...I just felt like I was talking too much to her and that's something that I have to be more careful with because I want to find out what she's thinking more ..And even when she went back, I said what is it that you wanted them to learn, and she said well, the setting and then she got off onto well, you know, it's not a scary place, and you know, the bed, and she got off into the bedroom and different things-- and other times during that interview when I was asking her about her central question, she'd have to go through her notes and find it again and read and just go back and read it over and there were just several times throughout that that I just felt like she still doesn't understand it. And I guess that's why I kept trying to reiterate it in as many different ways as I could"-italics added-

As Alexa worked through her role as mentor to Kate, she struggled with how much to model and tell, and how much to ask Kate about her purpose in teaching.

"I knew when I was doing it that I was saying more than I wanted to cause, I actually said the words that I wanted her to say...you know I said well, 'say today, the book is about the ghosteyed tree and the setting is in the woods and today you're going to draw a picture and you're going to draw a setting and you're going to put yourself in that setting in the woods' (pause) and, I thought when I was saying it, I thought, 'I shouldn't be saying this cause I want her to think of this on her own', and I thought, I was really in conflict with myself, cause if I don't say it, maybe she's not going to be able to--maybe she has to hear somebody say it first, to model it for her so that maybe she could carry it over."

Along with a message about understanding what she teaching, Alexa also wanted Kate to begin to hear the message that she would need to take some initiative in thinking through teaching decisions without relying on others to make those decisions for her. During the conference excerpted above, Alexa said that one of her goals, which she "just touched on briefly at the end was just expectations that, eventually you are going to have to do this without us." After viewing the video of this conference, Alexa became even more concerned about Kate's apparent inability to link concepts together to teach. Alexa said:

"She (Kate) hadn't mentioned the author in any of these conversations, and that was part of her, a real central part of her

central question, was how the author dealt with the setting. I'm not convinced at all that she knows what her central question is or, that she understands her lessons and her concepts that she's going to be teaching..."

Alexa is focusing specifically on the language arts content that Kate is teaching to frame conversations. Once she began this strategy of asking questions about content and purpose, she persists with this form of questioning until it is clear to Alexa during student teaching that Kate is not able to talk on this level about her subject matter and pedagogical knowledge.

Understanding children and adapting curriculum to meet children's needs.

Alexa's emphasis on knowing the purpose of what you are teaching is directly linked to her goal that Kate learn how to connect subject matter knowledge with the first graders in Alexa's classroom. Alexa tells Kate repeatedly that she needs to be explicit when talking to the children, and to learn and understand how to communicate clearly with first graders. In early November, Alexa was talking to Kate about reaching the children. After watching the videotape of this conference, Alexa remarked that her purpose had been to help Kate:

> "...to understand what it is herself that she wants the children to learn. What is it that she's trying to teach the children, that she has a clear understanding and keeps focused on that. "

As Alexa experiments with her role as mentor to a struggling student, she takes on much more of a role of an educator who is concerned that her student understand the literacy knowledge she is trying to teach to children. Unlike other mentors who define their role as quite different from a university professor who teaches prospective teachers new knowledge, Alexa feels very much like it is her responsibility to help Kate learn and talk about knowledge in a way that demonstrates understanding. Alexa does not distinguish a kind of special classroom knowledge from the knowledge of the

university. In this particular year of mentoring, Alexa takes it upon herself to be both teacher and guide, support and critic. She feels it is her responsibility to learn about a way of mentoring that is new to her, to ask questions that dig out Kate's understandings.

Theories about learners

Alexa's views about learning include a belief in supporting learners so they feel success, comfort and freedom to take risks. This is evident in her work with Kate, as she thinks hard and watches others and changes strategies so that Kate can have the opportunity to blossom. Early in the language arts practicum, Alexa asserted that she felt there was no difference between how she viewed the learning of her first graders and the learning of prospective teachers.

> "I guess I treat my first graders the same way (as a student teacher). You know, I let them try new things and, I'm open to their ideas and it's like I don't, I guess it isn't any different...The broad umbrella above all this is that everybody has to feel safe and be able to take risks and not be afraid to make a mistake and to know what we're going to learn from those things and then from that, there's a whole bunch of varieties of ways that you can approach things (learning)."

As Alexa continued to work with Kate during student teaching, she adapted her above response. After viewing a videotape of a conference between Kate and Alexa in late January, Alexa said:

> "Well, I'm thinking about earlier in the fall when we were talking about this I said I really saw a parallel of how I mentored and how I taught but, *the way I'm mentoring now is nothing like the way I, the way I teach*...I feel like I've, you know I haven't given up on Kate, I mean I haven't like written her off, but, I don't know how to describe it even though I talk about it all the time. I'm closer to that point with her than I would ever, I would never have that level of consciousness or level of whatever with a student when I'm feeling closer to just saying, 'you don't have it and I can't help you, I can't give you everything you need to be successful'. And, with a student, I don't think I'd ever do that. I've never had that way of thinking. I know that I'm not 100% responsible for helping Kate be successful or having my students be successful...Maybe my role is going to be just to help her on

you know, basic things while she's with me and then she's going to have to move on and try out those things and practice what she's learned from me and from MSU and apply it again at another time. Maybe if I look at it that way I won't feel so overwhelmed, with, that she just can't get it all done this term."

As Alexa worked through a conception of her role for Kate during student teaching, she changed strategies again during conferences. It seemed like she wanted to still try to help Kate, and did not want to give up on her completely. She thought about how she could still be helpful to Kate even though she would not experience success in passing this student teaching experience. She decided to go back to basic, what she called "low-level teacher knowledge" that she thought Kate needed before she would be able to carry on substantive conversations such as those Alexa had been earlier trying to achieve. Alexa's concern that "we don't get to student learning and their conceptual understanding" became overshadowed by conversations which focused on "just the trivial stuff that you take for granted that people will do on their own that can make the lesson a failure if you don't think about it....Like drawing lines around a chart to make it more understandable..."

Frequency counts: Views about learning

Alexa's student teacher, Kate, was pulled out of student teaching early in February. Because of the timing of the interviews and the struggles of Kate, there were only three conferences videotaped, and thus three stimulated recall interviews. The frequency counts are based on three interviews compared to the six interviews held with Lisa, Kimberly and Brooke.

The most dominant theme discussed by Alexa was helping Kate develop independent thinking skills. Kate talked about this theme five[6] times during the three interviews. She was very concerned that Kate be able to talk about

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[6]The unit of analysis was one complete response including probes. This means that Alexa referred to the theme "developing independent thinkers" five times, with a total of 21 interview chunks.

and think through decisions on her own, and consciously adapted her mentoring style to try to help Kate become more independent. When she talked about this theme, Alexa sometimes talked about what it meant to her to help Kate become an independent thinker (level two response). At other times, she provided concrete examples of what she was doing to help Kate become an independent thinker (level three response). One example is the way she asked her questions to find out what Kate was thinking. Her extent score for develop independent thinkers= 2.4 out of 3.0.

Once during the three interviews Alexa talked explicitly about the importance of matching philosophy with instruction. When she spoke of this issue, she stressed the importance of knowing what you are teaching and why you are teaching this knowledge to children. She talked about how she modeled her own philosophy to Kate, but did not think that she had made the modeling explicit to Kate (level two response). Her extent score for matching philosophy with instruction= 2.0 out of 3.0. Early in the interviews (October and November) twice Alexa said that there were many similarities in how she viewed the learning of her elementary students and student teachers (level two response). In January, however, she changed her mind, and said that the way she was working with Kate had little in common with the way she works with her elementary students (level three response). She felt like she was giving up on Kate, for she was saying Kate needed to be pulled out of student teaching. Alexa struggled with the issue of feeling like she was "giving up" on Kate, and feeling like she would not so easily give up on one of her elementary students. Her extent score for parallels between elementary students and prospective teachers as learners= 2.3 out of 3.0.

Alexa did not focus on the mentor/novice relationship during the three interviews. Perhaps because of the nature of their conversations, Alexa did

not seem to conceptualize their relationship as collegial. Her conversations focused on probing for information and understanding.

During the three interviews Alexa distinguished the special knowledge of classroom teachers only once. Within the one episode, she focused on the theme of how she could help Kate learn about children and adapt to children's needs (level three response). Her extent score for connecting subject matter with children= 3.0 out of 3.0.

The sources of knowledge Alexa uses to help novices learn to teach (sources of knowledge)

Alexa credits a lot of how she is thinking about mentoring this year to occasions where she has an opportunity to interact with other mentors and student teachers. Professional Development School opportunities provided in brown bag language arts seminars and student teaching seminars gave her chances to observe how Kate and other student teachers converse, along with how other mentors converse with Kate. Alexa also credits her experience in the TDOC project with MSU as a chance to learn to be reflective about teaching practice, and feels that this affects how she works in her classroom and with student teachers. Academic Learning teacher preparation program has brought new knowledge to Alexa which shape how she talks about teaching. Involvement with the program allows Alexa the chance to be able to talk to Kate in a common language while Kate is struggling during her field-based experiences.

Professional Development School as a source of knowledge

Alexa believes that her involvement in professional development work in collaboration with university faculty has helped her grow as a teacher and mentor. She said:

> "I think that PDS projects have helped me a lot to learn how to look at my classroom differently and see the good as well as the

bad...having a big support group, you know, somebody else to talk to, somebody else to collaborate with, and all these other opportunities that are building up, like this brown bag lunch and the forum we have with the language arts class have helped a lot in mentoring."

It was at one of the brown bag language arts seminars that Alexa had the chance to see Kate in interaction with her peers and with Alexa's colleagues. Having an opportunity to hear other mentors (Brooke and Lisa) question Kate about her central question and unit helped Alexa think about how to support Kate's learning. Sharing knowledge, dilemmas, and celebrations in a collaborative group has been stimulating and helpful for Alexa. She credits these opportunities for having a significant impact on the conception and enactment of her role as mentor.

In addition to the language arts seminars held at Brown PDS, the main inquiry project that Alexa sees as bearing a lot on her work with Kate is her involvement with the TDOC project where she and Lisa were encouraged to reflect about their teaching practice. She said:

"My involvement with the TDOC project was a really big change in the way I taught. I really changed a lot. The way I taught, and the way I thought about my students and their learning. ..We just started asking ourselves a lot of questions about why we're doing things the way we do and just being more open to all sorts of possibilities and ideas, and I think that probably helps me when I'm with Kate, to you know, ask the kinds of questions to make her think like that."

Academic Learning as a source of knowledge

Alexa has worked as a mentor with Academic Learning for five years, and over that time has found benefits for both her teaching and mentoring in becoming knowledgeable about the philosophy and knowledge base of the Academic Learning teacher preparation program. Alexa feels that she embraces the philosophy of Academic Learning in her classroom. It is because of her knowledge of Academic Learning content and philosophy that

she is able to support Kate not only in gaining practical experience in the classroom, but in understanding the content and concepts taught within Academic Learning. According to Alexa:

> "I am much more aware and focus more on the conceptual understanding than I did before. And that started through Academic Learning and going to the mentor teacher meetings and seeing what the students were coming up with in their units...Knowing what she (Kate) was required to do in her coursework and also knowing that she's been having a hard time doing that, I think I was really exaggerating or emphasizing it more yesterday than I do with anybody else. It has part to do with that I just understand more because of the Academic Learning Program and so I've been trying to help her think about that more... After having done it over, you know, so many times...After going through that many mentor teacher meetings and hearing it that many times and looking over that many units and through the courses that the students have done...and I know that with my own teaching, I'm much more aware of the conceptual understanding when I'm deciding what I'm going to teach and why I'm going to teach certain things, so it's helped me become more focused also."

The excerpt from a conference between Kate and Alexa illustrates how Alexa focuses conversations on content and terminology common to Academic Learning. Because Alexa understands the nature and purpose of central questions, she is able to probe Kate about the central question for her unit. Because she was a part of a PDS project where she was asked over and over the purpose of a lesson of instruction, she was able to be persistent and passionate about the importance of understanding what one is teaching and why this knowledge is important to teach. Alexa embraces what she has learned from collaboration with others involved in projects and Academic Learning, and uses this knowledge as a teacher and mentor.

Classroom teaching experience as a source of knowledge

Alexa views classroom teaching experience as one source of knowledge which she can use to help Kate learn to teach. She believes that experience in the classroom has provided her with knowledge about children. This

knowledge includes:

> "Knowing children and understanding how children learn. Knowing that all children don't learn the same way and knowing there's a lot of different styles and being able to provide different styles of presenting information so that all children will be reached, you know, that you're not just doing everything, presenting everything all the same way. I think, you need to be, you need to be a very good communicator and that's really, that's very difficult to help someone learn."

In earlier conversations with Kate (October-January), Alexa attempted to weave together knowledge of content with knowledge of pedagogy. She did not focus conversations on issues of management in isolation of content. However, toward the end of January Alexa changed strategies when she realized that Kate could not manage conversations on that level. So, she shifted to what Alexa referred to as "low level" conversations that did not "get at student learning and conceptual understanding." These conversations focused more on the technical knowledge of teaching that Alexa believes ordinarily comes from time in the classroom.

At the end of January, Alexa decided to move to this "low level" knowledge and have Kate observe Alexa begin the morning routine.

> "What it's going to be is just the routine in the morning, like bringing the kids in and getting them, their coats off and getting them in their seats and doing the attendance and everything that we do in the morning, because that's starting, that's really falling apart and that's the beginning of the day! Things falling apart as soon as they come in the door. So, that's what I'm going to start doing again so that she can watch me and I think it's...I think I'll do that tomorrow, and I'll write down a few questions for her to focus on."

Frequency counts: Sources of knowledge

As Alexa worked to help Kate understand and articulate her knowledge base, Alexa relied on her experience with Academic Learning program. Six times within the three interviews Alexa talked about Academic Learning as a valuable source of knowledge for helping her teach and mentor. When she

spoke about Academic Learning, she mostly referred to specific examples of qualities and knowledge she has gained that are integral to her work (level three response). She feels that knowledge of teaching for conceptual understanding, forming and working toward a central question and designing concept maps are all valuable tools that she uses. Having the common knowledge base helped her converse with Kate. Her extent score for Academic Learning as a source of knowledge= 2.6 out of 3.0.

Three times during the three interviews, Alexa talked about Professional Development School work as a source of knowledge in her teaching and mentoring. Twice she talked about how PDS work in general has benefitted her work (level two response). On one occasion Alexa provided a specific example of a quality that she had gained from PDS that has played an integral role in her work as a teacher and mentor (level three response). Alexa attributes the development of a reflective disposition to her professional development work. Her extent score for Professional Development School as a source of knowledge= 2.3 out of. 3.0.

When Alexa spoke about classroom teaching, she did not separate this experience from her work in PDS and Academic Learning. For her, it seemed that boundaries were blurred, and each source of knowledge informed the other. Twice during the three interviews Alexa spoke about links of classroom teaching experience with other sources of knowledge (level three response). Her extent score for classroom teaching experience as a source of knowledge= 3.0 out of 3.0.

The nature of reflection used by Alexa to help Kate learn to teach (Nature of Reflection)

Alexa has taken advantage of a variety of opportunities to use as sources of knowledge to help her work as a mentor to Kate. She used time in seminars

to watch others interact with Kate. She used Academic Learning course work knowledge to talk with Kate about what she was teaching. She used the stimulated recall to watch herself interact with Kate, and to listen to Kate's responses during conversations.

Reflecting about work with prospective teachers

Alexa determined on her own that it was her responsibility to help Kate push herself to understand the literacy content that she was trying to teach students. From watching the videotaped conferences between herself and Kate, and from observing Kate in interaction with children, peers and Alexa's colleagues, Alexa adapted her style of mentoring. After the brown bag seminar Alexa said, "I'm learning that I was being too helpful to her (Kate) and not helping her think enough on her own." This stimulated Alexa to take a different approach with Kate.

At the brown bag seminar mentioned throughout this case, Kate was explaining to her peers and to other mentor teachers (Lisa, Brooke and Paige) what was the purpose and central question for her language arts unit. It was after that meeting that Alexa said, "she just really didn't understand what her central question was, and no matter how anybody asked her, she just, it was obvious that she didn't know what she was talking about."

In addition to the brown bag seminars, Alexa looked forward to the stimulated recall interviews, for she said they provided her with the chance to talk through her thoughts and frustrations working with Kate. She intently watched the videotaped conferences between herself and Kate, taking notes and later talking about what she had said to Kate, when she thought she had said too much, what her purpose was in the conversation, and what she was learning about being a mentor. In late November she remarked:

"I am learning a whole new skill that I haven't really used a whole lot. And it, I'm finding it very hard, but I think I'm doing it. Where I have to really listen to her and process what it is she's saying and still look for the main thing that I'm trying to find (pause) and find that (the main idea), and then come back and ask her the question to help her clarify it in her own mind, what it is that is the main idea I want her to come out with (pause) and I guess, I've never had to do it quite in this depth before and for this sustained amount of time, but I was just watching myself and I remember when I was doing it (asking questions, listening to Kate) and I was thinking along side of everything else, this is really hard. This is REALLY hard to do...But I also thought from watching the tape that (pause) I was, I felt like I was being effective with it."

Modeling and encouraging prospective teachers to reflect

During Alexa's work in the TDOC project, she was encouraged to ask questions about "why we were doing things the way we do." It is this framework that Alexa brings to the mentoring of Kate. She believes it is vital that Kate be able to talk about why she is teaching a certain concept, and be able to talk about what she is teaching and what she hopes students will learn and understand. This is the content of reflection according to Alexa, and she repeatedly models this concept of reflectiveness to Kate. However, Kate is not ready to be reflective about her teaching, because she is stuck at what Alexa refers to as "low-level knowledge."

Even toward the close of her mentoring of Kate, Alexa did not give up. Saddened because Kate could not reach a level of conversation where she could talk about her principles and practices, Alexa was close to giving up on Kate as a learner. Then, she thought about how she could reconceptualize her role as mentor, and how she could still model some important skills that Kate needed to learn. She referred to this shift in conversation as "low-level knowledge", but recognized that there was value in engaging Kate in conversations about observations of the more technical aspects of teaching. Since she believed that it was important to be competent also in technical aspects of teaching,

Alexa decided to have Kate observe Alexa doing the morning routine. Then, the two could talk about issues of routine and management. As Alexa worked through the problem of how could she foster experiences which could be fruitful for Kate even though Kate would not pass student teaching this term, she became comfortable with the belief that it was important for teachers to master technical parts of teaching, and that the technical parts of teaching are valuable. This is consistent with the believe that perhaps technical competence is important and indeed necessary for one to reach beyond for a more liberalized, critical understanding (Buchmann, 1991).

Frequency counts-Nature of reflection

Alexa tried in various ways to provide Kate with examples of teaching, and to encourage Kate to talk critically about her own teaching practice. Five times during the three interviews Alexa talked about her goal to model and encourage Kate to reflect about her teaching. Each of the times she discussed this goal, she emphasized questions that she asked Kate to challenge her to think about teaching plans and decisions, to understand the subject matter she is teaching and why this subject matter is important for children to learn. She rotated between modeling and then asking Kate to voice her thinking (level three response). Her extent score= 3.0 out of 3.0.

Seven times within the three interviews Alexa reflected about her work with Kate. She mainly focused on what she felt Kate was learning during the experience in the field, and how Alexa could be most supportive in her learning (level two response). She also talked about her observations of Kate in interaction with other mentors during the brown bag seminar, and how that incident helped her think about new forms of interaction with Kate. Toward the close of Kate's time in the classroom, Alexa began to think about what she could help Kate learn that would help her in her future classroom

experiences (level three response). Her extent score for reflecting about work with prospective teachers= 2.3 out of 3.0.

Alexa talked about literacy subject matter specifically three times during the three interviews. She mainly focused conversations with Kate around what Kate knows about the literacy knowledge or skill she was teaching, why it was important for children to learn,what children already know about this literacy knowledge and skill, and how she will adapt this knowledge appropriately for the children. Her extent score for reflection about literacy subject matter knowledge= 2.6 out of 3.0.

A visual model of mentoring

Each mentor was asked after the fourth videotaped conference to design a visual model which represented her conception of the role of mentor. Since the fourth conference was held after Kate was pulled out of the field, the researcher held a fourth interview session with Alexa to talk about her model. The mentors could choose to either draw the model and bring it to the interview held on the next day, or to draw the model during the interview time. Since Alexa met with the researcher specifically around the issue of the mentor model (there was no videotape to watch, so there was no stimulated recall interview) she chose to draw her model during the interview and describe her model to the researcher as it was designed.

Alexa designed a concept map, since she said this was a familiar way for her to conceptualize ideas. Within this model, she highlights her view that "how knowledge is used depends on the level the teacher candidate is ready to enter." This emphasized her experience with Kate, and how she learned that everyone will not be able to articulate and use knowledge sources in the same way. Within Alexa's map, she emphasizes the word "understanding," which is

a phrase that has become a part of her vocabulary since PDS and Academic Learning involvement. She said that she learned to emphasize not just teaching, but teaching for understanding. On the map, she describes several kinds of understanding; understanding of student, of subject matter and of concepts.

Perhaps because of the influence of the brown bag session where Alexa witnessed Kate in conversation with other mentors, she specifically highlighted the brown bag seminars as a source of knowledge for mentoring. She also mentioned asking questions and modeling as forms of support she could provide.

Finally, Alexa emphasized that her goal was to help Kate find her own style of teaching, and not be a clone of Alexa. She hoped that Kate, the elementary students and Alexa could have been in a more reciprocal relationship where each learned, trusted and respected each other.

Alexa
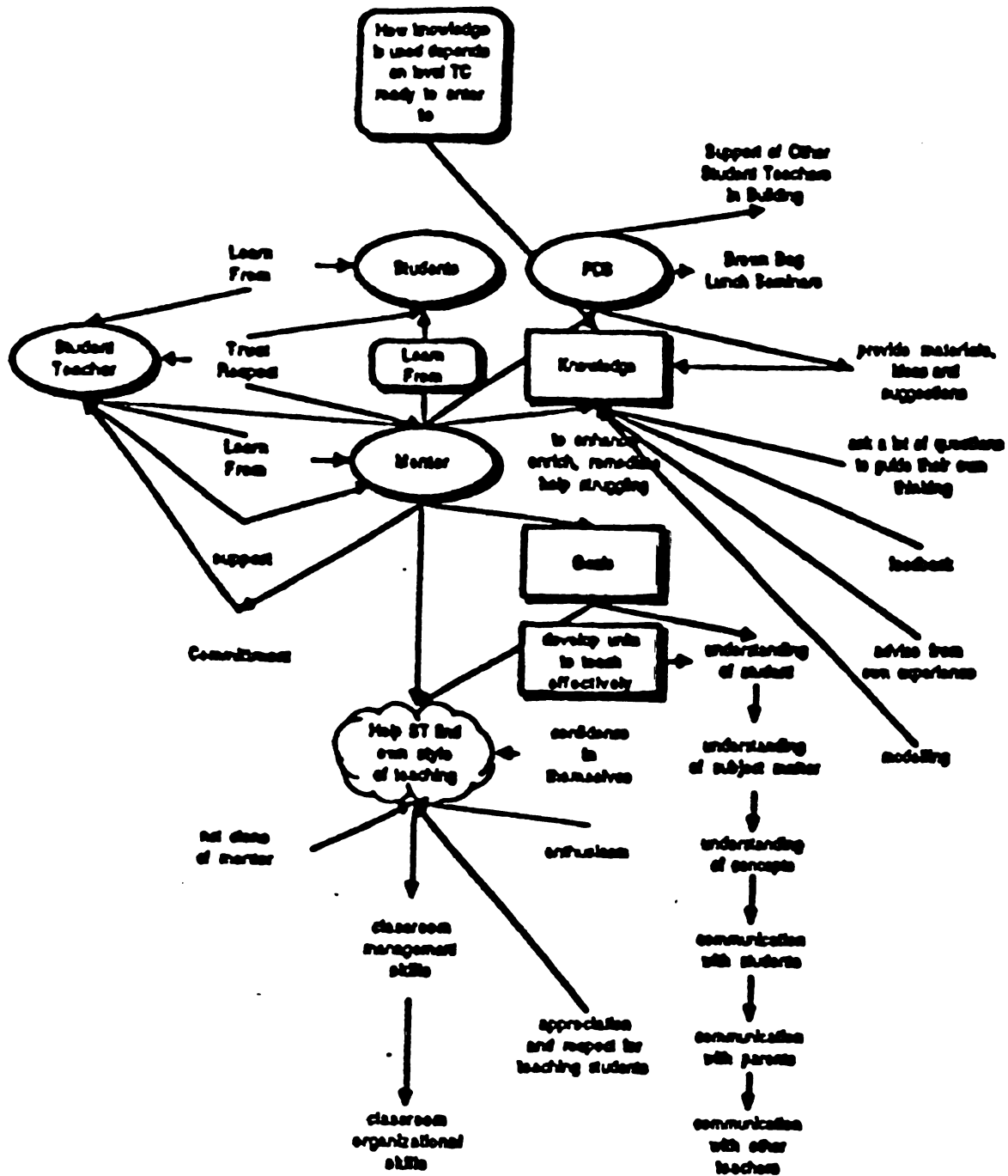
Figure 4

Summary

Alexa used the stimulated recall interviews as a way to watch herself in interaction with her student teacher, Kate. As she watched the videos and discussed the interactions, she realized that her beliefs about learning needed to be adapted to meet Kate's needs. Evident in the frequency counts, Alexa continued to emphasize her goal that Kate gain some competence in independent thinking.

Throughout the months of working with Kate, Alexa reflected about the ways which she could be most supportive in Kate's learning. She used a variety of sources of knowledge and interaction styles to try to help Kate make connections about subject matter knowledge to instruction. In her mentor model, her frustrations are expressed as she stipulates that the ways which sources of knowledge can be used by novices depends on the competence of the teacher. This competence was defined by Alexa on two levels of technical competence, and a more reflective competence.

PAIGE

Background

Paige[7] *is a third grade teacher at Brown Elementary. Paige has been teaching for twenty years. Paige holds a Masters degree. This is Paige's first time working as a mentor with the Academic Learning teacher preparation program. She worked with teams of student teachers early in her teaching career. Paige is actively involved in two Professional Development School projects. She is a member of the LISSS (Literacy in science and social studies) group in which a group of university faculty graduate students and classroom teachers meet weekly to study integration by reading literature co-teaching in the classrooms and debriefing about experiences. Paige has also been co-teaching the social studies methods course with a university professor in the Academic Learning program for two years. Paige, along with Brooke, co-coordinated the language arts brown bag seminars. She also regularly attended the student teaching seminars held at Brown PDS.*

Paige's theories of how novices learn to teach
(views about learning)

Paige spends a bulk of conference time with her student teacher Jane and interview time with the researcher talking about herself as a learner and how she acts and reacts in learning situations. Modeling is the dominant mode of talk with her student teacher Jane, as Paige gives examples of her thinking and her teaching. She shares a lot of her own beliefs and stories from teaching. Paige does not spend very much conference time questioning Jane about her beliefs and decision making. However, Paige is very supportive of Jane trying new ideas. Paige's theories of how to support Jane in learning to teach include the themes that Jane 1) help students to have voice and engage in learning and 2) be thoughtful about her teaching planning and actions. Paige also describes other views about learning which influence her mentoring which will be discussed as well.

Paige was ill during two of the five months that Jane was in the classroom for the language arts practicum (October-December 15,) and full time student teaching (January -March 15). Even though Paige was ill, she

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[7]Paige is a pseudonym.

still wanted very much to continue working with Jane, and resumed her mentoring role by the end of January.

Due to work in a Professional Development School research project, Paige has restructured time. She teaches three mornings per week in her classroom, plus one full day. PDS supports the work of a co-teacher in Paige's classroom during the other time. Even though the co-teacher is in the room 1/2 of the instructional time, Paige is Jane's mentor teacher, and is the person who takes responsibility for planning and debriefing with Jane. However, because of this arrangement, Paige is not available for observation and discussion during much of the instructional time.

Helping students to have voice and engage in learning

Paige's philosophy of teaching includes the view that learners in her classroom have a voice in making decisions about what they learn about as a means to engage the students in their learning. Paige has a particular commitment to this philosophy in her writer's workshop. She said, "You've not only got to make all these decisions (about teaching), but allow the (elementary students) time to make decisions, and then live with the consequences of these decisions." As Paige works with Jane, she makes this philosophy apparent, and uses this philosophy to guide how she mentors Jane.

The following conference illustrates Paige's theme of "voice" and how this theme influences her mentoring of Jane. In February, Jane had decided to introduce what is referred to as "the writing process" to Paige's third graders. Because the students had been exposed to features of the process, Paige felt it was appropriate for Jane to pursue this more formalized instruction, although Paige herself was reluctant to do so because it clashed with her philosophy of instruction. Jane had a negative experience with the class the first day that she introduced the writing process, and Paige and Jane

are discussing this episode.

Paige: This was their first formal exposure, time they've been asked to follow these steps for the writing process. *I know there's an issue of voice, the kids not being told what to do, it's difficult for them* -they're used to having voice in the room. I know they were ready, but I was feeling guilty that if they would have negative vibes you would get blamed for it.

Jane: I kind of felt guilty too, because *I felt like I was making them write a certain way.* I just didn't know if it was just too much for them at once.

Paige: I know why you're feeling this guilt, it's because *you're used to them having so much voice in the classroom, you're not used to saying, do this and this, and letting them do what they want in writing, and I think you're more in the role of guiding them instead of saying do this, do that.*

Jane: I'm not used to going around and having them answer the same question.

Paige: Do you think it could be the question itself? Tell me the question you asked one more time.

Jane: 'Do you think the writing process helped you as an author to write the letter?'

Paige: OK. Do you think there was another way that you could have phrased that question, or that we should have given that question some more thought, because I felt like you that I had to help walk around and make sure that they answered the question. *I didn't really feel like the question made them engaged.*

Jane: I didn't know if, "do you think your letter had been as good if you didn't use the writing process" that was the other question that I was thinking of. I really wasn't happy with the question I had, but I didn't know of a really good one.

Paige: Yeah, you mentioned that question to me this morning before school. But, I didn't know then that you were unhappy with the question.

Jane: More uneasy than unhappy.

Paige: Did you anticipate that you would have to go around the room like that?

Jane: I felt like I was pulling things out of them. Or they just didn't think they should have to talk about it, they said, 'we already wrote our letters, and now you want us to think about why we wrote them'.

Paige: *They didn't see how that would be valuable for them? How can we think about a way to help them see the value in knowing why they are learning about a writing process?* -italics added-

During this conference, Paige reinforced her view that connecting with learners means engaging them. During the stimulated recall interview where Paige viewed this excerpt on video, she explained that she was trying to help Jane see that teachers face a dilemma when they let students have voice, then try to impose their own voice on the students. She said:

> "What I was trying to let Jane know is, even if the attitude is negative, there are some things that you have to do, I mean that, that...that you have to do in teaching writing workshop that maybe they (the elementary students) won't favor at the time. But, yet, after you kind of force - not really force - after you say 'do this', which they're not used to hearing, then maybe later they could see a reason for it that was not apparent in the beginning."

After viewing the video taped excerpt transcribed above, Paige was asked whether she thought Jane had understood the message Paige was trying to communicate. Paige was not satisfied about how the interaction had transpired. She reflected,

> "I think maybe we should have taken the time then to say, 'let's look at this question about the writing process, whether or not I've helped you as an author. Let's take a look at this right now and see if we can figure out a way to phrase that question that would really engage the kids'. I mean, I think we should have taken that opportunity right then to write a good question together. (pause) You know, I was reading one of the juniors' papers for the social studies methods class and she said 'well...I don't know really where I want to go with this unit... So, if I had this to do over again.. I'm going to do this and this..." And my response to her was 'why the next time, why don't you do it right now?' You know, it's not too late. So I don't really think that it would be too late for Jane and I to go back to that question about the writing process and maybe we should revisit that, or maybe I could just ask, suggest that she write the question again in her journal and that we could think about it, you know, she's going to be faced with that issue again, soon. So I think we should, I think we should go back to that."

Paige's philosophy for engaging the students and letting them have voice is evident in her discussions with Jane. It seems that Paige assumes Jane

shares this philosophy, and asks questions about how Jane can match this philosophy (Paige's) with Jane's instruction. Jane is struggling with her desire to teach a more formalized writing process, and figuring out whether this is, or how this is a mismatch with the philosophy described by Paige. Jane seems concerned about how she was approaching this lesson, and didn't like feeling like she was "making them write a certain way." Yet Paige did not probe Jane to find out what *Jane* hoped to accomplish by teaching the process, why *Jane* felt it was important for students, and why *Jane* wanted to ask the students a question about the writing process. Paige does indicate her concern that the two work together to think about a way to approach this which will help the students see the value in the approach.

Being thoughtful about teaching planning and decisions

Paige feels that it is important for both herself and Jane to be able to talk about their philosophies of teaching and why they are teaching particular knowledge to the students. During conversations with Jane, Paige dominates talk by sharing experiences and reasons for why she chose to teach a particular area, and how she hopes to engage the children. Within these conversations, Paige emphasizes her belief that it is important to be thoughtful about teaching decisions. Though she dominates most conversations, there are also times when Paige does ask Jane questions about her thinking while planning for instruction. During a stimulated recall interview, Paige said:

> "I asked her, what was your purpose in teaching that unit, why did you do that?...and that was the clincher, right there. *It was very apparent to me that she had done some serious thinking about, not only what was going into a unit, but why it was important to teach.* Why that would be useful, or important to the kids to know." -italics added-

Though Paige's style of mentoring does not include many direct opportunities for Jane to voice her views, or dig deep for her beliefs, Paige's modeling of thinking hard about purposes and approaches helps Jane develop this skill. As the relationship begins to develop, Jane becomes more assertive in cutting into conversations and voicing her opinions. As this occurs, Paige begins to step back and engage in more collegial conversations where both parties articulate knowledge, alternative ideas for implementation, and analysis of teaching choices. Throughout conversations Paige repeatedly emphasizes her belief that a teacher is "thoughtful" about making decisions and selecting curriculum.

Paige uses stories about her own teaching experience to get this point across to Jane. For example, Jane was planning a poetry unit to teach in Paige's classroom that Jane would begin during student teaching and Paige would continue during spring. Paige spent the majority of the conference time explaining to Jane how Paige was approaching planning the poetry unit. Her message of thoughtfulness was the theme. She said:

> "...so like Nancy Atwell (author who writes about teaching writing), I decided I had better just start reading poems, that's what Nancy said she did in order to start a unit or a chapter on poetry. So I started...reading poems and you know, one poem made me think of another poem and...I started thinking about... my favorite poets and poems, and I thought well, who says you've got to start with all these different poems, or with the idea that some poems don't rhyme, and you know, the kids are going to... learn a lot of this, just by sharing poetry with them. And who says you've got to start with line breaks. I guess, *I guess I'm saying just do it. But yet, just do it thoughtfully...* " -italics added-

Theories about learners

Paige's theories about learning include a belief that learners should be provided with a lot of voice in the decision making and learning. Paige allows Jane a lot of voice in her actual planning and instruction, but does not provide

a lot of opportunity for Jane to talk about her own emerging philosophies of teaching and her own thinking process as she plans and teaches lessons. As student teaching progressed, Jane became more assertive in voicing her ideas, and the relationship seemed to progress to a more collegial plane.

Paige views her work with Jane as collegial. As Paige talked about her work with the student teachers in the building with the brown bag language arts seminars, she said:

> "... I guess that's what I tried to do at that first meeting is I, *look I'm your peer. I'm at the same place you are with this, regardless of our age. I'm working on the same things and it's something that teachers have to continue doing.* But then yesterday at the meeting I thought, I was feeling so guilty about taking that time because I was sure that that was what Lindsay (university professor) was saying about not giving the seniors enough time to talk."

Paige seems to model herself as a learner who is "open to new ideas." She does not seem to acknowledge that student and experienced teachers might bring different lenses to teaching experiences.

Frequency counts: Views about learning

The frequency counts tabulated for Paige reflect a total of three interviews compared to the six interviews which were held with Brooke, Lisa, and Kimberly. Consistent with her philosophy that teachers ought to be thoughtful about their decisions and practice, Paige spoke two[8] times during the three interviews about developing teachers that are thoughtful. When she spoke about this issue, she provided concrete examples of how her definition of "thoughtful" was being enacted in the classroom (level three response). She was specific that teachers be thoughtful about how to engage students and how to allow students to have voice in classroom learning decisions. Her extent score for developing independent thinkers= 3.0 out of 3.0.

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[8]The unit analysis was one complete response including probes. This means that Paige referred to the theme "developing independent thinkers" two times-with a total of 19 interview chunks.

Only once within the three interviews did Paige talk about parallels she sees between elementary students and prospective teachers as learners, and matching philosophy with instruction. On both of these themes Paige scored a level two response. She defined similarities between how she views the learning for both elementary students and prospective teachers, for she believes both should have voice in their learning. She talked about the importance of having a philosophy of instruction, but did not help Jane uncover her own philosophy. Her extent score for parallels between learners= 2.0 out of 3.0. Her extent score for matching philosophy with instruction= 2.0 out of 3.0.

The two remaining themes were each mentioned twice within the three interviews. When Paige talked about her relationship with Jane, she referred to Jane as a colleague. However, she did distinguish differences in the repertoire of experiences which novices and experts hold (level two response). As she talked about connecting subject matter knowledge with children, Paige described how classroom teachers have experiences, through daily contact with children, that enable them to share classroom knowledge with prospective teachers (level two response). Her extent score for mentor/novice relationship= 2.0 out of 3.0. Her extent score for connecting subject matter with children = 2.0 out of 3.0.

The sources of knowledge Paige uses to help novices learn to teach

(sources of knowledge)

Professional Development School opportunities have made it possible for Paige to have restructured time to participate in teacher education experiences. Paige feels a part of Academic Learning, and feels that she teaches and mentors in a way that is consistent with program goals. She uses her experience with teaching in Academic Learning and working in

Professional Development School projects to shape conversations with Jane.

Professional Development School as a source of knowledge

Paige is an avid reader who carefully and excitedly reads both expository and narrative texts shared within Brown PDS. Through work in the LISSS (Literacy in Science and Social Science) project, Paige has had opportunities to work with university professors in her classroom, to plan with colleagues in the building, to read literature about theories of teaching and learning, and widen her repertoire about the teaching of writing.

Jane is the first Academic Learning student teacher Paige has mentored in her classroom. As Paige begins to work through what it means to be a mentor, she finds herself pulling from sources of knowledge which she has learned as a result of her PDS participation. She said:

> "In the LISSS group, we ...did a lot of reading and a lot of discussing. And I think that the literature that they gave us to read, these articles that they gave us to read were really helpful. *And I remember sharing one with my student teacher. It was the idea of the workplace. That the classroom was a learning place instead of a workplace.* And I was so excited about it from the discussion that we had in the LISSS group and I gave it to her and I just thought, I can't wait to hear what you have to say about this..."

Paige models how she values knowledge gained from literature she reads. She talks to Jane about books she reads, such as books about the teaching of writing by Nancy Atwell and Donald Graves. She refers to conversations she has in her study group, to articles they have read, and to philosophies they hold. This modeling is the dominant mode of mentoring for Paige.

Paige also co-coordinated the brown bag lunch seminars held at Brown in conjunction with the language arts methods course. The five mentor teachers and five student teachers at Brown were encouraged to attend these sessions which focused on issues of unit planning and teaching. The principal

and reading resource teacher also attended, along with various university faculty from Academic Learning. Paige describes her role in the brown bag seminars as follows:

> "I just think of myself as being another resource, and the brown bag lunch as a way of letting the seniors know that I'm another person they can ask if they need some assistance with their (language arts) unit and you know, I might not have all of the right answers or I might not know... what Lindsay (language arts instructor) would tell them about a unit but I've got my own ideas about it..."

Academic Learning as a source of knowledge

Restructuring efforts at Brown PDS have made it possible for Paige to leave Brown to work with Academic Learning students at Michigan State in the social studies methods course. From this experience, along with other interactions with Academic Learning students and faculty, Paige feels that she has been learning about "conceptual understanding, learning to question myself about teaching, and developing focusing (central) questions." She feels this knowledge helps both in her classroom and her mentoring. Paige says that she works hard to embrace the concepts taught within Academic Learning in both her teaching and mentoring. She says that "the idea of conceptual learning and questioning" are particularly powerful for her in carrying over to her teaching.

Paige feels that she has changed how she approaches mentoring since working with PDS and Academic Learning. She says:

> "I feel like I know what the juniors and seniors are being taught, because I'm learning the same thing (pause)...I guess I've changed a lot cause I'm thinking like in the first experience with those cluster groups of student teachers (first experience with student teachers), I would have never thought about, like right now I'm really excited about sitting down and doing poetry with Jane, but I never thought about the concept of writing together being better than writing alone."

Through work with the LISSS project and co-planning to teach the

social studies methods course, Paige has had many occasions to collaborate in teaching. She feels this is a very valuable way for both herself and others to learn, and therefore came up with the idea that she and Jane would co-plan a poetry unit that Jane would begin during student teaching and Paige would complete during spring.

Overall, Paige feels that the work with Academic Learning benefits both prospective and experienced teachers.

> "They're (prospective teachers) learning just as much in the university as they are in the classroom. I feel like I have an advantage because, first of all, I know what they're learning. I know what the language arts curriculum is and I know what the social studies curriculum is, and what the science curriculum is. I know what they're being taught and I know that what I'm doing in the room, what I'm teaching my third graders in the room ... is pretty much on target. Meshes with what they're being taught on campus..."

In addition to her role as mentor, Paige's input helped shape the unit planning assignment for the social studies methods course. Because she had a unique vantage point of interacting with the prospective teachers both in the university and elementary school classroom, she had opportunities to talk to the students about course expectations. Paige said:

> "She (Jane) was really intimidated by her social studies unit so I got with Kelly (professor in Academic Learning) and said, 'we can't have these juniors feeling like this', or these seniors feeling like this and that, *I think I was instrumental in the idea of opening up the social studies units and leaving them as more ongoing instead of completed.* I talked with Kelly about it and said that it really bothers me and for being her first unit, I hated, you know, *it seemed to go against the idea of, the learning place goal that learning is continuous and lifelong, you know, for them to write these units in social studies that are finished products ... like I've written a unit, and that's done.* Like, my Christopher Columbus evolved into my 1492 unit and that's not going to be done because, I mean, it'll never be done. Finding out what happened 500 years ago in science, or in the different subject areas, so anyway, that'll never be completed. It's just an ongoing....I stopped at the Teaching Connection yesterday and she (librarian) was telling me oh, by the way, we're getting three new Christopher Columbus books in. And I said well, then, save one for me..."

Classroom teaching experience

In addition to PDS and Academic Learning knowledge, Paige uses her classroom experiences to frame discussions with Jane. Repeatedly she retreats to episodes in her teaching to illustrate a point, philosophy or opinion. She seems to, at times, use these narratives as strategies to help Jane learn. She said:

> "I do a lot of modeling with Jane... like today with the Napping House. I was sharing the Napping House with the boys and girls, and...I knew that, that my expression, that the expression that I put into it could either, either...force them, I mean not force them, but I could read it in one way or I could read it in another way...And, you know, I knew that that would really get the kids involved in it. And why I know is from past experience. From trying it different ways. From trying reading poetry cold to.reading it after I've rehearsed it several times with expression. There's a big difference there."

Frequency counts: Sources of knowledge

During the three interviews with Paige, she frequently referred to Professional Development School and Academic Learning as playing an influential role in how she was teaching and mentoring. Five times within the three interviews Paige talked about Professional Development School work as a source of knowledge. Sometimes she talked in general about the benefit of PDS involvement (level two response). On other occasions she was more specific about qualities which she has gained through PDS work (level three response), most specifically, is the habit of being thoughtful in planning and teaching. She also credits the idea of the metaphor of looking at her classroom as a learning rather than a work place to PDS. Her extent score for PDS as a source of knowledge= 2.4 out of 3.0.

Six times during the three interviews Paige talked about the role Academic Learning has played in helping her mentor and teach. She often referred in general to how involvement with the program, through co-

teaching and attending seminars has helped her (level two response). At times she was more specific in talking about qualities she has learned from Academic Learning, such as teaching for conceptual understanding (level three response). Her extent score for Academic Learning as a source of knowledge= 2.3 out of 3.0.

Paige seems to regard her PDS and Academic Learning experiences as integral to her work, and does not specifically talk about classroom experience as isolated from collaboration and research. She spoke on one occasion out of the three interviews about how classroom experience is valuable for helping novices learn to teach (level two response). Her extent score for classroom teaching experience as a source of knowledge = 2.0 out of 3.0.

The nature of reflection used by Paige to help Jane learn to teach (nature of reflection)

Paige feels very involved with Academic Learning through her work with the cohort of students in social studies methods over the past two years. She seems interested in talking about and working with prospective teachers as a resource on the university campus, in the brown bag language arts seminars at Brown, and by mentoring Jane in the elementary classroom. She is reflective about her work with Jane. Paige models reflectiveness by showing Jane how she thinks through teaching decisions, but does so in a way that does not impose these decisions on Jane. She does not seem to be advocating a certain way of teaching, but truly seems to believe that by showing herself as a lifelong learner who works hard to match beliefs with instruction, Jane will learn these habits. Although Paige does not often probe Jane to think about her own decisions, she does use verbs like "wondering", "challenging" and "thinking" to advocate ways of approaching teaching decisions.

Reflecting about work with prospective teachers

Paige was actively involved in planning and participating in both the brown bag language arts seminars and the student teaching seminars held at Brown. During one of the student teaching seminars in February, Paige was talking to the five student teachers and the four other mentor teachers about the importance of knowing why you are teaching certain knowledge or skills to children. Consistent with her way of working with novices, Paige used her own experience to make her point. She said that "working with student teachers forces you to know where your thinking is coming from." Paige was using the example from her experience to illustrate to the novices the importance of understanding your purpose in teaching. She was also making a point about what she has learned about mentoring a novice. Paige was later asked what she was thinking about when she made the above remark. She said:

> "You've got to get what you're doing and why straight in your own head. I mean really straight in your own head so that when someone asks what you're doing and why, you'll be able to answer. And sometimes, you just put yourself in automatic, and you do stuff, and I find (pause) you just do. Without thinking about it. And I find that having Jane there forces me to not put myself on automatic, but to continuously think about who I'm doing this with and, and for what reason and why. It just forces me to think, it's not that I usually have, I mean most often, ninety percent of the time, I've got a good reason. I know what I'm, I know what I'm about. But there's sometimes that you just do stuff because it's been done before and it makes me very aware of that 10% of the time. That, where I'm just doing instead of thinking and then doing."

Paige went on to describe how she promotes thinking about purposes of instruction with her student teacher, Jane. For example, she said that it is important to her that Jane does "some serious thinking about not only what was going into a unit, but why it was important to teach."

This excerpt shows Paige's commitment to understanding and being able to articulate reasons for her teaching decisions and actions. According to Shulman (1988, p. 33), "teachers will become better educators when they can begin to have explicit answers to the questions, 'How do I know what I know? How do I know the reasons for what I do? Why do I ask my students to perform or think in particular ways?" Paige is asking herself these questions. Although she does not often explicitly ask these questions of Jane, she repeatedly models herself as an inquirer who pursues questions of purpose and reason. She uses the occasion of mentoring as an opportunity to dig deeper about what she knows, and feels that the way to support Jane is by exposing her implicit theories and asking herself hard questions.

Modeling and encouraging prospective teachers to reflect

The dominant style of Paige's mentoring is modeling. Though it is questionable whether this modeling is strategic, the message of the importance of being a thoughtful, inquiring educator comes through across conversations. Paige does not spend much conference time probing Jane about her purposes, reasons and subject matter knowledge. Paige acknowledges this at the close of the interviews, as she talks about what she would like to continue to work on to help novices learn to teach. She said that she has learned through this first time mentoring, after almost twenty years, that it is "really important to listen" to your student teacher. She said that she wants to continue working on questioning.

> "I think the questions (you ask) are extremely important and it's important to phrase... your question in a way that will challenge her (student teacher's) thinking and not, I mean it's important to ask questions that...that are going to stimulate her to do more thinking in depth, not questions with yes or no answers, but to just get her to really wonder about..to ask her questions that really don't have answers to get her thinking, to think critically about different events in the classroom and different children in

the classroom and about different strategies...why some strategies might work for me and why they might not feel like they work for her or in fact not work for her."

Frequency counts: Nature of reflection

This was Paige's first experience mentoring in many years, and was her first mentoring experience with Academic Learning. Within the three interviews, she talked on six different occasions about thoughts she had about work with prospective teachers. Sometimes she spoke about what she felt Jane had learned through student teaching and other Academic Learning experiences (level two response). She also provided some specific examples of goals she had for Jane to continue, namely to be thoughtful about her teaching (level three response). Her extent score for reflecting about work with prospective teachers= 2.2 out of 3.0.

On two different occasions during the three interviews Paige talked about modeling and encouraging Jane to reflect, and about literacy subject matter. She talked about the importance of making her own knowledge explicit to Jane so she could see her reasoning (level two response). She also began to dialogue with Jane about the literacy subject matter which Jane was working on in the classroom (level two response). Her extent score for both modeling and encouraging prospective teachers to reflect and for reflecting about literacy subject matter= 2.0 out of 3.0.

A visual model of mentoring

Each mentor was asked to design a visual model which represented her conception of the role of mentor. Each of the mentors was asked at the fourth conference, held in early February (this was Paige's second conference), to either bring the model to the next stimulated recall interview (so they would have until the next day to design the model), or to draw the model during the stimulated recall interview time. Paige chose to draw her model on her own

time, and described her model to the researcher.

Paige uses the analogy of a rainbow to describe her work with Jane. She described how she pictures herself as a protector of Jane, and holds an umbrella over Jane to help her through hardship. She sees her goals in mentoring as the sunshine, for she seems to view mentoring as a happy, fulfilling experience. Her goals include influence from PDS experiences, where she works to "challenge traditions" and "create my own knowledge." She also views knowledge in a positive way, for she illustrates various types of sources of knowledge by using a rainbow. Knowledge is highlighted prominently on Paige's model. She values multiple sources of knowledge in making teaching decisions. One of these sources is classroom experience (the bottom one). Paige feels that classroom experience is enriched by other sources such as readings, discussions, writing, and questioning.

Rainbow of Knowledge Sources
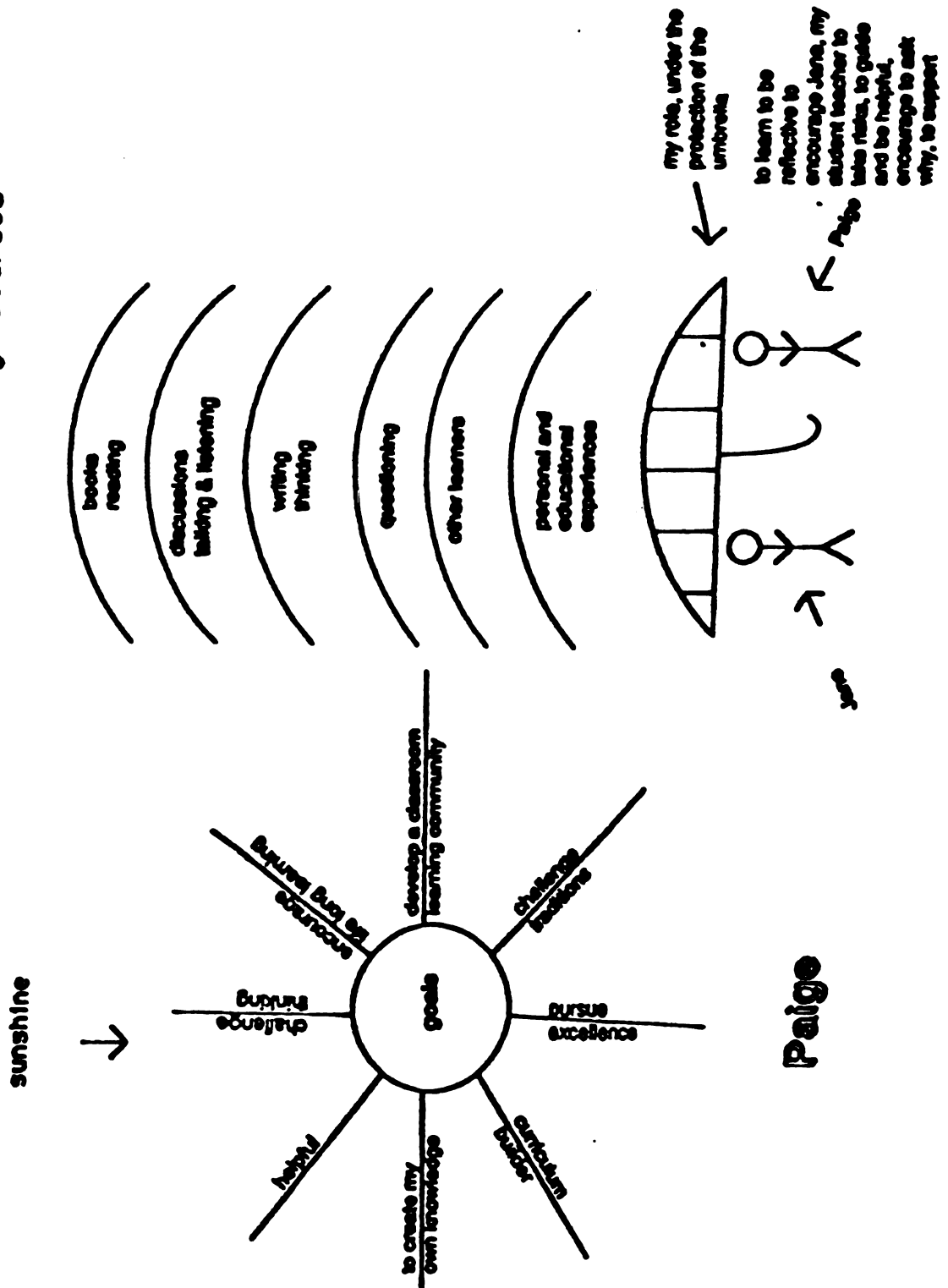
Figure 5

Summary

Paige believes it is important to communicate to a novice that a good teacher is thoughtful in consulting multiple sources of knowledge when constructing knowledge to make teaching decisions. She emphasizes her theme of creating thoughtful thinkers throughout the narrative excerpts, frequency counts and mentor model. Paige watched the videos to see whether she was helping Jane develop her thinking skills. Though she models this view more than she explicitly promotes it, she did communicate in her verbal modeling and construction of her visual model that she wants Jane to believe that Jane is a curriculum developer who can challenge traditions and her own thinking to create and implement instruction.

BROOKE

Background

Brooke[9] *is a fifth grade teacher at Brown Elementary. Brooke has been teaching for twenty one years. She holds a Masters degree in literature. Brooke has worked with two student teachers as a part of Academic Learning's mentor teacher component. She did not work with any student teachers previous to working with Academic Learning. Brooke has been actively involved in two Professional Development School projects. She is a member of the LISSS(Literacy in Science and Social Studies) group, in which a group of university faculty, graduate students and classroom teachers meet weekly to study integration by reading literature, co-teaching in the classrooms and debriefing about experiences. Brooke has presented results of co-teaching efforts in the teaching of writing at local, state and national education conferences. Brooke has also been involved in co-planning and co-teaching the language arts methods course with a university professor and graduate student in the Academic Learning program for two years. Brooke, along with Paige co-coordinated the language arts brown bag seminars. Brooke also coordinated the student teaching seminars held at Brown PDS.*

Brooke's theories of how novices learn to teach
(views about learning)

Brooke focused on two areas in her mentoring of Michelle and her work with other prospective teachers in Academic Learning. Brooke's theories of how to support Michelle in learning include the themes that Michelle 1) be able to articulate her philosophy and be thoughtful about how her philosophy matches instruction and; 2) be thoughtful about creating thoughtful learners. Brooke also describes other views about learning which influence her mentoring which will be discussed as well.

Brooke teaches three mornings per week in her classroom, plus one full day. PDS supports the work of a co-teacher in Brooke's classroom during the other time. Even though the co-teacher is in the room 1/2 of the instructional time, Brooke is Michelle's mentor teacher, and is the person who takes responsibility for planning and debriefing with Michelle. However, because of this arrangement, Brooke is not available for observation and discussion during half of the instructional time.

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[9]Brooke is a pseudonym.

Matching philosophy with instruction

Brooke believes that a variety of Professional Development School experiences have helped her "rediscover" the way she thinks about teaching and learning. Brooke has been a co-instructor for Academic Learning's language arts methods course and coordinator of both the brown bag language arts seminars and the student teaching seminars held at Brown PDS. She uses these experiences to think about her work with Michelle, and uses her experiences with Michelle to help her think about her other teacher education roles.

As a result of interactions in various roles, Brooke began to talk more and more about her belief that it was important for prospective teachers to articulate what it is they believe, and be able to match these beliefs with instructional actions. This became an important theme in her work with Michelle and the other prospective teachers. In October, she said: "...I think the whole idea about having a clear idea of your philosophy is critical. I mean, I think that's really, really important. And definitely having ideas about learning. The ways in which kids learn."

During conversations with Michelle, Brooke pushes her to think about the content she is teaching. She focuses on helping Michelle see that there is not just one way to approach a teaching decision. She said, "I don't give her cookbook textbook kind of answers or solutions to things... I say well how would you handle this?"

The following conference excerpt illustrates how Brooke interacts with Michelle. During the language arts practicum, Michelle wanted to begin teaching a language arts unit around the theme of "point of view." She wanted to expose the students to a variety of written genre that portrays Christopher

Columbus from different perspectives. Within the following conference, Michelle is beginning to plan for her first lesson.

\- - - - - - - - - -

> Michelle: I am going to first give them (the students) a pre-test to get their opinions about what they think of Columbus.
>
> Brooke: Well, here's a decision that you have to make. Do you want to have them talk about it, or do you want to just collect it (the pretest about their point of view of Columbus). *It depends on the purpose and how you want to introduce the unit. Do you want to talk about point of view right now? How do you want to introduce the concept of point of view?*
>
> Michelle: I think that's the one thing, I don't know...You gave me the idea of the continuum, I was first going to just have a poster, because I didn't think of it as a continuum, but I think that's a really good idea, that's helpful cause it's easier to picture, but do you have suggestions about what to put on the continuum?
>
> B: Well, like you could think about this, but you could have great explorer on one end and (pause) destroyer of Native Americans on the other end. You'd have to think about it, *depending on what you want the purpose to be*, like maybe positive versus negative...but even positive and negative are hard for kids...(they go back and forth with ideas) and have them put their names on a stick and stick themselves somewhere on this continuum...You have a pretest, you have them talk, you have them place themselves on this continuum. *Now, when are you going to bring up point of view?*
>
> M: Well, it's on the poster, but I don't know the words to explain it.
>
> B: OK, you're going to give this pre-test to get them talking about Columbus, then you're going to have them plot themselves on the continuum, and then, maybe say, you've got these opinions about Columbus, how did you get these opinions. They might say...
>
> M: Teachers, books I've read, TV.
>
> B: Then at that point, *somehow, you need to bring in point of view*, but you need to set it up so you're not just saying point of view, try to give them something to hang it on.
>
> M: Do you think it would be good to give them an example? - italics added-

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Brooke tried to help Michelle think about what she wanted the students to learn about the purpose of the unit, doing the pre-test, and sticking their

name on a continuum to voice their opinion about Columbus. As Michelle and Brooke go back and forth about the concept "point of view", it seems that Brooke feels that Michelle has the knowledge, and pushes Michelle to put the pieces of the lesson together. By the close of the conference, Michelle has articulated ideas that 1) the students have opinions about Columbus, which is their point of view; 2) that we form our point of view from a variety of sources, including talking to other people, reading books and watching television. Then, Brooke wanted Michelle to get into some literature since this is a literature-based unit. Brooke suggested that Michelle "describe to the students how authors who want different reactions might write to target different spots on the continuum, where the students have placed their markers."

After viewing the above excerpt, Brooke was asked what was the purpose in pursuing her inquiry about the introduction of point of view. Again, Brooke returns to her belief that a teacher needs to know the purpose for teaching a concept. Brooke talked about how she was trying to encourage Michelle to think through why she was involving the students in the activities which she proposed. Brooke said:

> "Well, I think I was challenging her to think about *what do you really want kids to do*. And I think that goes back to the idea, yeah, *you've got to have that thought through*. You have to be able, you, it has to be clear in your mind. You have to be ready to say yeah, this is what I want kids to do. This is what's important to me. If it's not, then no, you shouldn't do it." -italics added-

Brooke feels that her role as a mentor is to help prospective teachers think about the problems of practice, rather than to provide them with solutions. She said, "If you concentrate on giving them a way to think about what they need to know and, and to, not to find the answers, but to find the problems." Brooke emphasizes that her goal is to help Michelle make

thoughtful decisions that are grounded in understanding what it is one wants children to learn. Although in the conference Brooke probed Michelle to think about her purpose of teaching point of view, Brooke did not specifically reference the importance of subject matter knowledge as part of a philosophy of instruction. She did, however, talk about how this conversation with Michelle lead her to think about how she wanted to approach co-teaching the Academic Learning language arts methods course for the following term. She said:

> "...I have been putting a lot of thought into how these students are learning. (When we teach the language arts methods course spring term) "I want to challenge them to think about what the language arts are and how they would teach language arts."

The idea of understanding philosophies that guide instruction which began during her mentoring of Michelle lead to thoughts about how to structure teacher education experiences for the next cohort of Academic Learning student teachers.

Being thoughtful about creating thoughtful learners

Brooke's philosophy of being not only aware, but also thoughtful about instruction influences how she supports Michelle in learning to teach. It also influences how she talks to Michelle about helping elementary students learn. She believes that there is a difference between teaching as a series of activities and thoughtful teaching. She feels it is part of her role as mentor to model and encourage Michelle to be thoughtful when implementing instruction with students. From her vantage point as a classroom teacher, Brooke feels that she has learned the difference between what she calls teaching activities and teaching strategies.

> "Well, because you're in there all day long with these kids and you're, you are going to develop strategies. And if you, if you've developed, *if you have a good sense of thinking, then you're*

gonna develop strategies that will promote that (a good sense of thinking). If you haven't, if you've learned that teaching is nothing but a series of activities, then that's what you're going to do."

Brooke believes that the way a teacher implements instruction either conveys a message to children that learning is an unconnected set of activities or that learning involves thoughtful exposure and interpretation of experiences. She said that if a teacher has a "good sense of thinking" that that teacher will "develop strategies that promote" a good sense of thinking among the students.

Brooke's views of implementing instruction derive from Professional Development School work with the LISSS (Literacy in science and social science) project. The project group read and talked about the difference between a work and a learning setting. Brooke has been working with Michelle to establish a writer's workshop is the classroom. She uses these terms to frame conversations about her views of how to set up an engaging environment for students. She said:

> "When you, when you look at it (classroom) in terms of the work place, you're focusing on products, you know, getting things done....I think as long as you do focus on products, you're not, you're going, that's what they're going to be thinking about and so when they are done, then they're done. But what's different about this (work in her classroom), and maybe this is something else that I need to explain to her (to Michelle), is that...this isn't focused on a product, but it's an ongoing thing so that you, you're never done."

The instruction in Brooke's classroom, in her perception, focuses on helping create thoughtful learners who engage in the process of learning something (e.g. learning to write) rather than work to finish a product and move to the next task.

Theories about learners

Brooke's believes that novices need to be encouraged to articulate their philosophy of teaching and think about ways that instruction will match their

philosophy. This theory of creating thoughtful learners is consistent for how Brooke views both elementary students and prospective teachers. In both cases, Brooke says she is promoting independent thinking, allowing learners to experiment with and have ownership with new ideas, asking challenging questions, and supporting the learners in taking risks.

Brooke does make one distinction between her elementary students and her prospective teacher. Brooke views Michelle as a colleague. When Brooke was asked if she feels that there are differences between an experienced and a novice teacher, she replied,

> "I don't buy into that (expert/novice differences)..I think there are things that get easier you know, things come together more because you've got more to draw on. I mean that I think that I do have some whatever to draw on but, I don't see that as, I don't set myself up as like, okay, now do it the way I'm doing it."

Brooke seems to have a conception of experienced versus novice which sets the experienced party up as the one who has "answers," and she doesn't like the feeling that conveys. She continued by saying:

> "I mean they can have all this supposed expertise because they've had this experience, *but that doesn't mean you've thought about it or used it or done anything with it.* And I guess I see myself as really having done something with it, because I've continued to think about it, and that I just don't fall back on experience, and like say, well, I've been teaching 20 years, therefore I know."

Because Brooke views herself as a learner who is still continuing to think about her teaching practice, she sees herself as on an equal plane with Michelle. Similar to the other mentors, she does not talk about the role of experience in helping Brooke look at teaching episodes differently than Michelle. What is important to Brooke is that a teacher be thoughtful about the practice of teaching, and those who are thoughtful are her comrades.

Frequency counts: Views about learning

Consistent with her belief about helping novices match philosophy with instruction and be thoughtful about their instructional decisions, Brooke talked frequently about these themes. On fourteen[10] occasions during the six interviews Brooke spoke about the importance of developing thoughtful teachers who could reason through and justify instructional choices. The majority of the time when she spoke about this theme, she provided definitions for what she felt it meant to help prospective teachers become more thoughtful about her teaching (level two response). She repeatedly voiced her belief that it was important to be thoughtful, and began thinking of ways that she could help Michelle and the new cohort of students engage in thoughtful inquiry about their beliefs of teaching. She provided some specific examples of how she was helping Michelle become thoughtful about her teaching, by asking her questions about purposes and practices (level three response). Her extent score for developing independent thinkers= 2.2 out of 3.0.

The theme matching philosophy with instruction occurred ten times within the six interviews. Conversations about this theme focused mainly on concrete ways she was working with Michelle and other prospective teachers to help them to discover their own philosophy and then match philosophy with instruction (level three response). She focused sessions during the student teaching seminar around the issue of articulating philosophies, and providing examples from actual teaching experiences that support those philosophies. Her extent score for matching philosophy with instruction= 2.7 out of 3.0.

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[10]The unit of analysis was one complete response including probes. This means that Brooke referred to the theme "developing independent thinkers" fourteen times-with a total of 40 interview chunks.

Seven times during the six interviews Brooke spoke about the special kind of knowledge that classroom teachers can share with novices. As a co-teacher for the language arts methods course in Academic Learning, she feels that she has valuable experiences and perspective that adds another dimension to a traditional methods course. She feels that she has information about practical realities of what can be accomplished, and has daily contact with the complex and ambiguous nature of the classroom. When she talked about connecting subject matter with children she mostly described what special knowledge mentors have that they can share with novices (level two response). Though she referred to the importance of being thoughtful when connecting knowledge to children, this actual theme occurred only twice within the six interviews. Her extent score for connecting subject matter knowledge to children= 2.2 out of 3.0.

Brooke spoke about parallels between how she views elementary students and prospective teachers only once. When she spoke about this theme, she defined similarities in ways she views learning for both sets of learners (level two response). Her extent score for parallels between learners = 2.0 out of 3.0.

Conversations about the mentor/novice relationship surfaced four times across the six interviews. Although Brooke uses the word collegial to describe her relationship with Michelle, she does make a distinction between the experiences of the mentor and novice (level two). She says that the mentor "has more to draw on." She talks about viewing herself as someone who has really thought about the experiences she has had, and uses those experiences to help her think about future instructional decisions. Her extent score for mentor/novice relationship= 2.0 out of 3.0.

The sources of knowledge Brooke uses to help novices

learn to teach (sources of knowledge)

Brooke has been active in Professional Development and Academic Learning work. Brooke believes that experiences in PDS have shaped how she now thinks about teaching and learning. She feels invested in helping students learn to teach, and has latched onto the idea that it is vital for prospective teachers to understand their teaching philosophy and how that matches with instruction. As she works with Michelle and reflects about her work with prospective teachers, it is difficult for her to talk without mentioning PDS or Academic Learning knowledge.

Professional Development School as a source of knowledge

Professional Development School experiences have influenced the way that Brooke approaches her work in the classroom and with prospective teachers. She said:

> "I think that's the really neat thing about having had the opportunity to work in PDS, I can tell myself I know *why* now. Before, I was just looking for reasons to justify what I was doing, but I wasn't, I wasn't finding it, I wasn't reading journals and studying and you know, I finished my masters program in 78 and you know, I've..I knew I wasn't getting it from workshops and inservices. That wasn't helping. They were just doing the quick fix things and I knew that didn't work. But the one thing I didn't do was continue to study. It just never occurred to me. ..And I guess that through all of this (work in PDS) I've gotten some ways to think about teaching, and about asking questions in different ways. And how I've framed it for myself now, and what I'm saying in 406 (the Academic Learning student teaching seminars) is that *you need to know what your philosophy is and then you have to match what you're doing with your philosophy and you have to look at what's happening in your classroom and say...where does that fit in all of this?* " -italics added-

One idea in particular that seemed to powerfully impact Brooke was H. Marshall's (1990) descriptions of the classroom as a learning setting or a work place, which she read and studied with the LISSS group. As they plan, teach,

and reflect about teaching practice, members of the LISSS project have as a goal exploring "ways to genuinely engage students in their education and to create classrooms that are *learning settings* for all students" -italics added- (Rosaen & Lindquist, 1992, p. 4). Brooke embraced this idea of distinguishing between a work and learning setting, and helping prospective teachers understand the differences in each of the settings. For example, Brooke said:

> "Being involved in PDS changed how I use my experience. Like this idea of thinking about the classroom setting as being a learning community as opposed to a work setting. You know, three years ago I wouldn't have had that to offer as an idea for them (student teachers) to think about."

Part of how Brooke now uses her experience is to think about ways to work with the five prospective teachers placed at Brown (brown bags and student teaching seminars) and with the entire cohort of twenty-seven Academic Learning elementary majors (language arts methods). As she moves between teaching in her classroom, working in a PDS study group, mentoring her novice, and coordinating seminars, Brooke weaves together knowledge she is learning through a variety of sources. She said:

> "In our (PDS) study group this fall, something really caught my attention. Well, in our group we've spent a lot of time talking about the classroom environment, how really important that is.and and we had developed this workplace versus learning environment sheet and then I started to read this, and then it really hit me, you know, when I, when Michelle was talking, that this was basically probably something that they (student teachers) really haven't thought about or, I mean I don't know if they get this in any of their courses, but the need for personal philosophy became really important to me..that you need to take some time and think what it is that I believe about teaching. You know, I mean, now I've got all this information, what am I going to do with it? "

There are times when Brooke feels overwhelmed by study group meetings, planning for and teaching college students and collaborating with colleagues to teach differently in her classroom. At moments she feels that PDS efforts have not reached that point where restructuring really frees

classroom teachers appropriately to have time to research, reflect, write and talk about their work.

Academic Learning as a source of knowledge

Restructuring efforts at Brown PDS have made it possible for Brooke to leave Brown to work with Academic Learning students at Michigan State in the language arts methods course. Brooke's experience with Academic Learning and PDS closely tie together, and it is difficult to distinguish a boundary between the two sources of knowledge and experience.

Brooke's belief about the importance of knowing your philosophy pervades conversations she has with Michelle, and become a frame for her work with other prospective teachers in Michelle's cohort. Brooke said that as a result of the LISSS project work and her work with Michelle:

> "...that's why I came up with this thing about, with the 470C (student teaching seminar). It's, you need to know what your philosophy is and then you have to match what you're doing with your philosophy and you have to look at what's happening in your classroom and say...where does that fit in all of this."

During the fall, before the student teaching seminars began, Brooke was already thinking about the idea of uncovering one's philosophy. She talked not only about how she wanted to approach this topic with the seniors, but also about thoughts for teaching the next set of juniors in the language arts methods course spring term. In November, she said:

> "I was thinking that we should change textbooks next year (for language arts methods). I really thought about this and I thought okay, suffice to say that if you're going to teach..if you're going to teach in a school district that's full of programs, they're going to train you, you're going to be trained. Do not worry. They will send you to Michigan Model, you'll be trained. They will send you to Math Your Way, you will be trained. I mean, there's at least a teacher's manual and the way the publishing companies now, there are ditto books and, you know, you've got, so if that's the way you're going to teach, you don't need to spend time doing that kind of stuff. Because it will be provided for you. What...*what you would have, what you need to do is spend some time thinking about your philosophy and how that matches with what you're*

teaching. You know, to.really teach them, (prospective teachers) ...*to really challenge them to think about what the language arts are, and how would you teach this?* ...I think that, you know, giving them some different things to think about, it might challenge their way of thinking and then like by showing them some of these videotapes of what kids in my classroom say and what you can get out of them or what they see happening in some classrooms, ...just to start the thinking." -italics added-

Brooke continued to talk about the importance of grounding what you know in knowledge so that you can talk about and justify what you are doing as a teacher during the student teaching seminars held January-March. She said that, as an experienced teacher, she could tell the five prospective teachers in the student teaching seminars that "it's just a feeling I have" to justify a teaching decision. But she feels:

"...that doesn't help the students....that's what pushed me to think in that 470C (student teaching seminar) course about your philosophy of, you know, that basically you have to have, these things that you do have to be grounded in something and you have to know what they're grounded in and, if you just do stuff and they're not really grounded in a belief system that you have about what you want your classroom to be like, then, you, you may think you know what you want your room to be like, but everything that you're doing is working against that."

Classroom teaching as a source of knowledge

Brooke seems to talk in ways that begin to weave together the sources of knowledge of classroom teaching experience, and knowledge of the subject matter of language arts taught in Academic Learning, although she continues to talk about the valuable perspective which she as a classroom teacher brings to PDS and Academic Learning. One example of how she seems to be beginning to blur the lines between sources of knowledge is when she talks about the role of subject matter knowledge in mentoring. Other mentors have distinguished classroom experience as a special kind of knowledge of doing, and have relinquished responsibility of helping novices learn about subject matter knowledge. In contrast, Brooke said:

"...Part of a knowledge base as a mentor is to help students (student teachers) figure out ways to think about, like to reason through how to take the subject matter and get it to the students, so that the students (the elementary students) can make sense of it. I think part of helping the students (student teachers) make sense of it (subject matter) means that you (as a mentor) need to have a sense of thinking about subject matter."

She seems to think about her classroom knowledge as including both subject matter and pedagogy. She speaks about "reason(ing) through how to take the subject matter and get it to the students" in a manner similar to how Shulman (1987) describes the construct of pedagogical content knowledge.

Frequency counts- Sources of knowledge

Within the six interviews Brooke spoke about Professional Development School work as a source of knowledge ten times. Most of the time when she spoke about this theme, she provided specific examples of how she has gained qualities and habits through PDS work (level three response). She refers to the "learning place" (Marshall, 1990) metaphor as particularly useful to her teaching. At other times she spoke in general about the positive benefits she has gained from PDS work (level two response). On a few occasions, she talked about feeling overwhelmed by PDS expectations and time, and felt that she did not see benefits (level one response). Her extent score for PDS as a source of knowledge= 2.6 out of 3.0.

Five times within the six interviews Brooke specifically referenced Academic Learning as a source of knowledge. At times she talked in general about how involvement with the students through the methods course and seminars helped her think about mentoring and teaching (level two response). She also referred to specific examples of experiences she had with Academic Learning students that helped her think about how to support novices learning (level three response). She used her experiences with Michelle to frame how she thought about planning for the next year's

language arts methods course. Her extent score for Academic Learning as a source of knowledge= 2.4 out of 3.0.

Brooke talked about classroom teaching experience as a source of knowledge eight times during the six interviews. She emphasized that classroom teaching experience was a valuable source of knowledge (level one response) that gave her a certain vantage point from which to work with prospective teachers on campus in class and seminars. On several occasions she provided specific examples of how her experiences help her mentor (level two response). For example, she talked to Michelle about issues of timing, structure and language that might be appropriate for students. She did not talk about taking the step to explicitly integrate her classroom teaching experiences with Academic Learning, though her talk about subject matter and pedagogy as part of her work may be an effort to move in that direction. Her extent score for classroom teaching experience as a source of knowledge= 1.5 out of 3.0.

The nature of reflection used by Brooke to help Michelle learn to teach (nature of reflection)

Brooke seems to feel involved with Academic Learning through her work with the cohorts of students in language arts methods over the past two years. She voices interest in planning, teaching, and evaluating novices' growth in language arts. Brooke uses her experiences mentoring Michelle to help thinks about occasions of learning for the next cohort of Academic Learning students as a whole in language arts teaching.

Reflecting about work with prospective teachers

Brooke coordinated both the brown bag language arts seminars and the student teaching seminars held at Brown PDS. The seminars were connected to coursework and field experiences of the prospective teachers. Brooke planned

the seminars around needs which the prospective teachers had expressed, and around Brooke's desire to have the prospective teachers understand and articulate their philosophies of teaching.

Working closely with Michelle in the classroom provided Brooke with experiences which helped shape her work with the other four prospective teachers placed at Brown PDS. Through conversations with Michelle, Brooke grew more adamant that a teacher need to be able to articulate the purpose for carrying out an instructional action. After one conference where Michelle was challenging Brooke about her philosophy of teaching writing, Brooke said:

> "Having that conversation with Michelle helped clarify in my mind and support in my mind why I was doing it instead of just thinking yeah, I know gut level this is right; but without having to actually verbalize why I felt that way (pause) Yeah, I think that you can think you know something but until you actually have to say it, you don't really know for sure whether that's really what you believe or not. I mean you can just say well, it's just a feeling I have, but that doesn't help Michelle."

Part of Brooke's conception of thoughtful teaching includes the idea that one ought to be able to talk about *reasons why* a decision was made. She feels that it is valuable to be engaged in a conversation with someone else in order to help make implicit theories of teaching explicit. As she said above, "until you actually have to say it, you don't really know for sure whether that's really what you believe or not." The idea that there is value in uncovering beliefs and knowledge, and that these beliefs and knowledge can be made explicit through interaction is the basis of research on implicit theories (Clark & Peterson, 1986; Witherell & Noddings, 1991). By giving Michelle the opportunity to understand Brooke's thinking, Michelle is gaining access to an experienced teachers' reasoning and knowledge. Through interactions like this, it is possible that Michelle could also learn to talk through her own

beliefs and articulate her own knowledge.

After this conversation, Brooke began to think about the advantages of being able to talk aloud about the reasons behind teaching actions. This experience lead Brooke to structure the student teaching seminars (470C) around the theme of understand your philosophy of teaching. Brooke said:

> "...that also pushed me to think in the 470C (student teaching seminar) course about your philosophy of, you know, that basically you have to have these things that you do have to be grounded in something, and you have to know what they're grounded in and, but if you just do stuff and they're not really grounded in a belief system that you have about what you want your classroom to be like, then, you, you may think you know what you want your room to be like, but everything that you're doing is working against that."

Modeling and encouraging prospective teachers to reflect

Throughout Brooke's work in a dyad with Michelle or with a small group with Michelle and her peers placed at Brown, Brooke has encouraged the prospective teachers to reflect about the purposes and content of what they are teaching. Whether it be an interaction with Kate (Alexa's student teacher) about a central question of a unit, with Shelly (Lisa's student teacher) about writer's workshop, or her own student teacher, Michelle, she asks questions about what the student teacher wants to teach and why that subject matter is important to teach.

When working with Michelle, a lot of interaction time is spent with Brooke modeling her way of thinking through teaching decisions. As she said:

> "Basically, I think aloud, I guess is how I would term it. It's like I talk to her (Michelle) about why I'm doing what I'm doing or what I would do or...not what I would do if I were you."

Brooke is very clear throughout her mentoring that what she is modeling is a way of thinking about teaching, not a way of teaching. As she said above, she is giving examples about "why I'm doing what I'm doing" but " not what I would do if I were you."

Frequency counts: Nature of reflection

Brooke spent a lot of time thinking about the way she was supporting the learning of Michelle, as well as the other four prospective teachers placed at Brown. She also used her experiences with this group of students to think about working with the next cohort of Academic Learning students. Seven times during the six interviews she reflected about work with prospective teachers. Sometimes she talked about what she thought Michelle was learning during the student teaching experience (level two response). On other occasions she spoke about specific goals she had for Michelle (level three response). She wanted Michelle to be thoughtful and to be able to talk about how her philosophy matched instruction. Her extent score for reflecting about work with prospective teachers= 2.4 out of 3.0.

Six times during the interviews Brooke talked about modeling and encouraging prospective teachers to reflect. She mainly focused on the issue of making one's knowledge explicit in order to make visible one's reasoning (level two response). She talked about how she thought aloud to Michelle to let her see Brooke's thinking, especially about how Brooke constructs writing workshop. There were also a few times when Brooke talked about encouraging Michelle to reflect by asking her challenging questions about subject matter decisions and why certain subject matter is important for children to learn (level three response). Her extent score for modeling and encouraging prospective teachers to reflect= 2.3 out of 3.0.

Only once during the interviews Brooke talked specifically in an interview about literacy subject matter that she was helping Michelle work through. When she did discuss the subject matter itself (point of view), she talked about challenging Michelle to think about what she knows about point of view, and how she has adapted this knowledge appropriately for children

(level three response). Her extent score for reflection about literacy subject matter= 3.0 out of 3.0.

A visual model of mentoring

Each mentor was asked after the fourth videotaped conference to design a visual model which represented her conception of the role of mentor. The mentors could choose to either draw the model and bring it to the interview held on the next day, or to draw the model during the interview time. Brooke chose to draw her model during the interview and describe her model to the researcher as it was designed.

Brooke designed a concept map, since she said this was a familiar way for her to conceptualize ideas. Brooke's concept map is simple, yet contains important ideas that are consistent with how Brooke talked about her role as mentor and her beliefs about helping novices learn to teach. In the center of the map, in a larger circle than the rest of the concepts, Brooke placed the concept of the "teacher education student as an independent thinker." This idea of helping novices to become thoughtful and able to articulate their philosophy and knowledge was prevalent throughout the six interviews.

As she talked about how prospective teachers learn, she emphasized that each student teacher brought their own prospective to teaching practice. She said that sources of knowledge such as prior knowledge/experience, the formal education of the university and ideas that the novices had about education all influenced how they formed their beliefs about teaching. She drew arrows back and forth between these sources, saying that each component of prior knowledge "TE formal education" and "Ideas about education" were connected, and influenced each other.

Brooke conceptualized her representation around the idea that her goal was to help novices become independent thinkers, and labeled the concepts surrounding "independent thinker" as sources of knowledge that help novices reach the goal of independent thinking. Included as sources of knowledge are the mentor, and also the university supervisor during student teaching. She uses the words "communication" and "perspective" as concepts surrounding the map. Brooke described use of the term communication to indicate that the mentor would help the novice communicate her understandings about teaching. Brooke described use of the term perspective to indicate that the novices' perspective about teaching was developing from a variety of sources, including her prior experiences and informal ideas about education, as well as formal coursework knowledge and experience.
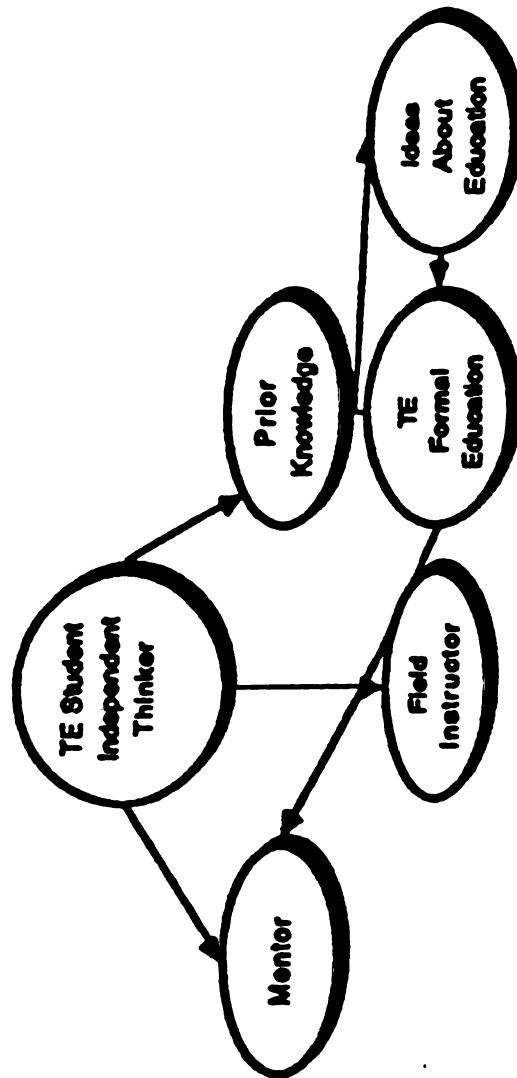
Brooke

Figure 6

Summary

Brooke consistently emphasized her belief that novices learn to match philosophy with instruction in order to help develop their independent thinking. These themes are apparent in her narrative, frequency counts and mentor model. Throughout her interactions with student teachers in the context of a university methods course, language arts and student teaching seminars and her mentoring of Michelle she conveys the message that the novices need to understand and be able to talk about the purposes of their instruction. She recognizes the power of prior experiences and beliefs in shaping novices current beliefs about teaching, and hopes that by articulating beliefs novices will become more aware of conceptions that guide their practices.

SUMMARY OF THE CASES

The purpose of the first section of this chapter was to illustrate how the five classroom teachers make sense of their role. Narratives, frequency counts and visual models which the mentors created were the three different types of data used to capture the perspective of the mentors. The intention was to provide an in-depth description of each of the five teachers, to learn about how each of the teachers working in Brown Professional Development School think about mentoring. The following section will describe and analyze patterns and differences found across the five cases.

PATTERNS AND UNIQUENESS IN HOW FIVE CLASSROOM TEACHERS MAKE SENSE OF THEIR ROLE AS MENTORS

Patterns

The purpose of this section is to discuss patterns and uniqueness across the five cases. There are patterns, or trends, among the mentors' stories which reveal significant findings of the study. The patterns illustrate how four of the five teachers enact their roles as mentors in a way which is substantially different from traditional forms of supervision. Three patterns will be discussed. The first pattern is that a discourse community was created by university faculty and classroom teachers as a result of Professional Development School and Academic Learning teacher preparation program experiences. Within this discourse community, four of the five mentors share common language, knowledge, and beliefs about helping novices learn to teach. The second pattern is that the ways in which the mentors interact within the context at Brown Professional Development School affects the sources of knowledge used to mentor. The third pattern is that the content of four of the five mentors' reflections center around work in teacher education and understanding literacy instruction.

Pattern One: *A discourse community was created by university faculty and classroom teachers as a result of Professional Development School and Academic Learning teacher preparation program experiences. Within this discourse community, four of the five mentors share common language, knowledge and beliefs about helping novices learn to teach.*

The first pattern is that a teacher education discourse community has been created at Brown Professional Development School. Evidence supporting the claim that a teacher education discourse community has been created at Brown includes: 1) four of the five teachers use common language from Academic Learning teacher preparation program to help novices learn to teach; 2) four of the five teachers bring knowledge and norms from

individual projects into the larger discourse community; 3) four of the five teachers share common views of learning and 4) four of the five teachers feel they have a voice in preparation of novices. Before these four reasons are explicated, it is necessary first to define characteristics of this teacher education discourse community.

This teacher education discourse community is based on a collaborative model for teacher preparation.

The Academic Learning teacher preparation program is working to develop roles for classroom teachers as mentors and collaborators in teacher education. Originally in the mid-1980's, Academic Learning faculty hoped that the mentor teachers would help university faculty mutually construct a conceptual framework for teacher education. Early efforts to mutually construct a conceptual framework were limited because of time, money and personnel. Now with the conception of Professional Development Schools, Academic Learning faculty find an opportunity to participate and collaborate with both prospective and experienced teachers in different ways. At Brown PDS, consistent with Cochran-Smith's (1991a) "collaborative resonance" model, both university and classroom educators play an active role in shaping both philosophies and actions in the Academic Learning teacher preparation program.

Both the classroom teachers and university faculty together have begun to reach shared meanings about the conceptual framework of Academic Learning. These shared understandings of the conceptual framework lead to shared action in preparation. Following are four illustrations of how four of the five teachers are members of a teacher education discourse community at Brown PDS.

Four of the five teachers use common language from Academic Learning

teacher preparation program to help novices learn to teach.

The conceptual framework of Academic Learning includes the goal that prospective teachers study subject matter in a way which will support pupils' conceptual understanding. University faculty and mentors are encouraged to help prospective teachers draw on both research and practical experience about teaching and learning to make teaching decisions. Prospective teachers are also encouraged to reflect about their learning and on the practice of teaching (Roth, Rosaen & Lanier, 1988).

Lisa, Alexa, Paige and Brooke feel that it is important to understand the conceptual framework of Academic Learning in order to effectively enact the role of mentor. These four mentors feel they share common beliefs and understandings with Academic Learning faculty about teaching for conceptual understanding, about using multiple sources of knowledge to make teaching decisions, and about reflecting about learning and teaching. These mentors use language common to the Academic Learning program in order to help prospective teachers see consistency between what they are learning in the university and field.

There are several ways in which the mentors share common goals and language. For example, Lisa and Alexa often ask prospective teachers to map out literacy knowledge and skills in order to be able to talk about relationships between concepts which will be taught. Academic Learning calls this method "concept mapping."

In addition, Brooke, Paige, Lisa and Alexa each push prospective teachers to talk about the main idea of their language arts unit in order to see evidence of the novices' understanding of the unit. This main idea is framed as a question which synthesizes what they want to teach and how they will frame the unit for the elementary students. Academic Learning calls this

method a "central question."

Finally, Brooke, Paige, Lisa and Alexa each ask questions which probe prospective teachers' conceptual understanding of the subject matter they are teaching. For example, Brooke asked Michelle about her understanding of "point of view", Alexa asked Kate about her understanding of "setting", Lisa asked Shelly about her understanding of "personification" and Paige asked Jane about her understanding of having "voice in the writing process."

Four of the five teachers bring knowledge and norms from individual projects into the larger teacher education discourse community.

Each mentor participates in individual projects within Brown PDS. Brooke and Paige are members of the LISSS (Literacy in Science and Social Studies) group. Lisa and Alexa are members of the DAC (Developmentally Appropriate Curriculum) group. Kimberly is a member of the Math study group. Four of the five teachers have developed a discourse community beyond individual projects. They bring experiences from individual projects to the larger teacher education community to build a larger base of shared understandings about visions for preparing teachers.

For example, as part of the LISSS study group, Brooke and Paige both studied H. Marshall's (1990) metaphor of the work setting versus the learning setting. The conceptualization of the learning setting emphasizes norms consistent with the Academic Learning program and with what mentors and prospective teachers were working to promote in their classrooms. Brooke and Paige brought the Marshall article to a student teaching seminar (held during full time student teaching) and distributed the article to the mentors, prospective teachers and university faculty in attendance. The following seminar focused on discussion of the article and illustrations of applications of the learning setting metaphor in the classroom. Brooke and Paige brought

research knowledge from an individual project to the teacher education discourse community to build and extend the community's knowledge.

Brooke was involved in another example of bringing experiences from another project to the teacher education discourse community. Brooke co-taught the language arts methods course on campus (Spring, 1991). Kate (Alexa's student teacher) was a member of that class. Over the course of the ten week term, Brooke had many interactions with Kate, and observed Kate in interaction with university faculty and peers. She noticed that Kate often looked for answers rather than finding ways of pursuing her own inquiry for answers. Brooke herself had been in the trap of answering Kate rather than asking questions while in the language arts methods course (Spring, 1991). By the time Kate was in the language arts practicum and attending the brown bag language arts seminars (Fall, 1991), Brooke had experience in asking Kate questions rather than providing answers. Alexa observed Brooke in interaction with Kate during a brown bag lunch. As Alexa watched Brooke ask Kate questions, she learned a lot about different ways of interacting with Kate in a way that was guiding but not giving answers. This brown bag seminar marked a shift in the way Alexa began to interact with Kate. Alexa observed the way in which Brooke interacted with Kate, and began using this questioning method in her own subsequent interactions with Kate.

Four of the five teachers share some common views about learning.

The case studies described how the mentors talked of their views about learning. There were some common themes among the mentors, including "matching philosophy with instruction" and "connecting subject matter to children." The theme shared most significantly across the four mentors was"developing independent thinkers."

There was shared agreement among Lisa, Alexa, Paige and Brooke that an important part of their role was to help "develop independent thinkers." Brooke spoke about this theme 14 times during the 6 interviews and Lisa spoke about this theme 11 times during the 6 interviews. Brooke spoke mainly about what it means to help students become independent thinkers (See Table 4, Theme A, Level 2 response). Brooke's average for the number of times and extent to which she talked about this theme = 2.2. Lisa primarily provided concrete examples of how she was enacting her goal of developing independent thinkers (See Table 4, Theme A, Level 3 response). Lisa's average for the number of times and extent to which she talked about this theme = 2.8. Though Paige only spoke about this theme 2 times during the 3 interviews, she gave a level three response each time she spoke about the theme (Average = 3.0). When Paige spoke about developing independent thinkers, she provided concrete examples of how her goal and definition of independent thinkers is enacted in the classroom and/or mentoring (See Table 4, Theme A, Level 3 response). Alexa spoke about this theme 5 times within the 3 interviews. Her average for the number of times and extent to which she talked about this theme = 2.4. Sometimes she provided a definition of independent thinking (See Table 4, Theme A, Level 2 response) and sometimes she provided concrete examples of how she was enacting this definition in her mentoring (See Table 4, Theme A, Level 3 response).

Four of the five teachers feel they have a voice in preparation of novices.

At Brown PDS, both university and classroom educators help to develop the conceptual framework of the Academic Learning teacher preparation program. Four of the five mentors communicate their shared understandings of this conceptual framework in the action of preparing teachers. These four mentors feel they have a voice in preparation of novices at Brown. For

example, Lisa, Alexa, Paige and Brooke work with prospective teachers in language arts brown bags and student teacher seminars. During these experiences, the mentors help prospective teachers talk about unit planning and instruction congruent with teaching for conceptual understanding.

Paige in an example of a teacher who feels she has a voice in the university portion of preparation. Paige and other members of the teacher education discourse community at Brown talk about sharing a philosophy of learning. Specifically, these educators want to help prospective teachers share the philosophy that teaching is an experience of life long learning. However, Paige felt that there was an occasion where the actions of preparation were not consistent with this philosophy. For example, Paige felt that the structure of the unit planning assignments in university methods courses were not promoting the philosophy of life long learning. Paige worked with the social studies methods course at the university. She said that the way the social studies unit plan assignment was originally designed left the unit plans as finished products where prospective teachers feel that "I've written a unit, and there--it's done." Paige said that this action "seemed to go against the idea of the learning place goal-that learning is continuous and life long." Paige suggested that the unit plan assignment be revised to capture this part of the teacher education conceptual framework. Brooke provides another example of a teacher who has a voice in structuring the Academic Learning teacher preparation program. From her work with her prospective teacher, Michelle, and with the language arts methods course (Spring 1991), Brooke felt the novices needed to think more about their philosophy of teaching language arts, and how this philosophy matched instruction. This idea also came from other PDS conversations where Brooke learned to ask *herself* questions about purposes and practices. As she was thinking about

plans for the Spring 1992 version of the language arts methods course she said, "I have been putting a lot of thought into how these students are learning. (When we teach the language arts methods course spring term) I want to challenge them to think about what the language arts are and how they would teach language arts." Since part of the Academic Learning conceptual framework included emphasis on reflection, Brooke felt it was important to help the prospective teachers in the language arts methods course think about their own philosophies, and how these philosophies match with instruction.

TABLE 4

How do the mentors talk about their theories of how novices learn to teach?

Views About Learning

A - Developing Independent Thinkers-
1= *saying* a goal is to help students become independent thinkers
2= *providing a definition* of what it means to this mentor teacher to help students (elementary and prospective teachers) become independent thinkers
3= *providing concrete examples* of how this goal and definition of independent thinkers is *enacted* in the classroom and/or mentoring

B - Parallels Between the Two Learners (elementary & prospective)
1= *saying* the ways that this mentor teacher thinks about learning is similar for both elementary students and prospective teachers
2= *defining* similarities in ways this teacher views learning for both elementary students and prospective teachers
3= providing *concrete examples of times in mentoring* when it is helpful and not helpful to draw parallels between elementary students and prospective teachers (there are occasions when the mentor feels she should look at the learners' needs differently).

C - Matching Philosophy With Instruction
1= *saying* that it is important for a prospective teacher to know the purpose of a lesson or unit so that the prospective teacher knows what she is doing and why she is doing this lesson/unit
2= *defining* the mentor's own philosophy and how her philosophy matches instruction (modeling without explaining her modeling to the prospective teacher)
3= linking #1 and #2 to provide *concrete examples of actively helping* the prospective teacher learn to discover her own philosophy and match her philosophy with instruction.

D - Mentor/Novice Relationship
1= *saying* there are similarities between a mentor/prospective teacher relationship and a relationship with a colleague in the building
2= *recognizing* that the prospective teachers do not have the repertoire of experiences that their colleagues have, and thus *differentiating* a collegial relationship from the mentor/prospective teacher relationship
3= *providing concrete examples* of differences between a mentor and a novice, and supporting those differences through mentoring *actions*

E - Connecting Subject Matter With Children (mentor's special knowledge)
1= *saying* it is important for student teachers to have someone to talk to who is connected with children in a classroom
2= *defining* the "special knowledge" that school-based educators hold and can share with prospective teachers
3= *providing concrete examples of* using this "special knowledge" to help prospective teachers be thoughtful in connecting instruction with children

Theme	Brooke (6 Interviews)			Kimberly (6 Interviews)			Lisa (6 Interviews)			Paige (3 Interviews)			Alexa (3 Interviews)		
	# of times	Ex-tent	Avg.	# of times	Ex-tent	Avg.	# of times	Ex-tent	Avg.	# of times	Ex-tent	Avg.	# of times	Ex-tent	Avg.
A	14	31	2.2	3	6	2.0	11	31	2.8	2	6	3.0	5	12	2.4
B	1	2	2.0	2	2	1.0	3	6	2.0	1	2	2.0	3	7	2.3
C	10	27	2.7	2	3	1.5	6	17	2.8	1	2	2.0	1	2	2.0
D	4	8	2.0	5	8	1.6	2	3	1.5	2	4	2.0	0	0	0
E	7	16	2.2	10	19	1.9	9	20	2.2	2	4	2.0	1	3	3.0

Summary: There is significance in creating a teacher education discourse community between classroom teachers and university faculty.

The construction of a teacher education discourse community at Brown PDS meant that members were involved in a fundamentally different relationship from traditional distinctions of university and classroom roles. Instead of working at cross purposes in field and university portions of preparation, members of the teacher education discourse community at Brown have developed shared understandings and shared purposes in preparing teachers.

Within a teacher education discourse community, participants share defined purposes for preparation of teachers. These shared purposes enable participants to develop ongoing relationships with each other where voices are valued. Knowledge for teaching comes both from university and the field. Classroom and university educators can participate in enacting the conceptual framework of the discourse community in different ways. Some forms of involvement in the teacher preparation program include co-teaching, collaborating in leading seminars, and using each other as resources in mentoring. Participation in a teacher education discourse community provides members with new ideas and resources that members may not have come up with alone.

Pattern Two: *The ways in which the mentors interact within the context at Brown Professional Development School affects sources of knowledge they use to mentor.*

The second pattern is that the context of Brown Professional Development School has a significant influence on how four of the five mentors approach their work with novices. Consistent with the social constructivist view of learning, interactions with the social context influence how people learn. As people interact with past and present experiences, the environment, and others, knowledge and beliefs are shaped. There are three

examples of how the ways in which the mentors interact with the context at Brown PDS affects the sources of knowledge used to mentor, including: 1) four of the five teachers promote development of norms in their mentoring which have become a part of the Brown PDS culture; 2) four of the five teachers use Professional Development School and Academic Learning as a source of knowledge in mentoring; 3) four of the five teachers blend "two worlds" of knowledge (university and school).

Four of the five teachers promote development of norms in their mentoring which have become a part of the Brown PDS culture.

There are certain norms which have become a part of both the teacher education discourse community and the larger Brown PDS culture. Some of these norms include valuing collaboration, talking to colleagues (university and peers) about ideas, sharing resources of research articles and practical ideas, and seeing research as a valuable source of knowledge. Four of the five mentors explicitly model and talk with novices in ways which promote development of these norms.

For example, Paige models how she values multiple sources of knowledge to make planning and teaching decisions. While talking with her student teacher Jane, Paige shows how she approaches the task of designing a new unit. In order to begin writing a poetry unit, Paige told Jane how she re-read a book about writing by Donald Graves, and then read a chapter in a book by Nancy Atwell about teaching poetry. Paige told Jane that after reading these resources, she then met with a professor in Academic Learning to talk about additional resources and methods. Then, Paige invited one of Brooke's students into her third grade classroom to provide her students with a concrete example of an author of poetry in Brown Elementary. Within this example, Paige was modeling to Jane ways to incorporate rich resources of

research, university professors, and other students in the building into her planning. Consistent with this example, Paige highlighted her belief in her mentor model that it is important and exciting to have multiple sources of knowledge to consult. She titles her mentor model a "rainbow of knowledge sources." Within each band of the rainbow, she describes the many different sources which she has learned to value. Some of these sources include books, discussions, questioning and other learners.

Paige promotes the norms of talking to colleagues (university and peers) about ideas, sharing resources of research articles and practical ideas, and seeing research as a valuable source of knowledge. Brooke, Lisa and Alexa also help novices value these norms. Brooke encourages novices to read articles on learning community and on writing instruction. During student teaching seminars, she presses novices to collaborate with each other as sources of knowledge to discuss unit planning and analyze critical incidents of teaching.

Lisa has been exposed to research articles and has participated in group discussions in Brown PDS which have "opened her up to so many more options." She said that learning to be reflective gives her motivation to question her own practice and the motivation to "dig up the answers." Lisa hoped that she could help her student teacher, Shelly, develop the disposition to question herself and her practice.

Alexa's experiences with reflection are similar to Lisa's. Alexa said that Professional Development School experiences have helped her learn to ask "a lot of questions about why we're doing things the way we do and just being more open to all sorts of possibilities and ideas, and I think that probably helps me when I'm with Kate, to you know, ask the kinds of questions to make her think like that." Similar to Lisa, Alexa hopes to help Kate develop the

disposition to question herself about her practice.

Four of the five teachers use Professional Development School and Academic Learning as a source of knowledge in mentoring.

In addition to learning norms of collaboration and value of research, participants gain new knowledge from experiences in a Professional Development School and the Academic Learning program. Brooke, Paige, Lisa and Alexa feel that knowledge from PDS and Academic Learning are integrated both in their classroom teaching and mentoring.

For example, Brooke talks about the important influence of PDS and Academic Learning on her teaching and mentoring. She says, "I think that's the really neat thing about having had the opportunity to work in PDS. I can tell myself I know WHY now." PDS experiences have helped her develop the desire to question herself and her practice. She has learned to articulate reasons for instructional actions. This knowledge transfers to another context where she works with novices in Academic Learning. She says, "..And how I've framed it for myself now, and what I'm saying in 406 (Academic Learning student teaching seminar) is that you need to know what your philosophy is and then you have to match what you're doing with your philosophy, and you have to look at what's happening in your classroom and say...where does that fit in all of this?" She talks about Professional Development School as a beneficial source of knowledge ten times during the six interviews. She talks about Academic Learning as a beneficial source of knowledge five times during the six interviews (See Table 5).

Paige's participation in PDS and Academic Learning experiences has also influenced her teaching and mentoring. She says she has learned about "conceptual understanding, learning to question myself about teaching and developing focusing (central) questions." She talks about Professional

Development School as a beneficial source of knowledge five times during the three interviews. She talks about Academic Learning as a beneficial source of knowledge six times during the three interviews (See Table 5).

Alexa feels that Academic Learning has a strong influence on both her teaching and mentoring. Because of her knowledge of Academic Learning content and philosophy, Alexa is able to support her student teacher Kate's conceptual learning. Alexa says that she understands about conceptual understanding from participation in Academic Learning meetings and working with prospective teachers across five years. She says, "I know that with my own teaching, I'm much more aware of the conceptual understanding when I'm deciding what I'm going to teach and why I'm going to teach certain things." Alexa feels that her knowledge of Academic Learning philosophy "has helped me become more focused (when working with Kate)." She talks about Professional Development School as a beneficial source of knowledge five times during the three interviews. She talks about Academic Learning as a beneficial source of knowledge six times during the three interviews (See Table 5).

Lisa attributes the development of a reflective disposition to professional development work. She feels she has more "wisdom about first grade children and how they learn" since she has worked in both the TDOC (Teachers Development and Organizational Change) and DAC (Developmentally Appropriate Curriculum) projects. Lisa feels her PDS experiences benefit Shelly's learning. Since Lisa understands what she wants to teach and why she wants to teach certain subject matter, she can help Shelly reason through her own teaching decisions. She talks about Professional Development School as a beneficial source of knowledge eight times during the six interviews. She talks about Academic Learning as a

beneficial source of knowledge eight times during the six interviews (See Table 5).

Four of the five teachers blend "two worlds" of knowledge (university and school).

Traditionally, university and field portions of preparation work at cross purposes. These cross purposes lead university, classroom and prospective teachers to separate knowledge for teaching into that which comes from the university and that which comes from the field. At Brown PDS, Brooke, Paige, Lisa and Alexa blur the lines between what and where learning for teaching occurs. Since most of the mentors participate in discourse and share understandings about learning to teach with Academic Learning university program faculty, there is a more natural break in the boundary between knowledge typically differentiated between university and field.

Brooke and Paige feel they have a voice in constructing the university methods courses at the university. They feel they are integrating knowledge from readings, collaborations, experience with other prospective teachers, and classroom teaching experience in both their campus and field work with novices.

In addition to work in methods courses, Brooke, Paige, Lisa and Alexa each take responsibility for helping novices learn to think about literacy instruction. Each of the four mentors feel comfortable questioning the prospective teachers at Brown about conceptual knowledge and pedagogy.

Alexa provides a significant example of a classroom teacher who is integrating both roles of teacher of content and pedagogy. Alexa believes it is her responsibility to help Kate understand the literacy subject matter she is teaching. Alexa emphasizes helping Kate learn appropriate ways to adapt content knowledge for first grade learners. Finally, she feels it is equally

important for Kate to learn to be reflective about her teaching decisions and practice. Alexa said to Kate, "The main thing is that you need to stop and ask yourself why am I teaching this and what do I want the kids to learn when I'm all done. You have to be really clear in your mind what you want them to learn." Alexa blends knowledge of subject matter and classroom experiences in her mentoring.

TABLE 5

How do the mentors use different sources of knowledge to help novices learn to teach?

Sources of Knowledge

A - Professional Development School project/research involvement

1= *saying that PDS work has NOT played an integral role* in how this teacher works as a mentor or a classroom teacher

2= *saying that PDS involvement HAS benefitted* this teacher in how she works as a mentor and/or a classroom teacher

3= *providing specific examples of qualities/habits this teacher has gained* through PDS experiences that are integral to the rest of their work (i.e. reflecting, believing that it is important to know your philosophy, understanding how prospective teachers learn)

B - Academic Learning mentor teacher component

1= *saying that Academic Learning work has NOT played an integral role* in how this teacher works as a mentor or a classroom teacher

2= *saying how involvement in the Academic Learning mentor teacher component HAS benefitted* this teacher in how she works as a mentor and/or a classroom teacher

3= *providing specific examples of qualities/habits this teacher has gained* through Academic Learning experiences that are integral to the rest of their work

C - Classroom teaching experience

1= *saying* that classroom experience is a valuable source of knowledge

2= *providing specific examples* of how the "special knowledge" of classroom experience is valuable for helping novices learn to teach

3= *linking classroom experiences integrally with PDS and Academic Learning experiences* in order to help novices learn to teach

Theme	Brooke (6 Interviews)			Kimberly (6 Interviews)			Lisa (6 Interviews)			Paige (3 Interviews)			Alexa (3 Interviews)		
	# of times	Ex-tent	Avg.	# of times	Ex-tent	Avg.	# of times	Ex-tent	Avg.	# of times	Ex-tent	Avg.	# of times	Ex-tent	Avg.
A	10	26	2.6	4	7	1.75	8	21	2.6	5	12	2.4	3	7	2.3
B	5	12	2.4	5	8	1.6	8	19	2.3	6	14	2.3	6	16	2.6
C	8	12	1.5	9	15	1.6	5	11	2.2	1	2	2.0	2	6	3.0

Summary: It is important to understand the context in which prospective teachers are placed.

It is important to understand the context in which prospective teachers are placed because certain contexts increase the likelihood of helping novices learn norms of valuing multiple sources of knowledge, teaching as life long learning, and the value of reflecting about instructional philosophies and actions. The ways in which the teachers interact with the context at Brown PDS have implications for considering the types of environments in which educators want to prepare prospective teachers. Certain contexts support growth and learning. The context of Brown PDS provides opportunities to develop norms of collegiality, of sharing resources and of seeing research as a valuable source of knowledge.

In addition, members of the teacher education discourse community at Brown PDS bring shared understandings of the conceptual framework of the Academic Learning program to their work with novices. These shared understandings help university, classroom and prospective teachers interact with people and knowledge in the context of Brown in a common language. The participants in preparation can work together toward common goals for dispositions, subject matter and pedagogical knowledge which novices should work toward in their teaching.

Pattern Three: *The content of mentors' reflections center around work in teacher education and literacy instruction.*

The third pattern is that the content of mentors' reflections center around work in teacher education and literacy instruction. Since teacher educators are promoting reflection as a beneficial competency for teaching, there is a need to examine the content of reflections in teaching and teacher education. Most studies have focused on the process of reflection (Cruickshank, 1987; Schon, 1987) rather than the content of reflections (Calderhead, 1989; Zeichner, 1990). There are two illustrations which support the claim that the content of mentors' reflections focus on work in teacher education and their role in helping novices understand and teach subject matter, including: 1) four of the five teachers reflected about their influence in preparing novices for independent teaching; and 2) four of the five teachers reflected about literacy instruction in ways consistent with Academic Learning goals.

Four of the five teachers reflected about their influence in preparing novices for independent teaching.

Four of the five mentors reflected about their work as school-based teacher educators. The mentors began to be critical of their own influence in the preparation of novices. They began to think of their job as mentors as having a long range outcome beyond performance during student teaching. While working with novices, Paige, Brooke, Lisa and Alexa began to focus on a larger goal of helping novices learn to become independent, thoughtful teachers.

Brooke, Paige, Lisa and Alexa talked in differing ways about what it meant to be a school based teacher educator. First, Brooke and Paige discussed how they were working to prepare both the novices in their room and the larger cohort of prospective teachers. Second, Lisa and Alexa discussed how

their role conception of mentor was changing as they watched video taped interactions and conversed with the researcher about their role as mentor.

Brooke and Paige reflect about their role as school-based teacher educators

Paige has participated in Academic Learning through co-teaching the social studies methods course for two years. She also participated in the PDS study group called LISSS (Literacy in Science and Social Studies) for three years. However, Jane is the first Academic Learning student teacher Paige has mentored in her classroom. Paige said that she has learned through working with her student teacher, Jane, that a school-based teacher educator needs to be able to talk with a novice about why the educator is teaching certain knowledge and skills to children. She said that it was important to be able to make her knowledge explicit to Jane in order to help Jane see Paige's reasoning and decision making. Paige said that working with Jane has forced her to "not put myself on automatic, but to continuously think about who I'm doing this with and, for what reason and why."

Consistent with Schon's (1987) belief that a mentor must be able to make her tacit knowledge explicit, Paige worked to model her thinking to Jane. In addition, Paige moved beyond modeling to guided practice with the group of five prospective teachers placed at Brown. During one of the student teaching seminars, Paige began the session stating that she has learned through work with Jane that it was important to be able to talk aloud and justify teaching decisions and actions. Consistent with a theme from her interviews, Paige encouraged the prospective teachers to be *thoughtful* about understanding the knowledge and reasoning used to make teaching decisions. During the student teaching seminar, Paige engaged the prospective teachers and mentors in an activity which helped the prospective teachers to begin

making their own beliefs explicit.

Within these same student teaching seminars, Brooke emphasized the importance of reflecting about one's philosophy of teaching in order to see whether that *philosophy matched with instruction.* Seven times within the six structured interviews Brooke reflected about her work with prospective teachers. She used her interactions with her student teacher, Michelle, to help think about how she wanted to structure the language arts methods course for the next cohort of student teachers. Brooke believed that what prospective teachers should be reflective about is their teaching philosophy.

Paige and Brooke used the student teaching and language arts brown bag seminars, their work co-teaching courses, and their individual interactions with their prospective teachers to think about what was important for novices to learn. The two teachers promote reflections that are thoughtful, promote inquiry about purposes of instruction, and about knowledge and beliefs about teaching.

Lisa and Alexa reflect about their role as school-based teacher educators

The content of most of Brooke and Paige's reflections were about their role in teacher education outside of their classrooms. Lisa and Alexa each reflected about the mentor's role in teacher education within the classroom. Both Lisa and Alexa used the stimulated recall and structured interviews as a time to question themselves and think more about their role and responsibility. They each took notes while watching the video excerpts and answering questions, and wrote journals between sessions.

Lisa used the structured interviews and stimulated recall as an opportunity to study herself in the role of mentor. She analyzed herself as she viewed the videos. Eleven times within the six interviews she reflected

about her work with prospective teachers (see Table 6). After she viewed the first video in November, she was upset about how much she was telling instead of asking Shelly. From that point, she began to think about how she could adapt her role to meet her goal of helping Shelly become a more independent thinker. Lisa re-thought her own beliefs about a purpose of a mentor. She believed that it was important to help Shelly develop independent thinking skills, and saw that the way she was approaching her work was not helping Shelly develop that skill.

As Lisa continued to analyze the match between Lisa's beliefs about learning and how she was interacting with Shelly, Lisa began to develop a broader definition of the role of mentor. For the first time Lisa began to think about her role in helping prepare Shelly to develop independent thinking skills which would help her beyond the time in Lisa's classroom. Lisa became interested in helping Shelly be able to internalize some of the knowledge and questions from the student teaching experience in order to be able to ask herself the same questions when she had her own classroom. Lisa said that she wanted to "fade to the point in my coaching where...I don't leave her out there on her own yet,... but I'm almost just a whisper."

Similar to Lisa, Alexa used the stimulated recall interviews to help learn about how she was enacting the role of mentor in her classroom. At first, Alexa watched the videotaped interactions with her student teacher Kate to look for Kate's understandings and misconceptions. As she watched the videos and answered interview questions she thought of new questions to ask, and new ways to interact with Kate. She, too, began to construct a broader understanding of the role of a mentor in helping a novice learn to teach. Even when it was clear that Kate was not able to complete student teaching, Alexa did not give up. Instead, she shifted her goal. She shifted from the

immediate perspective of how she could help Kate successfully complete student teaching, to a broader outcome of how she could help Kate develop competencies which would enable her to teach independently at a later time.

Alexa had specific goals for how she wanted to encourage Kate to be reflective about current and future teaching practice. Within the three structured interviews with Alexa, she spoke 5 times about how she encouraged Kate to reflect. She scored a 3.0 for the extent to which she promoted reflection. Alexa encouraged Kate to reflect through questions that challenge her to think about teaching plans and decisions, to understand the subject matter they are teaching and why this subject matter is important for children to learn. Alexa worked through her own reasoning as a model on many occasions, then continually encouraged Kate to use a similar think aloud model (See Table 6 - Theme A - Level 3 response.)

Four of the five teachers reflected about literacy instruction in ways consistent with Academic Learning goals.

The Academic Learning teacher preparation program stresses conceptual understanding about teaching and learning subject matter. During the language arts methods course, prospective teachers are encouraged to develop a principled, reasoned stance about the instruction of language arts in an elementary school classroom (Rosaen, 1991b). Concurrently, Academic Learning faculty work with teachers at Brown to study issues and practices in language arts teaching consistent with the conceptual framework of Academic Learning. In efforts to promote subject-specific conversations between mentors and novices, the classroom teachers are involved in a variety of experiences, including co-teaching on campus, language arts forums held after school, and brown-bag language arts unit planning sessions. These experiences help university and classroom

educators share understandings about beliefs and goals for language arts instruction.

Four of the five mentors participated in these subject specific conversations about language arts instruction. They talked about goals for literacy instruction which were consistent with Academic Learning philosophies. Since the Academic Learning program emphasizes conceptual understanding of subject matter, the mentors were concerned with the novices' fundamental understanding of literacy subject matter. They asked questions to the novices which probed both for subject matter and pedagogical understanding necessary for literacy instruction.

Brooke, Paige, Lisa and Alexa each talked to their prospective teachers about the content of instruction. For example, Brooke's student teacher Michelle decided to teach a language arts unit focusing on the literary concept "point of view." Consistent with Academic Learning philosophy, Brooke pushed Michelle to think about how her teaching would foster student's conceptual understanding of point of view. She first asked Michelle to talk about her own knowledge of the concept point of view. Once Michelle talked about her conception of point of view, Brooke asked her to talk through how she was going to help the students understand this concept in a meaningful way. Brooke would not let Michelle talk about management of the lesson until Michelle articulated what she wanted the children to learn about the content she was teaching and why this concept was valuable to teach and learn.

When Brooke reflected about this interaction with Michelle around the content of point of view, she reflected about literacy subject matter at a level three response on the frequency table (See Table 6). A level three response includes the following content: challenging the prospective teacher to think

about what she knows about the literacy knowledge or skill she is teaching, why it is important for children to learn, what children already know about this literacy knowledge and skill, and how she will or has adapted this knowledge appropriately for the children.

Similarly, Lisa engaged Shelly in discussions about literacy instruction. Specifically, she talked with Shelly about how to help students understand the concept of personification. While thinking through pedagogical decisions, Lisa and Shelly articulated their own conceptions of personification. Throughout the six interviews with Lisa, there were six occasions when Lisa talked specifically about literacy subject matter. Lisa's average for the extent to which she talked about literacy subject matter was a 2.5 out of 3.0. This score means that Lisa sometimes engaged her student teacher in dialogues about what the student teacher knows about literacy instruction and how the content could be implemented with children (Table 6, Theme C, Level 2 response). On other occasions Lisa's reflections probed more distinctly for subject matter and pedagogical knowledge (See level 3 response above).

Alexa also pushed her student teacher Kate to articulate understanding of her language arts unit on night settings. Alexa asked Kate to talk about the content of her unit and the ways which she was presenting this content to students. Kate struggled with her understanding of the content. Alexa responded by saying that Kate needed to understand "why am I teaching this and what do I want the kids to learn when I'm all done." Alexa did not feel that Kate understood the concepts she was teaching nor the relationship between the concepts.

TABLE 6

What is the nature of reflection used by mentors to help novices learn to teach?

Nature of Reflection

A - Modeling and Encouraging Prospective Teachers to Reflect

1= *saying* that it is important to encourage prospective teachers to be reflective about teaching practice, yet not talking about how this is being enacted, or what prospective teachers are encouraged to reflect about

2= *defining* how to encourage reflection by making implicit knowledge explicit to prospective teachers through modeling how the mentor reasons through a teaching decision and/or action

3= *content of reflection include:* encouraging prospective teachers to reflect through questions that challenge the novices to think about teaching plans and decisions, to understand the subject matter they are teaching and why this subject matter is important for children to learn. The mentor works through her own reasoning as a model, then encourages prospective teachers to use a similar think aloud model.

B - Reflecting About Work With Prospective Teachers

1= talking about prospective teachers in terms of how well they are *performing* in student teaching, not in terms of what they are learning or habits they are developing.

2= talking *in general* about what the prospective teacher is *learning* during student teaching

3= talking *specifically about goals* for what the mentor wants prospective teachers to know and be able to do by the close of student teaching, and how the mentor can help novices to develop the disposition to be thoughtful about her own teaching when there is no one in the room to be there to constantly talk with and question

C-Reflecting About Literacy Subject Matter

1= talking to the prospective teacher about differences *in how the mentor would have approached a concept or skill* versus how the novice approached teaching

2= *beginning a dialogue about what the novice knows about the subject matter (literacy)*, and how that subject matter might be implemented with the children in the mentor's classroom

3= *content of reflection:* challenging the prospective teacher to think about what she knows about the literacy knowledge or skill she is teaching, why it is important for children to learn, what children already know about this literacy knowledge and skill, and how she will or has adapted this knowledge appropriately for the children

Theme	Brooke (6 Interviews)			Kimberly (6 Interviews)			Lisa (6 Interviews)			Paige (3 Interviews)			Alexa (3 Interviews)		
	# of times	Ex-tent	Avg.	# of times	Ex-tent	Avg.	# of times	Ex-tent	Avg.	# of times	Ex-tent	Avg.	# of times	Ex-tent	Avg.
A	6	14	2.3	4	7	1.75	5	12	2.4	2	4	2.0	5	15	3.0
B	7	17	2.4	4	6	1.5	11	26	2.6	6	13	2.2	7	16	2.3
C	1	3	3.0	2	5	2.5	6	15	2.5	2	4	2.0	3	8	2.6

Summary: It is important to examine the content of mentors' reflections.

The teacher education discourse community at Brown PDS is a place where questioning and articulating purposes for teaching decisions is a norm. In this context, mentor teachers reflect about their influence in preparing novices for independent teaching, and about how they are encouraging literacy instruction which is consistent with Academic Learning goals.

Four of the five mentors reflect about their work as teacher educators. The mentors also encourage their prospective teachers to learn to question and to reason through teaching decisions. J. Shulman (1987) said that few mentors use questioning or problem-solving in their conferences with novices. She said, "asking the right questions that engage a teacher in a reflective analysis of his or her own teaching will help teachers learn how to ask their own questions and, ultimately, become independent learners (p. 104). Mentors who work at Brown PDS and are members of the teacher education discourse community engage in reflective conversations with peers, university faculty and prospective teachers.

Uniqueness

The case studies provide rich descriptions of how five teachers who work in a Professional Development School and are associated with a teacher preparation program construct the role of mentor. The patterns provide evidence of how four of the mentors construct their role in a collaborative model. The purpose of this section is to describe the uniqueness among the mentors' stories. First, variability across the four mentors who do share some common views about helping novices learn to teach will be described. Then, variability in the case of the fifth mentor, Kimberly, will be contrasted. An examination of the uniqueness across cases can help teacher educators see how individuals who work in the same context differ, and how these differences might affect prospective teacher's learning.

There are uniquenesses among the four mentors who share some common views about helping novices learn to teach.

Alexa, more than any of the other four mentors, took responsibility for helping her prospective teacher learn conceptual as well as pedagogical knowledge.

Four of the five mentors developed a broader understanding of the role a classroom teacher can play in helping novices learn to teach. The uniqueness in Alexa's mentoring is that she took primary responsibility for helping her prospective teacher learn conceptual as well as pedagogical knowledge. Alexa changed her mentoring style in order to best support her student teacher, Kate. She began to question Kate more than model and give answers. The questions she asked were about the content, purpose and pedagogy of Kate's lessons.

Alexa used Academic Learning and Professional Development School experiences as sources of knowledge in her mentoring. In comparison to the other mentors, Alexa scored higher on the average for the extent to which

she used Academic Learning as a source of knowledge. Alexa's score was 2.6, compared to: Brooke, 2.4, Kimberly 1.6, Lisa, 2.3 and Paige 2.3 (See Table 5). More telling than these differences are the ways which Alexa used Academic Learning knowledge in her mentoring. For example, after viewing a videotaped conference between Kate and herself in which Alexa was questioning Kate about her language arts unit, Alexa said,

> "She (Kate) hadn't mentioned the author in any of these conversations, and that was part of her, a real central part of her central question, was how the author dealt with the setting. I'm not convinced at all that she knows what her central question is or, that she understands her lessons and her concepts that she's going to be teaching..."

Consistent with Academic Learning goals, Alexa is concerned with Kate's conceptual understanding of language arts content she intends to teach. Alexa pushes Kate to think not only about understanding of the content but also about what she wants the children to learn. Alexa says she wants Kate to "understand what it is herself that she wants the children to learn, --what is it that she's trying to teach the children, (so) that she has a clear understanding and keeps focused on that."

In addition to her uniqueness in focusing so diligently on helping Kate learn to teach for conceptual understanding, Alexa thinks about classroom teaching experiences differently than the other mentors. The way in which Alexa uses classroom teaching experience as a source of knowledge is that she links classroom teaching experiences integrally with PDS and Academic learning experiences in order to help Kate learn to teach. She does not separate classroom knowledge from university knowledge. She integrates the two forms of knowledge as complimentary and necessary. Alexa scored higher on the average for the extent to which she used classroom teaching experience as a source of knowledge. She scored a 3.0. compared to: Brooke,

1.5, Kimberly, 1.6, Lisa, 2.2 and Paige, 2.0 (See Table 5). The other four mentors differentiated classroom teaching experience as a "special knowledge" of teaching that is valuable in addition to university knowledge.

Alexa's reflection scores were also significantly higher than the other four mentors. Consistent with her view that her role is to help Kate think about issues of content and pedagogy, Alexa encouraged Kate to reflect about teaching plans and decisions, to understand the subject matter she is teaching and why this subject matter is important for children to learn. This is a level three response on the frequency counts for modeling and encouraging prospective teachers to reflect (See Table 6, Theme A, Level 3). Alexa's average for encouraging prospective teachers to reflect was a 3.0 compared to: Brooke, 2.3, Kimberly 1.75, Lisa, 2.4 and Paige 2.0 (See Table 6).

Lisa emphasized helping her student teacher internalize a disposition for life long learning and reflection.

Lisa and Alexa enacted their role as mentor similarly in many respects. Both teachers studied videotaped interactions, altered their questioning styles and thought about broader learning outcomes for their prospective teachers beyond the student teaching experience. The context-specific relationship between the mentors and prospective teachers allowed for different levels of outcomes for different prospective teachers. Because of the situation, Alexa focused on how to help her student teacher Kate learn basic competencies of teaching in order to be able to competently pass student teaching in the future. Lisa, on the other hand, did not have a struggling student. She was working with a student whom she felt she could move beyond basic competencies to a higher level outcome of developing a disposition for life long learning and reflection.

There are several examples which support the claim that Lisa worked to help her student teacher, Shelly, move toward a broader outcome of life long learning and reflection. During the language arts practicum in October, Lisa said that as a mentor she needed to think about how to help a student teacher learn in a way that is not just telling answers. She said, "...they've got to learn to question and think and put it all together themselves." Although Lisa intended to help Shelly learn to question and conceptualize knowledge independently, originally she was not enacting her goals in her mentoring. Lisa was shocked when she first watched a videotaped conference and saw she was doing what she said she was opposed to -- telling rather than asking. This sparked Lisa's interest in studying herself in interaction with Shelly. She began to think, talk and take notes about her goals for mentoring and watch for enactment of these goals in mentoring.

As Lisa talked about her interactions with Shelly and viewed the interactions on video, she began to think about her responsibilities as a mentor in different ways. During a later interaction, Lisa asked Shelly questions such as "In an ideal situation, if you could restructure the day any way you could, get any resources and time you need, what kinds of things would help you know who is reading, and what is going on (during reading time)?" When Lisa saw that Shelly could answer questions about knowledge and decision making, she discovered a broader purpose for asking Shelly these questions. She wanted to be able to fade to a point where Shelly had internalized the kinds of questions Lisa was asking. Then, Shelly could ask herself reflective questions about purposes and practice when she was teaching on her own.

During a stimulated recall interview, Lisa began talking about moving Shelly "to another level" where Lisa could help Shelly internalize questions

about teaching to ask herself independently. She said,

> "...I can fade to the point in my coaching where...I don't leave her out there on her own yet, it's not like I'm completely gone and she completely has to rely on her own resources, but *I'm almost just a whisper* or something, or a inner conscience, not inner conscience, that's not the word I want either but the idea of helping her move to that next step, where I can actually talk with her and help her and *guide her into how to internalize that and how to start thinking about what questions do you ask yourself to keep yourself on track and to continue to reflect and to question where you need to go next ."

Lisa changed her style of mentoring in order to help move her student teacher to a level of self-reflection. Lisa wanted to help Shelly develop a disposition to be self-reflective when teaching on her own.

Paige relied on modeling as a form of guided practice

In contrast to Alexa and Lisa, Paige predominantly modeled her beliefs about teaching rather than guiding her student teacher, Jane, to discover her own beliefs about teaching. Consistent with Brooke, Lisa and Alexa, Paige feels that it is very important to help novices develop independent thinking skills. She scored a 3.0 score when talking about the independent thinking theme (See Table 4). However, Paige is unique in that she typically only *models* to Jane, rather than modeling, coaching and then fading. There is little evidence to show that she moves away from modeling to coaching and fading to support Jane's own development of independent thinking skills.

Paige shares a lot of her own beliefs about teaching through telling stories of her own decision making in planning and teaching. She does emphasize the importance of being thoughtful about content and instruction, but does not ask questions to help Jane become more thoughtful. She does model herself as a continuous learner who deeply values using multiple sources of knowledge from books, peers, university faculty and study groups. For example, Jane was struggling to prepare a poetry unit. Paige did not ask ask Jane to talk about how she was approaching planning the unit. But she did

provide a powerful story from her own practice. She said:

> "...so like Nancy Atwell (author who writes about teaching writing), I decided I had better just start reading poems, that's what Nancy said she did in order to start a unit or a chapter on poetry. So I started...reading poems and you know, one poem made me think of another poem and...I started thinking about... my favorite poets and poems, and I thought well, who says you've got to start with all these different poems, or with the idea that some poems don't rhyme, and you know, the kids are going to... learn a lot of this, just by sharing poetry with them. And who says you've got to start with line breaks. I guess, *I guess I'm saying just do it. But yet, just do it thoughtfully...* " -italics added-

It is clear that Paige is modeling thoughtfulness in teaching. However, there is little evidence to show that Paige moves beyond modeling in her mentoring of Jane.

There is uniqueness in the case of Kimberly.

Kimberly chose not to participate in the teacher education discourse community at Brown PDS.

Kimberly chose not to participate in the teacher education discourse community at Brown PDS. She did not attend any of the language arts brown bag seminars, and only attended one mentor teacher meeting all year. This is the first year Kimberly has been a mentor with Academic Learning. Since she did not participate in conversations about the conceptual framework of Academic Learning, she does not use this framework to construct her role. She constructed her views about how to help novices learn to teach on her own. Her beliefs about mentoring reflect more traditional themes of "learning by doing" rather than promoting inquiry using multiple sources of knowledge. Throughout the structured and stimulated recall interviews Kimberly emphasized "you learn the most by doing it..." "...you learn by jumping right in there and getting your feet wet...by trial and error, there's no doubt about that."

<u>Kimberly makes distinctions between Academic Learning and Professional Development School as sources of knowledge.</u>

Brooke, Paige, Alexa and Lisa talk about their participation in the teacher education discourse community at Brown which embraces both Professional Development School and Academic Learning experiences. The teachers use the conceptual frame of Academic Learning to work in PDS projects, and use norms from PDS projects to interact in teacher education roles. In contrast, Kimberly makes a distinction between Professional Development School and Academic Learning as sources of knowledge and as integral to mentoring.

Kimberly makes it clear that she "doesn't feel that involved with Academic Learning." She said "as far as what Academic Learning and I have to do with each other it's very little." She also said that what Academic Learning professors "make us aware of is very little." Kimberly feels that university faculty make teaching sound easy in methods courses, and that the real experience of teaching comes from practice in the classroom. There is no evidence to show that Kimberly uses Academic Learning as a source of knowledge. Since she does not participate in construction of the conceptual framework for the program, she does not work to enact the goals of the program in her mentoring.

Similarly, there is no evidence to show that Kimberly uses Professional Development School work as a source of knowledge for mentoring. At this point in time, Kimberly defines Professional Development School experience as work in the math study group of which she is a member. These opportunities to research and study mathematics teaching have offered her new ideas and resources. She does not explicitly transfer the norms from that PDS project into her mentoring. She said,

"You could probably be a very good mentor and not be up on the current research. I think that is a possibility. Because people that have taught for a long time find out what works with children and I think that, all that research has done is they've gone around and found out what works with children and therefore their research is, you know, then they start saying, this is what works well. And so I think a teacher certainly could be doing that on her own without being up on the latest research."

Kimberly separates university and school knowledge in teacher education.

Brooke, Paige, Alexa and Lisa blur the lines between what and where learning for teaching occurs. In contrast, Kimberly makes sharp distinctions between what knowledge for teaching comes from the university, and what comes from the school. She believes it is her job as mentor to provide her student teacher, Betsy, with as much on-the-job experience as possible. She believes that it is her job as mentor to share as much classroom teaching experience with Betsy as possible.

Kimberly distinguishes her role as one who provides practical knowledge of teaching. She differentiates her role from that of university professors. When she talks about university professors, whether in the context of PDS or Academic Learning, she describes the university as "providing us" or "giving us research." There is no evidence to show that Kimberly views herself a partner in constructing knowledge for teaching together with university professors. She feels the university will provide subject matter knowledge, and she will provide the knowledge of classroom experience. She said, "I think my role is to help them (student teachers) to be more aware of what's going on with children...I won't spend much time focusing on content, that's the university's job."

Kimberly focuses on management of lessons rather than content instruction in her mentoring.

Brooke, Paige, Alexa and Lisa engage in substantive subject matter conversations with their prospective teachers. The four mentors are

concerned with helping their prospective teacher develop conceptual understanding of literacy subject matter in order to that subject matter to children. In contrast, there is no evidence to show that Kimberly engages her student teacher Betsy in conversations about conceptual understanding of literacy subject matter.

Consistent with Kimberly's conception of mentor, she believes it is her job to help Betsy manage her lessons. Kimberly does not feel it is her job to help Betsy understand the content she is teaching. She does focus on subject matter issues in many conversations with Betsy. However, these conversations focused on understanding the literacy knowledge for immediate purposes of being able to manage a lesson in Kimberly's classroom. Such was the case in a discussion about teaching a reaction paper. Kimberly initiated a conversation because she felt that Betsy did not understand what a reaction paper was, nor what the purpose of such an assignment might be. The conversation could have evoked rich discussion about the concept "reaction paper" and how this text structure can be fruitfully used with young readers and writers. Yet after asking Betsy to merely define her conception of a reaction paper, Kimberly moved to issues of management of the assignment in the classroom. She used Betsy's definition to work out logistics of management of the assignment rather than probing Betsy's literacy knowledge to help her in future contexts outside of Kimberly's classroom.

Kimberly's frequency counts were different from the other four mentors.

Four of the five mentors have very close overall averages for how they think about the three categories of views about learning, sources of knowledge and the nature of reflection in helping novices learn to teach. Kimberly's scores are consistently much lower than the four other mentors.

Table 7 summarizes the averages for the extent to which each mentors talked about each of the three categories.

Table 7

Total summaries of the averages of the extent scores across the three categories of views about learning, sources of knowledge, and nature of reflection

This table summarizes the averages for the extent to which each mentor talked about each of the three categories. (The highest score possible is 3.0).

	Brooke	Kim	Lisa	Paige	Alexa
Views about learning	2.2	1.6	2.3	2.2	2.4
Sources of knowledge	2.2	1.7	2.4	2.2	2.6
Nature of reflection	2.6	1.9	2.5	2.1	2.6

SUMMARY OF PATTERNS AND UNIQUENESS IN HOW FIVE CLASSROOM TEACHERS MAKE SENSE OF THEIR ROLE AS MENTORS

Within this section patterns and uniqueness in how the five classroom teachers make sense of their role as mentors have been discussed. There were three patterns. The first pattern was that four of the five mentors participated in a teacher education discourse community with university faculty and prospective teachers. Within this discourse community, the four mentors share common language, knowledge and beliefs about helping novices learn to teach. These shared understandings lead to shared purposes in the preparation of novices. The second pattern was that the ways which the mentors interact with the context at Brown Professional Development School affects the sources of knowledge used to mentor. It is important to understand the context in which prospective teachers are placed because certain contexts increase the likelihood of successful learning. The third pattern was that the content of mentors' reflections center around work in teacher education and literacy instruction. It is important to examine the content of mentors' reflections in order to understand the kinds of reflective inquiry in which the mentors are engaging.

In addition to three patterns, there were uniquenesses found in the data. The findings show that even in a context where a teacher education discourse community has been established, teachers participate in that discourse in different ways. One teacher chose not to participate in the discourse at all. An examination of the uniquenesses across cases help teacher educators see how individuals who work in the same context differ, and how these differences might affect prospective teachers' learning.

CHAPTER 6

IMPLICATIONS FOR THE SUPPORT OF MENTORS IN HELPING NOVICES LEARN TO TEACH

The conclusions illustrate that there are patterns and uniquenesses across the five mentors studied at Brown Professional Development School. The patterns are that a teacher education discourse community was created as a result of work with Professional Development School and Academic Learning, that the ways in which the mentors interacted with the context affected the sources of knowledge used to mentor, and that the content of mentors' reflections focused on subject matter and the mentors' influence on the student teachers' learning. There were also some uniquenesses in the data. For example, one teacher was different from the other four in that she constructed her role in a more traditional manner. She differed from the patterns of the other four teachers.

Within the pattern and uniqueness section, findings from the study were discussed and analyzed. The purpose of this final chapter is to discuss the implications of these specific findings for future practice in mentoring and research on mentoring. First, implications for future practice in mentoring will be explicated. Seven implication topics will be discussed. They are: 1) Creating an environment for teacher learning; 2) Interacting with the context to construct the role of mentor; 3) Engaging mentors and prospective teachers in reflective conversations about subject matter and pedagogy; 4) Learning about teachers' own practice through mentoring 5) Using the patterns from this study to help further study of mentoring; 6) Using this methodology as an intervention to support teachers in mentoring; and 7) Using cases of mentoring to support teachers in mentoring.

Following a discussion of the implications for teacher education

practice, implications for a future research agenda in mentoring will be examined. This final section will include examples of how this study has augmented current research, and how this study has raised additional questions for future research to pursue.

Implications for teacher education practice

Because certain conditions at Brown PDS promoted teacher learning, there are implications for creating an environment for teacher learning in future practice.

The results of this study show that an environment can be created within a public school which supports both experienced and prospective teachers' learning. A Professional Development School context (Holmes Group, 1990) can provide a rich environment in which teachers can take active roles in helping prepare novices, and work together rather than at cross purposes with university faculty. Within a PDS context, there were several conditions which supported development of an environment for teacher learning. These conditions have implications for future teacher education practice in which university, classroom and prospective teachers are involved in teacher education discourse.

A central feature of the context is that members who participate in a teacher education discourse community are involved in a fundamentally different relationship from traditional distinctions of university and classroom roles. Instead of working at cross purposes in field and university portions of preparation, members of a teacher education discourse community have developed shared understandings and shared purposes in preparing teachers.

This study has provided illustrations of what conditions were critical for

creating an environment where university and classroom educators work together to prepare novices. Some of these conditions include: 1) sharing beliefs, language and goals about teacher education; 2) sharing views about learning; 3) having a voice in preparation of novices; 4) providing different ways of sharing knowledge with novices beyond traditional distinctions between university and school knowledge; and 5) seeing knowledge as actively constructed and flexibly changing. As teacher educators begin to involve classroom teachers in more prominent roles in teacher education, it is important to examine the conditions which support the enactment of new roles in teacher education.

Involving classroom teachers in collaborative roles has many benefits. Classroom teachers, typically left on their own to construct a role of mentor, now have colleagues from both school and university who share similar goals for mentoring, and can talk through problems and ideas about teacher education. Participation in a teacher education discourse community helps educators from both university and school feel like they are working at united rather than cross purposes in preparation. Members of the teacher education discourse community *together* discuss the conceptual framework and actions in preparation. This provides different ways of sharing knowledge with novices beyond traditional distinctions between university and school knowledge. Both university and school partners are responsible for content and pedagogy.

It is possible to construct an environment where both university faculty and classroom teachers share a conceptual framework for preparation of novices. Though this conceptual frame may be originally developed by university faculty, classroom teachers have a voice in changing and adding new knowledge. Within this framework, participants in the teacher education

discourse community convey messages to each other and to novices that knowledge is flexible and constantly changing. Classroom and prospective teachers are learning from each other, and see each other as valuable sources of knowledge.

These are conditions which were critical for creating a teacher education discourse community at one Professional Development School. Those who study teacher education can learn a lot from study of these conditions and the possibilities which they allowed. A collaborative model for teacher education can make a difference as university and classroom educators work toward common goals. The ways in which the teachers interacted within the context of Brown PDS have implications for creating environments where educators want to prepare prospective teachers who promote life long learning, teaching for conceptual understanding, collegiality and valuing multiple sources of knowledge.

> *Because mentors at Brown Professional Development School learned to mentor by interacting with the context of Brown, the ways in which mentors interact within the environment has implications for supporting mentors' learning in future practice.*

The ways in which mentors choose to interact or not to interact in the discourse about teacher education affects how the role of mentor will be constructed. The mentors who interacted with the resources in the context of Brown illustrate that mentoring is socially constructed. Through interactions with each other, university faculty, prospective teachers, research articles and literature books, mentors built on and extended existing knowledge of teaching and mentoring. The results of this study indicate that teachers can and do study their own practice and change their role conception while immersed in mentoring. The implications for supporting teachers' learning is that through interactions in a rich context, mentoring changes, and with

change comes new knowledge of mentoring.

However, even in a rich context such as in a Professional Development School, not all teachers will participate in discourse about teacher education. There will be a range of ways in which people participate and interact with the environment. Learning to mentor in a context such as this may be a process of gradual investment. Some teachers are reluctant to invest too heavily in time commitments outside of their classroom. Not all teachers will be ready, or have the resources of time to invest in this time consuming commitment.

Some teachers may chose not to participate at all in a collaborative model of teacher education. If a teacher chooses not to engage in this reform effort, the role of mentor will mostly likely be constructed in predictable ways. Traditionally, mentors construct their role on their own, and focus on providing a novice with practical knowledge which will be of immediate use in the student teaching experience. This differs from PDS (Holmes Group, 1990) and collaborative resonance model (Cochran-Smith, 1991a) goals where school and university-based educators both take on responsibility for preparing novices who will be reflective, and be concerned with substantive subject matter teaching and understanding. Even though a collaborative model has appeal for many, not every teacher will be ready to be able to invest in study of teaching and teacher education.

Viewing mentoring as a constructive process has implications for future teacher education practice. The implications link directly to thinking about the kind of environment to create for teacher learning. In order to support development of a role as mentor in a collaborative model, there need to multiple opportunities for interactions with people, readings and ideas about goals and practices of teacher education. Both school and university educators

need to consider that social construction of roles takes time. Some teachers need more time and gradual engagement in interactions in order to construct their role in a collaborative rather than an isolated way.

> *Because mentors talked with their novices about substantive issues of subject matter and pedagogy, there are implications for helping mentors engage in reflective conversations with novices in future practice.*

Research on reflection has shown that there is very little shared meaning about what the content of reflections should include (Zeichner, 1990). Grimmett (1988) says that there is little agreement about the content of reflective inquiry or on the "kinds of contexts (which) tend to foster such a process" (p. 6). Conditions within a context promote certain kinds of interactions. For example, the context of this study promotes reflections where questioning and articulating purposes for teaching decisions is a norm. Given a context which fosters these goals, mentor teachers can reflect about their influence in preparing novices for independent teaching, and about how they are encouraging literacy instruction that is consistent with the conceptual framework of the university preparation program.

J. Shulman (1987) believes that educators should document examples of the content of mentors' reflections. She called for construction of cases of mentors who can engage their prospective teachers in reflective conversations about subject-specific pedagogy. Shulman said there is a need to document examples of mentors who do move beyond providing suggestions to questioning novices about teaching of subject matter. She said:

> "While providing suggestions is often appropriate, especially at the beginning of a novice's year, asking the right questions that engage a teacher in a reflective analysis of his or her own teaching will help teachers learn how to ask their own questions and, ultimately, become independent learners. This kind of facilitating is relatively new to staff development...needed are cases by veteran coaches to

provide examples of how the process works and establish precedents for mentors who are learning to coach" (p. 104).

The stories of these five teachers make a significant contribution to the case literature on mentoring, and more specifically to understanding the content of mentors' reflections about teaching and teacher education.

Because the mentors at Brown learned about their own teaching practice while engaged in mentoring, there are implications for using mentoring as a form of professional development in future practice.

Teachers can become more analytic about their own teaching practice and about their mentoring practice. This study has implications for designing meaningful ways to keep experienced teachers learning. A professional development school environment can provide stimuli which encourage adults to be life long learners who study and learn from study of their own practice. Through study of their work as mentors, teachers become more analytic about what they know and believe about teaching. By engaging teachers in study of their mentoring, teachers can learn more about their own teaching and mentoring practice. While engaged in mentoring, teachers begin to realize the importance of making ordinarily tacit knowledge explicit to novices. Teachers analyze reasons for their own instructional actions in order to model decision making for novices. Teachers can also watch themselves on videotape in interaction with their novices, and study their form of questioning, probing and providing feedback.

Because the results of this study show there were patterns in the ways in which mentors constructed their role, there are implications for using these patterns for future study and practice in mentoring.

Although the results of this study are not generalizable to all mentors, the usefulness of the results lie in generating and elaborating on the patterns which have been uncovered in the data. The patterns are: developing a discourse community, interacting within a context, and reflecting about

teacher education and subject matter instruction. Generating specific knowledge about patterns in mentoring within a collaborative model is valuable to teacher education. This study has shown that a Professional Development School context where teachers are closely associated with a teacher preparation program does make a difference in how four of the five mentors constructed their role. This study is an example of a group of people who have moved toward shared understanding about the conceptual framework and practices of a teacher education program. The patterns from this study could be used to generate more specific knowledge of the nature of teacher education discourse in a variety of PDS settings. The patterns could serve as a concrete framework for looking at how mentors and university faculty in other PDS's share views about learning, sources of knowledge and ideas about the nature of reflection in helping novices learn to teach.

> *Because mentors used the stimulated recall and interviews with the researcher to study their own mentoring, there are implications for using this methodology as an intervention to support teachers in mentoring.*

The results of this study indicate that two of the teachers used the methodology of the study as an intervention to learn more about their mentoring. Stimulated recall interviews were part of the methodology used to help mentors talk about their thoughts and actions while interacting in conferences with their prospective teachers. The stimulated recalls were used as retrospective reports of the mentors' perceptions of their thoughts rather than as an account of their interactive thoughts (Keith, 1988). The stimulated recall interviews were not originally intended to be mechanisms for teachers to study their own practice. However, an outcome was that watching the videos and talking to someone about the videotaped interactions had a direct impact on how teachers thought about their work with novices. From this study, there

are implications for using this methodology as an intervention to support teachers in mentoring. Stimulated recalls can be used as a tool to help mentors talk and think about their interactions with novices, articulate their beliefs and watch for enactment of their beliefs, and see evidence of their novices' conceptual understanding.

Two of the teachers did decide, on their own, to study themselves via the stimulated recall interviews. The most powerful implication of using the stimulated recall for mentors was that watching themselves on video and talking with someone about mentoring practice had a significant impact on teachers' learning about mentoring. The video taped interactions provided a forum for reflection, and for getting ideas out to be examined by the mentors and others in a teacher education discourse.

There is one caution in using stimulated recall as a learning tool. This methodology did not serve as an intervention for all of the teachers studied. Teacher educators cannot assume that educators, whether in the classroom or university will know how to study themselves without support or motivation. It is important to recognize that teachers learn in different ways. As adult learners are trying to understand a role of mentor for which they have received little formal training, educators need to try using different media for reaching different learners. Teachers who both embrace reading, reflecting and dialoguing about their practice would be more likely to use this inquiry as an opportunity to study themselves and learn more about what they believed a mentor should know and be able to do. However, there are other teachers who are not ready or willing to participate in this sort of inquiry. Teacher educators need to think about ways to support these teachers, who may already be thoughtful about issues of teacher education, yet lack the time or commitment to study themselves to learn more about being a mentor on their

own.

> *Because the case studies provide a conceptual framework for thinking about the mentoring role, there are implications of using cases of mentoring to support teachers in mentoring.*

J. Shulman (1987) believes one way to help university and school based educators share understandings about what it means to mentor is by studying and collaboratively talking about teachers' stories of their mentoring. Shulman calls for research which captures teachers' perspectives of what it means to mentor through documenting cases of different mentors' experiences and dilemmas. The five cases provided within this dissertation are very useful examples to help other teachers who are learning and studying about mentoring. These cases provide a concrete framework for thinking about the mentoring role, including the three categories of views of learning, sources of knowledge and nature of reflection used to help novices learn to teach.

The five cases also provide concrete examples of teachers' struggles and successes in developing broader outcomes for mentoring. Educators could use these cases to talk about how teachers move from focus on immediate problems of management of lessons in the classroom to larger issues of reflective teaching and learning which will influence the prospective teacher long after student teaching. The cases illustrate in varying degrees how teachers are working to figure out ways to help their prospective teachers gain life long skills of independent thinking which will provide them with reflective dispositions and problem solving tools when they are teaching on their own.

These cases also provide examples of classroom teachers who talk about subject matter knowledge and how to connect that subject matter knowledge with children. Classroom teachers have been criticized for lack of attention to

subject matter in conversations with novices (Feiman-Nemser & Parker, 1990). Within these cases are concrete examples of how mentors push novices to think and talk about concepts of literacy including setting, point of view and personification.

The cases constructed within the dissertation could be used as a stimulus for further discussion and construction of shared meanings for goals of the mentoring role. The patterns in the data illustrate that most of the mentors constructed their roles in ways which were substantially different from traditional forms of supervision. These differences included sharing a conceptual framework for teacher preparation with university faculty, sharing some views about learning, valuing multiple sources of knowledge rather than relying on practical knowledge in mentoring, and reflecting about subject matter teaching and the mentors' influence on a prospective teachers' learning.

Implications for a future research agenda in mentoring

From study of five classroom teachers' engagement in the mentoring role, there are several implications for a future research agenda in mentoring. This study has augmented existing research, and has resulted in discovery of new questions to be explored.

The value of this study for current research

There are three ways in which this study has specifically augmented literature in teacher education. First, Cochran-Smith's collaborative resonance model (1991a) was examined to find whether it was a plausible metaphor to describe what was happening at Brown PDS. Second, the conception of discourse community (Herzberg, 1986; Markova, 1990; Swales, 1990) was examined to find whether a teacher education discourse community was created at Brown PDS. Third, the construct of reflection (Schon, 1987;

Zeichner 1990) was examined to find concrete examples of the content of mentors' reflections. New questions arose for further research as the issues of collaborative resonance, discourse community and reflection were studied.

Collaborative Resonance Model

Cochran-Smith (1991a) described a *collaborative resonance model* in which participants mutually construct a preparation program. One purpose of this study was to determine if the Academic Learning teacher preparation program at Michigan State University was pursuing similar synergistic goals as described by Cochran-Smith. Cochran-Smith said that a certain environment was necessary in order to successfully create a collaborative resonance model. The environment needed to support a collaborative resonance model includes one where people feel comfortable voicing their views, valuing each other as sources of knowledge and working together to construct the framework and actions of teacher education.

The results of this study show that this context promotes elements of the collaborative resonance model including norms of collegiality, valuing multiple sources of knowledge for teaching and collaboration. Participation in such a context heightens feelings of investment in discourse about teacher education. Future research is needed to continue exploring questions which arose from this study about enacting a collaborative resonance model. One question, for example, is what is the affect of playing a more active role in the preparation of novices on the mentors and prospective teachers' learning? This study focused on the teachers' perspectives on mentoring. The study did not specifically focus on what the mentors were learning about their teaching while engaged in the mentoring role. Nor did the study examine the prospective teachers' perspectives about their learning.

There is also a need to further examine how a collaborative model such

as the one which exists at Brown is initiated, and how other participants can be encouraged to join in on teacher education discourse. Future research could explore further why some participants do not choose to engage in professional development opportunities in teacher education. The results of this study showed that not all teachers who mentored were participants in the teacher education discourse community. An issue to consider in establishing a discourse community is that some teachers will be reticent about participating in the discourse. Some teachers desire to stay close to their classrooms and will not invest too heavily in other time and professional development commitments. Setting limits on time and investment has implications for the ways which the teachers who do not participate in the discourse construct their role as mentor.

Creating a discourse community using the collaborative resonance model

Cochran-Smith (1991a) cautions teacher educators that synergistic goals cannot be completely realized unless participants work through assumptions about sources of knowledge that come from the school, from the university or are shared. In order to create a teacher education *discourse community* where knowledge, beliefs and language are shared, this issue needs to be confronted. It is clear that a teacher education discourse community has been created at Brown. Within this community, participants share goals about teacher education. It is not clear whether the issue of status differences among university and classroom educators has been explicitly discussed in the teacher education discourse at Brown PDS. For example, though the teachers feel they do have a valuable voice in teacher education, two of the teachers still also voiced perceptions of status differences between university and school educators. Teachers emphasized that they had a special knowledge of teaching which they could share with novices. This practical

knowledge, according to the teachers, is unique from university educators. Even though the teachers used multiple sources of knowledge in their mentoring, they were still staking claim to practical knowledge as their area of expertise. This raises questions regarding whether teachers truly feel that power in preparing teachers is truly shared, or whether status differences continue to exist among university and school educators. Future research needs to further examine assumptions about what knowledge and power teachers really feel they have in constructing and implementing university and school-based components of teacher preparation.

In addition to sharing views about where knowledge for teaching comes from, members of a discourse community also share beliefs and goals for teachers' learning. Several of the teachers in the study shared some common views about learning which included an openness to new knowledge and new ideas for the preparation of teachers. Future research is needed to uncover how much a commitment to traditional views about learning and teacher education affect a mentor's willingness to invest time and energy in conversations about new models of preparation. For example, if a teacher has a predisposition that university preparation has little value, she may not feel it is worthy for her to spend time talking in the teacher education discourse about university preparation experiences. If a teacher holds onto her old views about university preparation, she may not be willing or able to change.

Reflection

This research examined benefits for participants who embrace a context rich with resources and multiple sources of knowledge. Many of the teachers studied are modeling and participating in constructing university and field components of teacher education. Part of both the mentors' and university educators' conceptions of what should be involved in field experiences is

reflection. Scholars lament that little research has focused on the content of reflection in teacher education. This study provides concrete examples of the content of school-based teacher educators' reflections. The mentors reflect about their work with prospective teachers, and how they can work with novices to help them become independent thinkers who can connect subject matter with children and match philosophy with instruction. The mentors model and encourage their prospective teachers to reflect by talking aloud through their planning process, or their decision making, emphasizing planning and teaching thoughtfully. The mentors reflect about literacy subject matter as they converse with their prospective teachers about what it means to teach personification, or what is important to include when teaching point of view. Future research needs to build upon reports from this study of what factors may have supported mentors in this context to interact in a more reflective manner, and launch efforts to help other mentors engage in reflective conversations. For example, results from this study indicate that talking about ideas, and examining these ideas which someone else was a powerful way for some of the teachers to analyze themselves in interaction with novices. There was value of reflection in social interaction rather than by oneself.

The context of this study

Though the context of this study limits generalizability of the findings, this study raises many questions for future research. The context allowed for rich descriptions of five classroom teachers' experiences which can be used to help plan for selection and support of future mentors. J. Shulman (1987) called for more cases about mentoring to be written to help guide practice of mentoring. L. Shulman (1987) called for more examples of exemplary teachers to help codify what it means to be wise about practice. These cases provide

examples of how mentors are thinking, believing, knowing and acting that could provide valuable resources for both helping us learn about what makes one a wise teacher and a wise mentor.

Future research questions

This research study has raised some additional questions to frame a research agenda for mentoring. There are three questions in particular that arose from study of these five mentors. The first question is, are one of the three categories (views about learning, sources of knowledge and nature of reflection) more influential in shaping how a mentor constructs her role? This question is raised because of how one teacher's views about helping novices learn to teach inhibited her use of multiple sources of knowledge and reflection about teacher education. If it is true that views about learning play a powerful role in shaping beliefs about the role of mentor, future studies need to play particular attention to the relationship of views about learning to the sources of knowledge and kinds of reflection in which the teachers use to mentor.

The second question for future research is, what conditions allowed the mentors to be open to rely on a university program as a valuable source of knowledge in mentoring? This question is important because of some teachers predispositions that the university portion of teacher preparation has no value in the real learning of teaching. If teachers continue to hold this disposition, they might not change their conception of the role of mentors. Within this study, there were conditions in the context and the discourse which allowed the mentors who interacted with these conditions to see value in university knowledge both for their teaching and mentoring. However, the one teacher who did not see value in university preparation did not choose to participate in interactions with university faculty. Further study needs to

examine whether there is a correlation between the views about university preparation and the enactment of the mentor role.

The third question for future research is, if learning to mentor is a gradual process, what implications are there for the support of mentors? This question is vital to pursue. Results from this study showed that one teacher who did not invest in interactions within the context did not change her mentoring style from a traditional role. When teachers set time limits for the amount they are willing to invest, there are implications for work as a mentor. Future research needs to study teachers who are at different phases of a mentoring career. First year, five year and ten year mentors should be contrasted to see whether time is a significant variable in learning to mentor. Amount of investment should also continue to be compared with a larger sample, to see whether the kind of investment in learning about teacher education is a significant variable in learning to mentor.

In addition to development of future research questions there are a few areas of data collection and methods which might have strengthened the current study. For example, it could have been fruitful to have videotaped or audiotaped more informal interactions between the mentor and novice in addition to the formal conferences which were videotaped. These informal interactions would have provided additional data about the ways the mentors were enacting their role during the school day. Another source of data which could have strengthened the results would have been to interview the prospective teachers placed with each of the five mentors to find out if the goals of the mentors were communicated to and internalized by the prospective teachers. Equally important as articulation of goals for mentoring are the enactment of these goals for benefit of the learners. For example, it would be beneficial to find out whether Lisa's student teacher understood

Lisa's motive in helping leave her with final questions instead of final statements. Then teacher educators could see evidence of how a school-based teacher educator helped a novice internalize a substantive, conceptual-based disposition for reflection.

Next steps might include explication of issues and findings from the dissertation. For example, further study of the data will explicate in more depth the ways in which mentors interact with novices about subject-specific pedagogy. Data about interactions related specifically to literacy knowledge and skills will be used to describe and analyze subject matter conversations between novices and mentors. Another related line of inquiry will describe more specifically how the mentors use reflective questioning to guide conferences with novices. The ways in which questions and probes were developed through stimulated recall interviews and conferences will be described. Building from analysis in the dissertation, the ways in which mentors' views about learning influenced the nature of interactions within the teacher education discourse and with prospective teachers will be discussed.

SUMMARY

This study has resulted in significant findings regarding ways in which classroom teachers interact within a Professional Development School context to socially construct the role of mentor. Within this final chapter, implications of this study for future practice and research in mentoring have been explored. Within the first section, implications for ways of working with teachers as mentors were discussed. These implications included creating an environment for teacher learning, interacting with the context to construct the role of mentor, engaging mentors and prospective teachers in reflective conversations about subject matter and pedagogy, learning about teachers'

own practice through mentoring, using the patterns to help further study of mentoring, using this methodology as an intervention and ways to use the case studies to support teachers in mentoring.

Within the second section of this chapter implications for a future research agenda in mentoring was discussed. Three ways in which this study has specifically augmented literature in teacher education include examination of the "collaborative resonance" metaphor at Brown PDS, the development of a discourse community at Brown PDS and, the content of reflections of mentors at Brown PDS. Next, discussion of the limitations in the context are described. And finally, research questions for future research are discussed.

APPENDICES

Opening   interview   with   mentor   teachers

Opening and purpose: "I am trying to paint a picture of how you are understanding your work with prospective teachers. It is really important to me to understand your perspective of what's happening. I am not searching for a "right" answer. You also have the right at any time to choose not to answer a question. I am trying to capture YOUR perspective. Please be as honest and complete as possible."

Reason for conducting this interview before the language arts practicum: "I am really interested in this phase of your work with prospective teachers-the time from mid-October to mid-March. In order to accurately portray this time, I need to know about you before I entered the scene. I also want to begin to understand what sense you are making out of the experiences in which you are currently involved."

CATEGORIES OF QUESTIONS

Description   of   work   with   prospective   teachers:

FIRST: Please talk to me about your role working with prospective teachers. What do you do and what does this role involve?

1)   How do you describe your role working with prospective teachers?

2)   Is this different than how you would have defined this kind of work in teacher education two years ago? five years ago?

3)   Describe a time when you were working with a prospective teacher and you felt you really like the way you interacted with that prospective teacher.
     probe: what made it a good experience for you and your prospective teacher?

4)   Now, please describe a time when things didn't work the way you wanted them to with your prospective teacher.
     probe: what made this a difficult or unhappy experience?

5)   What do you think the role of the classroom teacher is in helping prospective teachers learn to teach?
     probe: what are appropriate ways of helping prospective teachers? give an example from your work with prospective teachers

6) How do you think Academic Learning university program faculty would define your role?

7) How does your definition of your role compare to the program's definition?

8) Describe what you think of when you hear the term "mentor teacher"?

9) Describe your ideal view of what a mentor teacher should "look like."

(Now I need to ask you a couple of questions about your background experiences)

Background experiences

10) I need to ask you some questions about your previous experience as a mentor:
a. How many student teachers have you had from MSU or other universities?
b. How many student teachers did you have before involvement in Academic Learning?
c. How long have you been a participant in the Academic Learning mentor teacher component?

11) Have you taken graduate classes? How many courses have you taken? What was/is your emphasis area?

12) Are there research projects, inservices, or other PDS experiences that have contributed to your understanding of the role of a mentor?
probe: have you been involved in research projects?
have you helped to teach university classes?
what other ways have you been involved in PDS work?

13) How have any of these experiences contributed to your view of a mentor teacher?

(I would now like to focus on how you have learned to mentor)

How you learned to mentor (sources, contexts, experiences)

14) What are sources you have used to learn to work with prospective teachers?
probe: are there any other sources? (these sources could include people, events, literature read, experiences, discussions)

15) How are you using what you learn in interactions with prospective

teachers? Can you give an example from work with a prospective teacher?

16) How do you decide how to talk with your prospective teacher?
probe: forms of talk include advice-giving, letting prospective teacher do all the talking, showing examples, telling what is right/wrong

(Now I'd like to focus on mentoring specifically within this context)

Mentoring within the Academic Learning/PDS context

17) How has your attitude about the role of the university changed since involvement with Academic Learning?

18) I'm going to ask you a series of questions about your thinking regarding changes you might have seen since work with Academic Learning.
a. Has involvement changed what you think about learning to teach - if so, in what way?
b. Has involvement changed what you think about the role of a mentor- if so, in what way?
c. Has involvement changed what you think about working with a university- if so, in what way?
d. Has involvement changed what you think about the value of field experiences- if so, in what way?
e. Has involvement changed what you think about where and how student teachers learn to teach- if so, in what way?

19) How does the context of the PDS provide benefits for the students? What are the drawbacks of working with prospective teachers in a PDS context?

(Finally, I would like to ask you some questions about working with prospective teachers in language arts)

Subject matter - Language arts instruction

20) Describe how you approach working with student teachers in language arts.
a. What do you think are important issues in language arts?
b. Are there differences in your beliefs and the Academic Learning program's beliefs about certain issues in language arts?
c. How do you discuss these language arts issues with your prospective teacher?
probe: do you reconcile differences?

(Thank you for your time. Is there anything else you would like to add

about working with prospective teachers in this program?)

Appendix   B

Structured   interviews   with   mentor   teachers

Interview   #1

1)   You have defined your perception of the role of a mentor. You have in
your care a student preparing to be a teacher. In this role of mentor,
then, you are in essence taking on the role of a teacher educator. What
do you think it takes to be a teacher educator?

2)   What do you think is the difference between a teacher educator in the
field and a teacher educator in the university?
If you were assigned to teach at the University in the teacher education
department, how would your role as teacher educator change? What
knowledge base would you need? How would you incorporate the
knowledge base you already have?

3)   Do you think there is a knowledge base for mentoring?
What does this knowledge include?

Interview   #2

1)   In this role of mentor, you have said that you are taking on the role of a
teacher educator. How does the Academic Learning teacher preparation
program make a difference in the knowledge base for this role?
a) What benefits are there in having a common language between the
university and the classroom?
b) How has this knowledge base helped you in the role of teacher
educator?

2)   How do you think students learn?
What implications does this have for how you are supporting the
learning of student teachers?

Interview   #3

1)   What knowledge do you think that you bring as a teacher that is used
when you mentor? (Is knowledge from teaching transformed to
knowledge for mentoring, and how?)

2)   How do you fundamentally believe that teachers learn best? How does
your focus adapt to this? (Give me an example of this strategy in action.
How do you help the student teacher learn? How do you use your own

knowledge about learning to teach to help student teachers learn?)

Interview #4

1) Pretend that you were asked to speak to a group of classroom teachers about what it is like to be a mentor teacher. The spokesperson for the group asked if you could bring with you a description of a model of mentoring that captures your beliefs and actions. What would this model include? How do you visualize your relationship, responsibilities and goals? This model can be drawn, captured by metaphors, synthesized into a concept map, etc. Talk me through this model.

Interview #5

1) Through your work as a mentor, what are you learning about helping novices learn to teach? What issues do you focus on, and think are important? How do you adapt your mentoring to what the prospective teachers need to learn?

2) How would you describe your work with your student teacher? Give specific examples:
telling   tailoring   transforming

Interview #6

1) Since you have so much experience in teaching, I am wondering if you find yourself drawn mostly to sources of knowledge from your own teaching experience when working with student teachers rather than other sources (e.g. from texts you have read, PDS experiences...) What are your reactions to this? Can you provide me with some examples to support your position?

2) During the seminar on Monday, Paige said that working with a student teacher forces her to think about why she knows something about teaching. Paige said, "Sometimes when I go home I think, does Jane know why I said what I did? Do I know why? Working with student teachers forces you to know where your thinking is coming from." What is your reaction to this?

Appendix   C

1) When the mentor teacher component was conceptualized, what did you hope for?
    probe: is the idea of co-construction a part of this vision? If so, how do you define what "co-construction" means?
    how explicit do you think the idea of "co-constructing" is understood by the mentors? Examples?
    to what extent do you think co-construction is occurring between program faculty, prospective teachers and mentor teachers? Examples?

2) What do you think the role of a classroom teacher is in helping students learn to teach?
   *probe: what are appropriate ways of helping prospective teachers? can you give an example from work with prospective teachers?*

3) Ideally, what forms of talk would you like to have occur between mentors and their prospective teachers?
    probe: advice-giving, letting prospective teachers do all the talking, showing examples, telling what is right/wrong?

4) Ideally, what kinds of knowledge, dispositions, skills would you have mentor teachers focus on in their conversations with prospective teachers?

5) Describe what you believe are the characteristics of an "ideal mentor" within this context. Does Academic Learning have an ideal model?

6) How does the context of the PDS provide benefits for the prospective teachers? What are the drawbacks of working with prospective teachers within this context? Examples?

7) What makes this an appealing site for experimentation with this conception of mentoring?

8) From your perspective, what are some potential opportunities for learning about mentoring in this PDS site for:
    a.   university faculty
    b.   mentor teachers

9) Do you have evidence that the classroom teachers are learning about

mentoring from participation in PDS experiences? Examples?

10) How is this learning being supported by the program faculty?

11) From your perspective, have the classroom teachers attitudes about mentoring changed since involvement in these PDS opportunities? Evidence?

12) Have your attitudes about the role of a mentor changed since involvement in these opportunities? If so, how?

13) What are your goals for this mentoring program?

14) What do you think might be important issues when working with prospective teachers in language arts?
a. do you feel there is a difference in your beliefs and the mentors' beliefs about certain issues?
b. How might this difference affect their work with prospective teachers?

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