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Sharon Feiman Nemser

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MENTORS AND MENTORING: Frames for Action, Ways of Acting, and Consequences for Novice Teachers' Learning

By

Martial Dembélé

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ABSTRACT

MENTORS AND MENTORING: FRAMES FOR ACTION, WAYS OF ACTING, AND CONSEQUENCES FOR NOVICE TEACHERS' LEARNING

By

Martial Dembélé

Mentoring became a favored strategy in the improvement of teaching and teacher education in the United States in eighties; however, researchers have not attended to the complexity of mentoring practice and seen the value of describing and analyzing it. Efforts to link mentoring to teacher learning are also rare.

This qualitative study of mentoring in one's own classroom at the secondary level contributes to the small body of scholarship focused on the practice of mentoring and its connections to novices' learning. Premised on a conception of practice as constituted by frames for action and ways of acting, and of mentored learning to teach as situated learning, the study addresses three central questions: What frames do mentors bring to bear on their work with novices? How do they act upon those frames? What are the consequences for novices' learning?

A multiple case study design was used to look closely at the mentoring practices of two experienced teachers in a Professional Development School. Data came from free-standing interviews, periodic weekly interaction logs kept by mentors and novices, written reflections on salient entries with follow up interviews, observations of novices' and mentors' teaching and of their formal interactions with accompanying interviews.

Two full-blown cases are presented. Striking differences between the cases reveal that being a good classroom teacher is necessary but not sufficient for being a good mentor. The cases also show that novices do not necessarily learn key aspects of teaching from first-hand experience alone. Rather, they need guidance to notice and understand what needs to be learned.

Three key ideas emerged from a cross-case analysis: *modeling, joint participation in authentic tasks, and intentionality*. These point to a normative view of mentoring in which mentors act as "*educational companions*," asking themselves questions such as, "What does my novice need to learn? How central is this to the kind of practice I want to help him/her construct? What sort of guidance should I provide?" Answering these questions calls for intentionality--thinking carefully in order to act in the novice's best interest. It entails being deliberate, systematic and structured.

Another one for you, Mom and Dad,
for teaching me how to be a student.

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I always looked forward to our regular project meetings in Erickson Hall and our day-long retreats during the annual meetings of the American Educational Research Association (AERA). I cherished ongoing conversations with the MSU-based project members. We pushed each other's thinking in very supportive ways. I felt safe to make my insights, understandings and confusions public. Getting ready for and presenting at the annual meetings of AERA and other professional organizations was a powerful learning experience for me. I am particularly indebted to Michelle in this respect. She has contributed greatly to my thinking about mentors' frames for mentoring and the importance of biography in mentoring practice. I have had countless challenging and insightful discussions about mentored learning to teach and the dilemmas inherent in the practice of mentoring with Neli. I have benefitted tremendously from Sharon Schwille's experience in the field. One of her many by-the-way observations that gave me a critical lens for examining mentoring practice was that the mentor himself or herself is an essential element of the context of novice teachers' learning. Jian's interest in policy, curriculum and the social organization of teaching has always reminded me of the importance of context in mentored learning to teach.

Thanks to the members of my guidance/dissertation committee--Professors Sharon Feiman-Nemser, Susan Melnick, Lynn Paine, Jack Schwille, and Steve Weiland--I experienced at a very personal level that which I was studying, i.e., *mentoring*. Each

committee member played a variety of formal and informal mentoring roles; sometimes the same roles were played by different committee members but in a variety of ways that reflected their expertise, professional interests, commitments and assessment of me as student and as a person.

Sharon and Lynn played a critical role in my intellectual development. I want to especially thank Sharon--my dissertation director--for believing in me, and for nurturing, supporting and stretching me. She has scaffolded my learning and assisted my performance over the years in ways that now inform my normative stance on mentoring. Our conversations before and particularly after the dissertation defense contributed tremendously to stretching me intellectually. I hope I can do the same thing for/with a novice researcher in the future.

I am grateful to Lynn for sharing with me her expertise in qualitative data gathering, analysis and reporting. I rarely answered her questions satisfactorily, but just thinking about them helped to clarify my ideas. The same applies to the questions raised by Susan. Hers were about theoretical perspectives and analytical frameworks. I have had several ideas for a dissertation, but one thing that remained constant is my interest in professional practice. It was Susan who made me realize that all the questions I have been raising over the years are about practice and what guides it. As my academic advisor and guidance committee chairperson, she has also played an important role in my meeting the requirements of the doctoral program and attending to institutional details that one can easily overlook.

I feel fortunate to have met Jack who encouraged me to apply to Michigan State when I was considering pursuing a doctorate in teacher education. Our relation has become multi-faceted. I consider him my mentor, collaborator, and personal friend. He believed in me from the very beginning and has opened many doors. The questions he raised and his editorial comments on my writings have helped me become a far better writer than I was

when I came to Michigan State. Finally, I am grateful to have known well and become a member of the Schwille family.

Steve became a member of my committee after I took his graduate seminar in Adult Development and Learning. This seminar rekindled and reinforced my interest in writing life with an educational accent. Steve has encouraged me to study practice biographically. I have brought that perspective to bear on my dissertation work and I am thankful to him for that.

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Now I would like to thank my family. Special thanks are due to my parents (Germaine Kéita and Maurice Dembélé), my sister Béatrice, and Alizata Ouédraogo for being so patient and supportive. Having my brother--Gaston--around made a big difference. Although we did not see much of each other because of our various responsibilities in addition to academic work, it was emotionally comforting to know that he was there.

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CHAPTER I

MENTORING IN TEACHER EDUCATION

Background

Mentoring is an old concept whose origins are traced back to Greek mythology, specifically to Odysseus's decision to entrust his old friend, Mentor, with his whole household--and particularly his son, Telemachus--before sailing away. Despite its conceptual and methodological limitations, the work of Levinson, Darrow, Klein, Levinson & McKee (1978) constituted a foundational study in the field of mentoring (Galvez-Hjornevik, 1986) and accounted for the recent popularity and acceptance of the concept of mentor in various professions or organizations (Speizer, 1981). Based on a study of successful business men, Levinson et al (1978) concluded that the mentor relationship is one of the most developmentally important relationships in early adulthood. The concept of mentor became popular in the business community long before it caught the education community's imagination. It entered the educational lexicon in the eighties and has been defined differently by different people (see Anderson & Shannon, 1988; Galvez-Hjornevik, 1986; Healy & Welchert, 1990; Merriam, 1983; and Speizer, 1981 for critical reviews).[1]

Mentoring is used in the present study to mean sustained, collaborative close-to-the-classroom work on teaching involving an experienced teacher (*mentor*) and a *novice teacher* (student teacher or intern) aimed at helping the latter *learn to teach*. Often, learning to teach is cast narrowly in terms of acquiring effective behaviors and observable skills, i.e., only the practical dimension of teaching practice. I use learning to teach in this dissertation to mean constructing a practice--which embodies both ways of acting and ways of thinking--while developing a professional identity.

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[1] See Cochran-Smith & Paris, 1992 for a critique of the use of the Homerian mentor as image for working with novice teachers.

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The title of mentor implies "the presumption of wisdom--accumulated knowledge that can serve as the basis of sensitive observation, astute commentary, sound advice, and constructive leadership" (Little, 1990, p. 316). Mentors are presumed to be able to model the teaching communities' ways of thinking and acting. As such, their company constitutes a potentially rich learning environment for novice teachers.

Mentors and Mentoring: Frames for Action, Ways of Acting, and Consequences for Novice Teachers' Learning is a multiple case study of mentoring in one's own classroom at the secondary level. The study grows out of and expands on a larger research project known as the "Learning from Mentors" study. Sponsored by the National Center for Research on Teacher Learning, the "Learning from Mentors" study is designed to investigate what and how mentors contribute to novice teachers' learning and the influence of context on both mentoring practice and novices' learning. I joined this project as a research assistant in the Fall of 1991. Over the years, my interests have evolved from what is in mentoring for mentors to mentors' theories of learning to teach and mentoring.

While gathering data and carrying out preliminary analyses as part of my research assistantship work, I became interested in, if not puzzled by why mentors act as they do in helping novices learn to teach. I became particularly intrigued with whether or not mentors develop plans--just as teachers do on a daily, weekly, monthly, term, semester or yearly basis--that lay out tasks or activities that embody learning opportunities for novices; and whether or not they can link those opportunities to general and/or specific learning outcomes. For instance, do they have clear purposes in mind when they assign tasks to novices? What do they want to accomplish when they "intervene" in different ways before, during, and after classroom teaching? Or when they model ways of acting and/or thinking? Or do they just go with the motion? If they have clear purposes in mind, do these add up to something from which one can abstract a theory of mentored learning to teach? These are some of the many questions that I pondered.

I conjectured that most probably mentors do not plan the same way teachers do because, unlike teachers, they may not have a clear conception of the subject matter of teaching and of the process of learning teaching. They may have thought hard about children's and young adolescents' learning but not equally hard--if at all--about what learning teaching entails. This conjecture stemmed partly from the lack of consensus that I noticed among university-based educators/researchers about what teachers need to know/learn, why, when, where and how (see for example Grossman's response to Kagan's 1992 review of research on professional growth among preservice and beginning teachers); and partly from my own growing uncertainties about these questions. I posited that, lacking a clear conception of the subject matter of teaching and of the process of learning teaching, it is unlikely that mentors can think about, design and create learning opportunities for novices that can add up to an overall coherent educative experience.

Locating and Justifying the Study

The existing literature on mentoring has very little to offer about my initial queries. Both empirical and conceptual work has tended to focus on issues related to program design, goals, implementation, administration and evaluation, mentor selection criteria and procedures, role definition, responsibilities and relationships. It is only recently that researchers have begun to look closely at the practice of mentoring and to provide the kind of fine-grained descriptions and analyses that Little (1990) called for in her review of the mentor phenomenon.

However, in their attempt to get close to the practice of mentoring, few researchers have taken interest in who the mentors are and/or why they do what they do; in other words in their biographies and/or their personal practical knowledge about learning to teach and mentoring. In my view, this reveals, not a lack of interest in mentoring, but the fact that typically mentoring has not been treated as a professional practice. Mentoring has been conceived of primarily as a social function, with little attention paid to its educative aspect. To some extent, the short history of research on mentoring parallels that of research on

teaching. Indeed, in the study of teaching, it is only recently that attention has been paid to teachers as individuals with emotions, thoughts and ideas about their daily work and workplace.

The Mentor Phenomenon in Teacher Education: Policy and Research Agendas

> The Association of Teacher Educators [ATE] has long had a keen interest in the challenges faced by the beginning teacher. Although programs to address this phase of teacher development have been slow to arrive, public figures and educators now agree that the first years of teaching are critical. We are pleased to see this turn of events and feel satisfied that ATE's efforts to bring attention to the induction phase of teaching have begun to bear fruit. The motivation for spotlighting the beginner is usually two-fold: to induct the new teacher into professional practice and to assess the adequacy of the beginner. Both concerns are important. However, the latter one has tended to preoccupy legislators and citizens. We want to correct that imbalance. Many new teachers are not given a chance to show up well on an assessment because the assistance and the encouragement that a beginner needs and deserves are often not available. . . . We see assisting beginners as one of the most productive ways to ensure that new members of the profession will succeed (Billy G. Dixon, in Huling-Austin, Odell, Ishler, Kay & Edelfelt, 1989).

> Mentoring among teachers in American schools has been spurred by public and professional debate over the quality of the work force, the vigor of the teaching occupation, and the conditions of improvement of schools. The proliferation of mentor programs results not from a groundswell of teacher interest, but is largely a product of policy interests and institutional concerns. Increased public attention to certification, tenure decisions, and teacher evaluation has driven the development of formal mentor roles (Little, 1990, p. 340).

The above excerpt from the foreword to *Assisting the beginning teacher*--a volume published by ATE--and the quote from Little's review of the mentor phenomenon provide a convenient entry point into understanding how the mentor appeared on the educational scene in the United States and how mentoring and the role of mentor have been conceptualized. Mentoring became a favored strategy in the improvement of teaching in this country during the eighties. Interestingly, these were times when criticism leveled

against the nation's educational system was at a high, as evidenced by the release of several influential and widely publicized commissioned reports during that decade.[2]

As one might expect, teachers, and, by extension, those who are in the business of educating teachers, were in the crossfire of the criticism from different corners. The inadequacies of teacher preparation, as practiced then, were highlighted. The idea of attracting more talented people--defined primarily as people with strong academic backgrounds--gained popularity among both policy-makers and educational leaders. Alternate routes to teaching other than the traditional preparation programs offered by colleges and universities were promoted. This, in turn, drew more attention to the inadequacies of abrupt entry into the profession and to the challenges faced by first year teachers.

As a result of and in response to this state of affairs, "[p]olicymakers and educational leaders . . . thrust *mentoring* into the vocabulary of school reform as part of a mission to reward and retain capable teachers while obligating these teachers, implicitly or explicitly, to contribute to the improvement of schools and the quality of the teacher work force" (Little, 1990, p. 297). Mentors have played various roles, but the dominant one has been to support and/or assist beginning teachers. Indeed, beginning teacher support and/or assistance programs mushroomed around the country in the eighties and policy-makers and program developers hailed mentor teachers as the key ingredient in their success (Huling-Austin, 1990).

Little (1990) rightly argues that "[m]entoring in education has derived its main justification from inadequacies in the induction of teachers" (Little, 1990, p. 331).

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[2] These include for example *A nation at risk* (National Commission On Excellence in Education, 1983); *A nation prepared: Teachers for the 21st century* (Carnegie Foundation for the Advancement of Teaching, Task Force on Teaching as a Profession 1986); and *Tomorrow's teachers: A report of the Holmes Group* (Holmes Group, 1986). *A nation at risk* is arguably the most notable of these reports.

Premised on a rather narrow conception of induction into teaching,[3] mentoring was initially conceived as a powerful organizational resource for relieving "the stress associated with the intellectual, social, and emotional demands of first year teaching" (Little, 1990, p. 322).

Whether it be to reward and retain capable experienced teachers or to attend to first year teachers' well-being (and learning), the implicit logic in the above policy rationales "is that the concentration of resources on a relatively small proportion of teachers will yield benefits for the larger teacher population and for the institutions that employ them" (Little, 1990, p. 300). These policy rationales have in turn shaped research on mentoring among K-12 teachers and where it is conducted. As observed by Little (1990), "[m]uch of the research . . . has taken the form of policy studies or program evaluations conducted in sites and settings shaped by formal intervention" (Little, p. 340).

Besides policy studies and program evaluations, a large body of work exists on issues of definition and relationship in mentoring. In fact, these issues constituted the dominant foci of conceptual and empirical work on mentoring during the eighties.

Definitional and relational issues in research on mentoring

A reading of the major reviews of the mentoring literature from Speizer (1981), Merriam (1983), Gray and Gray (1985) and Galvez-Hjornevik (1986) to Little (1990) suggests that during most of the eighties researchers were concerned primarily with two issues: the issue of definition and that of relationship. Many competing and complementary definitions of roles and specifications of functions and related behaviors, characteristics and qualities of mentors have been advanced (Alleman, 1986; Anderson & Shannon, 1988; Bogat & Rednar, 1985; Galvez-Hjornevik, 1986; Gehrke, 1988a; Gray & Gray, 1985; Healy & Welchert, 1990; Klopf & Harrison, 1981; Merriam, 1983; Phillips-Jones, 1982; Schein, 1978; Speizer, 1981).

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[3] See Lawson (1992) and Strobble & Cooper (1988) for a broader conception of induction--particularly Lawson's which is grounded in a conception of teaching as a moral, intellectual and political endeavor.

By far, however, relationship is the aspect of mentoring that has arguably received attention the most among researchers (Anderson & Shannon; Bower & Yarger, 1989; Galvez-Hjornevik, 1986; Gallimore, Tharp & John-Steiner, n.d.; Gehrke, 1988b; Gehrke & Kay, 1984; Gray & Gray, 1985; Healy & Welchert, 1990; Krupp, 1984; Merriam, 1983; Yamamoto, 1988). The bulk of conceptual and empirical work was devoted to how mentor-novice relationships start, develop and end; what makes or breaks them, etc. That relationship should occupy center stage in research on mentoring is not surprising given that mentoring is such a highly personal and relational practice. Unfortunately, however, this has made researchers not pay serious attention to the practice itself and its consequences for novices' learning, beyond emotional support.

Research Agendas in the late eighties and 1990's: A shift in focus

At the beginning of her review of the mentor phenomenon, Little (1990) observed that "[r]hetoric and action have . . . outpaced both conceptual development and empirical warrant. . . . Relative to the amount of pragmatic activity, . . . the volume of empirical inquiry is small" (pp. 297-298). In concluding the review, she pointed out the fact that "[t]here are few comprehensive studies, well informed by theory and designed to examine in depth the context, content, and consequences of mentoring" (p. 341).

Little (1990) also identified several characteristic limitations of studies of mentoring. These include "small sample sizes, an overreliance on retrospective accounts, the absence of control or comparison groups, and the scarcity of longitudinal designs" (p. 343). Her concluding observation that is most relevant for what the present study is all about is that "[m]ost studies rely heavily on in-depth interviews that reveal mentors' perceptions, but are also constrained by mentors' perspectives and experiences. . . . *Observations of mentors' work are rare in study designs, and rarer still in published reports* [italics added]" (p. 344). The work of Wildman, Magliaro, Niles & Niles (1992) is illustrative in this respect.

In contrast with previous studies, Wildman et al made an attempt to get close to mentoring practice. However, they limited their attempt to self-reports by mentors-- mentors' descriptions of their ways of helping beginning teachers. No observations of mentoring activities were undertaken. This constitutes one of the limitations of this study, although the authors claim that

> the mentors' descriptions of their ways of helping beginners were corroborated and elaborated in several ways. First, in the small groups, teachers from different school were interested in their colleagues' work with beginning teachers, which resulted in considerable questioning and elaboration of the activities reported. Second, mentor logs and a variety of short surveys were examined for comparison purposes (p. 206).

The second problematic aspect of the study and the way Wildman et al presented their results is that we lose the individuals, their voices, and the feel for lived experiences. This is a function of any large scale study. Certainly the mentors who were participating in the small group meetings could imagine what their peers were describing. But for the reader, a summary table of reported mentoring activities is of limited help. Cases that provide images of practice would be more helpful.

Magliaro, Niles, Wildman, Niles, Erhmantraut & Miller (1995) reported on a study of mentors' personal practical knowledge about learning to teach. This study is significant in that the researchers set out "to describe what experienced teachers learn about learning-to-teach via mentoring of their beginning teachers, and how this knowledge impacts their own professional lives" (p. 3). However, methodologically and in terms of data reporting, the study is not very different from Wildman et al's (1992). It does not provide us with images of what happens between mentors and novices.

Work done by Feiman-Nemser, Parker and Zeichner, and by Nevins provides images of what Little (1990) called for. It also demonstrates the importance and value of looking closely at what transpires between mentors and novice teachers. Nevins's work in particular contributes significantly to the case literature on mentoring and especially to understanding the content of mentors' reflections on teaching and teacher education.

As part of the Teacher Education and Teacher Learning (TELT) study--sponsored by the National Center for Research on Teacher Education (NCRTE)--Feiman-Nemser, Parker and Zeichner compared mentoring practices in two U.S. contexts. They documented--through interviews and observations--striking differences in the way mentor teachers conceived and carried out their work in two beginning teacher assistance programs (Feiman-Nemser & Parker, 1993, 1992, 1990; Feiman-Nemser, Parker & Zeichner, 1992). They linked these differences in mentors' perspectives and practices to differences in role expectations and working conditions, program orientations, and mentor preparation.

As part of the same study, Feiman-Nemser (1991) set out purposefully "to uncover Frazer's reasons for becoming a support teacher, his views of his role, and how he learned it, his thoughts about the impact of the work on his teaching" (p. 3). In addition, instead of a list, she provides us with a qualitative image of the meaning of mentoring for mentors. More important, she provides a fresh insight on the conditions that support Pete Frazer's practice and what he has gained from it, and places both in a context that is larger than the mentor-novice relationship, i.e., a context of "collaboration and experimentation within a professional learning community" (p. 17).

Nevins's (1993) work falls along the same line of inquiry. She conducted a program-based study designed to uncover and describe how five experienced elementary classroom teachers in a Professional Development School made sense of their work with novices, and in what ways they viewed student teaching as an occasion for teacher learning. Using stimulated recall and structured interviews, and observation, she documented how the teachers' views about learning to teach, the sources of knowledge upon which they drew and the nature of their reflection influenced how they worked with novice teachers.

Nevins came to the conclusion that "[a]s 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" (p. 257).

She concluded also that "multiple opportunities for interactions with people, readings and ideas about goals and practices of teacher education" (p. 259) are needed to support the development of a role as mentor in a collaborative model. "Both school and university educators need to consider that social construction of roles take 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" (pp. 259-260).

Besides highlighting the role of context, Feiman-Nemser et al's and Nevins's studies provide detailed descriptions of mentors' interactions with novices, rare in the literature. They also provide analyses of the opportunities to learn that such interactions hold out for novice teachers. The present study shares these aspects of the work of Feiman-Nemser et al and Nevins. It differs from them in that it attempts to attend explicitly to novices' learning in the company of mentors.

Mentors and Mentoring: Frames for Action, Ways of Acting, and Consequences for Novice Teachers' Learning

In 1991, the National Center for Research on Teacher Learning (NCRTL) launched a study of mentored learning to teach (see Kennedy, 1991). Part of a research strand concerned with "learning to reason pedagogically and manage instruction", the "Learning from Mentors" study focuses on what and how novices (e.g., student teachers and beginning teachers) learn in the company of experienced teachers (mentors, support teachers, cooperating teachers) who are also studying and changing their practice (Cochran-Smith, 1991). The central goal of the study is to provide insights about learning to teach, mentoring practices, and the conditions that enable novices and mentors to work together productively.

The study has three unique features. First, it was framed as a collaborative inquiry into mentored learning to teach to the extent that the participants themselves were actively involved in data gathering. "Our collaborative strategy allows us to describe and codify 'insider' knowledge and reasoning about teaching and learning to teach. Hopefully this

will help promote greater equality in teacher education between the language of research which dominates the discourse and the language of practice which rarely receives serious attention" (Feiman-Nemser & Paine, 1992, p. 2).

Second, the study was designed to bring together three strands of research that generally remain separate--research on teaching, research on mentoring, and research on teacher learning.

The study's third unique feature is its comparative, cross-national dimension. It was carried out in the United States, England and China, with multiple sites in each country. The selection of these three countries was purposive.

> We do not pursue this cross-national study in order to see what we can borrow from other countries. Rather the contrasts help us understand how novices' learning with and from mentors is shaped by institutional and programmatic arrangements as well as by broader social and cultural contexts. . . . The cross-national dimension enables us to learn how notions of learning and professional roles are artifacts of organizational cultures, social values, and constraints. Moreover, the particular cases we have chosen for comparison allow us to see a phenomenon regarded as new and experimental in the U.S. as it exists in programs of longstanding history (Feiman-Nemser & Paine, 1992).

As I pointed out earlier, the present dissertation grows out of and expands on the "Learning from Mentors" study. I chose to look closely at three mentors at work in a secondary school. In doing so, I sought to contribute to the small body of scholarship that focuses on the practice of mentoring, and to explore the consequences of mentors' ways of thinking and acting for novices' learning. I also sought to bring the participating mentors' voices to the larger debate about the mentor phenomenon. However, this dissertation is not about celebrating the mentors' accomplishments per se. Instead, it is about treating mentoring seriously, i.e., as a design-like professional practice with an epistemology, ways of thinking and acting, "a repertoire of expectations, images, and techniques" (Schön, 1983, p. 60), and dilemmas to be managed.

Underlying assumptions

Several interrelated assumptions underlie my investigation. First, I consider mentoring to be a practice of human improvement. Like other practices of human improvement, e.g., teaching, principalship, social work, etc, it involves achieving results through others. Consequently, how to do the work becomes an important question; so is the question of what ideas people have about how to do what they have to do.

Second, just as educational researchers have felt, and taken seriously, the need to study the practical aspects of teaching and, more recently, what shapes and guides what teachers do (Carter, 1990; Clandinin, 1985; Elbaz, 1983; Clark & Peterson, 1986; Connelly & Clandinin, 1990, 1988; Goodson, 1992; McCutcheon, 1992; Ross, Cornett & McCutcheon, 1992; Sanders & McCutcheon, 1986), there is a need to study *what mentors actually do* and importantly *what guides them* in making decisions and taking actions to help novices learn to teach. This entails getting closer to mentoring practice than has typically been the case to date in order to witness what the practitioners do, and to understand the choices they make and the personal meanings they attach to what they do.

I believe strongly that, ultimately, the realization of the transformational power of mentoring will depend more on this kind of inquiry than on simply theorizing about mentoring and/or on research that focuses primarily on the administrative and programmatic aspects of mentoring and on role definition and relational issues. It is not enough to put structures (mentoring programs) in place. One must look inside them to determine whether or not what is going on matches the original intentions. For practitioners, role definitions and lists of activities are of limited help. Exemplars or images of other practitioners in action, on the other hand, can help practitioners imagine what could be.

To understand mentoring it is especially important to inquire into why mentors do what they do. This is based on my third assumption--that, like any practical activity, mentoring is guided by some theory. Just as teachers, mentors "could not begin to practice without some knowledge of the context of their practice and some ideas about what can and

should be done in those circumstances" (Ross et al, 1992, p. 3). Just as teachers, mentors are guided by personal, practical theories that structure their activities and guide them in making decisions about how best to support novices' learning to teach. Finally, just as teachers, mentors draw on these theories tacitly and consciously "to make sense of their situations, take appropriate actions, and assess the impact of those actions" (Ross et al, 1992, pp. 3-4). This basic fact has obvious implications not only for the study of mentoring, but also for the design or improvement of mentoring programs and for the preparation and ongoing support of mentors.

Teachers' knowledge and mentoring

Cochran-Smith & Paris (1992) argued that:

> The major epistemological assumptions underlying mentoring as a strategy for educating beginning teachers would seem, at one level, to be self-evident: essential knowledge for teaching includes the accumulated beliefs, information, and principles of experienced teachers; and, the way these can be acquired by beginners is through face-to-face interaction over relatively long periods of time with experienced teachers. It follows from these assumptions that teachers' knowledge--what teachers know, how they come to know, and what they do with what they know--would be both heart and soul of the phenomenon of mentoring (p. 8).

They went on to suggest that

> mentoring will not reach its potential as a strategy for reform in teaching and teacher education until it is based on an epistemology that includes teachers' ways of knowing and acting about teaching. We are not suggesting that mentors should *not* propose a variety of strategies for effective instruction and management derived from "the knowledge base" or that they should *not* provide beginners with information about school and school district norms and procedures. We are suggesting, however, that the content of interactions among mentors and beginners needs to be much richer and more substantive than that (p. 10).

By "much richer and more substantive," they mean paying attention to subject matter and to diversity of student populations (including issues of race, gender and ethnicity), as well as "supporting beginners as they learn to be knowers. This means learning to be not only critical consumers and interpreters of other people's knowledge but

also knowledge makers who formulate analytic frameworks, pose problems of practice, and develop conjoined ways of collecting and connecting evidence in order to make decisions about teaching" (p. 11).

Cochran-Smith and Paris clearly have a distinct sociological view of what counts as the knowledge deemed necessary for successful mentoring and successful entry into the teaching profession--a departure from the current state-of-practice. I concur wholeheartedly with their emphasis on an epistemology of mentoring that is based on teachers' practical and situated knowledge. However, much as we should not accept knowledge from the academe uncritically, we should not take practitioners' knowledge for granted either. Such knowledge must stand the test of scrutiny by both the community of practice and the academe. The first step in this direction is to make this knowledge public. Indeed, as Schön (1983) put it,

> We are in need of inquiry into the epistemology of practice. What is the kind of knowing in which competent practitioners engage? How is professional knowing like and unlike the kinds of knowledge presented in academic textbooks, scientific papers, and learned journals? In what sense, if any, is there intellectual rigor in professional practice? (p. viii).

As shown above, there is limited work of this kind on mentoring as an educational practice. The research accumulated on mentoring thus far has little to offer on what actually occurs between mentors and novices, and especially on why mentors do what they do and what novices learn as a result. Researchers have hardly begun to appreciate the complexity of mentoring practice and to see the value of describing and analyzing it (Schwille & Wolf, in progress). Efforts to link mentoring practice to teacher learning are even more rare.

Conceptualizing practice

I take practice to mean *frames for action* and *ways of acting*; *intentions* and *performance*. In other words, I see practice as both performative/behavioral and cognitive. It is constituted on the one hand by what a practitioner actually does that is observable, and

on the other hand by why he/she does what he/she does, i.e., the invisible part of his/her practice.

As Sanders & McCutcheon (1986) have argued, "[e]ducational practices . . . involve more than simply behavior. Professional practices are manifest in behavior, of course, but they entail thoughts, interpretations, choices, values, and commitments as well" (p. 51). Thus defined, practice appears non-static, dynamic and inherently value-laden. It becomes a moving target. We must be cognizant of these features as we attempt to understand practice. First, this means that we cannot claim to have a definitive word about someone's practice based on data collected at a given point in time. Second, we cannot claim to understand someone's practice at any given time if we have not explored his/her frames for action. These frames are critically important for understanding actions to the extent that they run ahead of experience, define and guide it (and are in turn shaped by experience). How a practitioner frames a problem or task may open up or close out possibilities of seeing certain features of that problem or task as well as alternative ways of approaching it. We cannot understand what a frame leaves out unless we are aware of its contents.

Frames for action and frame analysis

The concept of frame and the idea of frame analysis are central to the present study.

My use of the term *frame* is informed by the work of Schön (1983) and by Barnes's (1992) discussion of the significance of teachers' frames for teaching. According to Schön, practitioners' "frames determine their strategies of attention and thereby set the directions in which they will try to change the situation, the values which will shape their practice" (p. 309). He went on to suggest that "[w]hen practitioners are unaware of their frames for roles or problems, they do not experience the need to choose among them. They do not attend to the ways in which they *construct* the reality in which they function; for them, it is simply the given reality" (p. 310).

How can practitioners become aware of their frames? Schön proposed *frame analysis*--"the study of the ways in which practitioners frame problems and roles" (p. 309). It is the kind of study that "can help practitioners to become aware of and criticize their tacit frames" (p. 309), "and thereby lead them to experience the dilemmas inherent in professional pluralism" (p. 311). Put differently,

> When a practitioner becomes aware of his [sic] frames, he also becomes aware of the possibility of alternative ways of framing the reality of practice. He takes note of the values and norms to which he has given priority, and those he has given less importance, or left out of account altogether. Frame awareness tends to entrain awareness of dilemmas (p. 310).

Developing practitioners' awareness of their frames is important to the extent that once they "notice that they actively construct the reality of their practice and become aware of the variety of frames available to them, they begin to see the need to reflect-in-action on their previously tacit frames" (p. 311). In Schön's view, the kind of frame analysis that will be useful to practitioners is the kind that is

> less a compendium of techniques and principles than an exercise in literary or art criticism, one that helps the reader to walk for a while in the writer's or artist's world, sharing his enterprises and methods, seeing as he sees. . . . In its more general form, this form of frame analysis would help practitioners to experience the world they would create for themselves [and others] if they adopted a particular way of framing the practice role. It would convey the experience of problem setting and solving, the self-definitions and the definitions of success and failure, that would be inherent in a particular choice of role-frame. It would not furnish criteria for choice among approaches to the profession, but it would help the practitioner to "try on" a way of framing the practice role, getting a feeling for it and for the consequences and implications of its adoption. It would help the practitioner understand the competence he would need, and the kind of person he would become, if he framed his role in a particular way; and it would thereby support the practitioner's efforts at frame reflection (pp. 314-315).

Barnes (1992) drew on the work of Minsky (1975), Schön (1983), Shibutani (1955) and Wyer and Srull (1984) to explore the nature and formation of the interpretive frames that guide teachers' choices of teaching strategies. He argued that

the concept of `frame' (Minsky, 1975; Schön, 1983, Wyer and Srull, 1984) can be used to consider the ways in which teachers perceive and execute their professional tasks. The term `frame' is used to refer to a clustered set of standard expectations through which all adults organize, not only their knowledge of the world but their behaviour in it. We might call them `the default settings of our daily lives'. . . . [T]he frames that we bring to any context allow us to both categorize what we see and attempt to interpret what is going on there, including unexpected features and events. We also use the frame to supply, sometimes misleadingly, those aspects of the context that we did not consciously notice (pp. 15-16).

In Barnes's view, a teacher's most significant frames for teaching are embedded in his/her preconceptions about the nature of what he/she is teaching; about learning and how it takes place; about students (in general, and about the particular group being taught); in his/her beliefs about priorities and constraints inherent in the professional and institutional context; and finally, in the nature of his or her overall commitment to teaching. "Though the frames appear to be made up of information about teaching, they incorporate an equally complex system of values and priorities, along with strategies which would enable them to be put into effect" (p. 16).

Regarding the origin of frames, Barnes suggested that

[t]eachers' professional frames have both an individual history of development and a relationship to the conditions and history of teaching as a profession. They are generated during interaction with persons, events and constraints that constitute teachers' work context, and represent the teacher's interpretation of the roles and strategies available to him or her within the particular situation. Professional frames may be generated as individual solutions to practical problems or to value dilemmas, but at the same time they are interpretive hypotheses that may have to be negotiated with colleagues and shared so that the teachers reinforce one another (p. 17).

The foregoing provided me with a framework for thinking about and mapping out mentors' frames for mentoring. It also prompted me to explore the origins of those frames. In the next section I answer the question: What are mentors' most significant frames for mentoring likely to be?

Frames for mentoring

I submit that mentors bring two basic sets of frames to bear on their work with novice teachers. Each set has several dimensions and is more or less explicit. One set includes mentors' knowledge and beliefs about learning to teach and mentoring, and the meanings they attach to being a mentor. The other set includes their frames for classroom teaching.

Knowledge and beliefs about learning to teach and mentoring. How a mentor acts in support of novice teachers' learning can be linked to several things. The most important, in my view, include 1) how he or she frames the learning to teach task and 2) how he or she conceptualizes the mentor role. What does he or she think novices need to learn or develop? How does he or she think the learning takes place, in the double sense of opportunities to learn and/or contexts for learning, and cognitive psychological processes? What does he or she know or believe about novices in general, and about particular novices? What is his or her assessment of their needs? What are his or her expectations of novices? Responses to these questions have a bearing on how a mentor conceptualizes his or her role in the service of novices' learning.

How a mentor frames his or her work with novices may also have much to do with the meanings that he or she attaches to the experience of mentoring. Answers to the following questions are important in this respect: What motivated/motivates the mentor to take on this role? What does being a mentor mean to him or her? Does he or she benefit from helping novices learn to teach? On the other hand, given the intensely personal and relational nature of the practice, and given that mentors in pre-service settings share their classrooms and students with novice teachers, are there any "costs" involved in the experience? How does the mentor manage some of the dilemmas that I believe are inherent in mentoring, e.g., the asymmetrical nature of the relationship, what/when to tell and not to tell, and responsibilities towards students versus towards the novice? Where does all this fit in his or her personal and professional life?

Frames for classroom teaching. A mentor is first and foremost a classroom teacher. As a classroom teacher, his or her actions in support of pupils' learning are shaped by his or her ideas about the nature of the subject matter he or she is teaching, his or her knowledge of and beliefs about learning, about learners and what is important for them to learn, and his or her conception of teaching. In addition, a teacher's actions may be shaped by considerations of several contextual factors including (but not limited to) the expectations that a teacher sub-group, a department, or a school as a whole have of teachers, the degree of experimentation allowed in the school or department, and parental involvement. Embedded in these are the mentor's frames for classroom teaching. In principle, they also constitute a major source of his or her ideas about learning to teach and mentoring.

The relationship between frames for action and actions is neither linear nor causal. In fact, there is virtually never a perfect match between practitioners' frames and their actions. Instead, the relationship is reciprocal and dynamic. Thinking, beliefs and knowledge are shaped by, and in turn shape, actions. In other words the former grow out of and into the latter. Consequently, to understand frames we should not limit ourselves to exploring frames in and of themselves. We need to look at actions to really appreciate and be able to critique frames. This justified the second major task that I set out to accomplish in this dissertation, i.e., describing and analyzing how mentors act upon their frames.

Ways of acting and repertoire-building research

Further justification for carrying out this task came from Schön's (1983) discussion of what he termed *repertoire-building research*, i.e., "[d]escription and analysis of images, categories, schemes, cases, precedents, and exemplars" (p. 309). Repertoire-building research is the second of four types of reflective research that Schön identified (frame analysis being the first). According to him, repertoire-building research "can help to build the repertoires which practitioners bring to unique situations" (p. 309).

Schön argued further that "when practice situations do not fit available theories of action, models of phenomena, or techniques of control, they may nevertheless be *seen as* familiar situations, cases, or precedents. Repertoire-building research serves the purpose of accumulating such exemplars in ways useful to reflection-in-action" (p. 315). A case can be developed to provide images of the desirable in practice, to portray a full problematic practice situation, or to raise a particular kind of practice problem. Using the practice of law as example, Schön wrote that "cases may serve as exemplars in the double sense. They describe precedents to which judges and lawyers can have access as they deal with new cases. They also exemplify ways of thinking about the problem of linking procedural rules to particular problems of judicial decision" (p. 315).

Repertoire-building research is widely practiced, but in Schön's view, it "tends to focus on the starting situation, the actions taken, and the results achieved" (p. 317). He cautioned case writers about just displaying "linkages between features of action, outcome, and context" without revealing "the path of inquiry which leads from an initial framing of the situation to the eventual outcome" (p. 317). Not revealing the path of inquiry suggests "a kind of historical revisionism in which the case writer acts as though a view of the case which arose only at the end of inquiry had been available to him [sic] from the very beginning. When a case study more nearly represents the evolution of inquiry, it may provide the reader with exemplars in the double sense I have described" (p. 317). This entails, among other things, explicating one's methodological choices and analytical decisions and procedures (see chapters one and five).

Mentors' ways of acting and novices' learning

The complexity of mentoring--especially in one's own classroom--lies in the fact that the mentor himself or herself is a critical element of the context of novices' learning. The kind of teaching that a mentor practices embodies images or a model of what could be learned, but the mentor himself or herself serves as a model by virtue of being the mentor. In other words, novices' learning is situated in the context of what is to be learned in a

double sense. Being in the context of practice is important in learning a design-like practice, but just being there does not ensure learning. Novices need to be guided in noticing and understanding the features of the context of their learning.

How a mentor acts as a classroom teacher in support of pupils' learning and what he or she does purposefully in the service of novices' learning are therefore critical. Indeed, novices not only learn from observing the mentor teach, but their learning is a function of their participation in what needs to be accomplished to get the work of teaching done. It is also a function of the amount and kind of guidance and assistance they receive from the mentor.

Recent cognitive and socio-cultural research provides support for the above. This research has shown that context matters in cognitive activity and learning. In her introduction to *Perspectives on socially shared cognition*, Resnick (1991) observed that recent theories of *situated cognition* are challenging the view that the social and the cognitive can be studied independently, arguing that the social context in which cognitive activity takes place is an integral part of that activity, not just the surrounding context for it. . . . [E]very cognitive activity must be viewed as a specific response to a specific set of circumstances" (p. 4).

"[T]hinking is intricately interwoven with the context of the problem to be solved," Rogoff (1984) argued. She defined context as "the problem's physical and conceptual structure as well as the purpose of the activity and the social milieu in which it is embedded" (p. 2). According to Brown, Collins, and Duguid (1989) "[s]ituations might be said to co-produce knowledge through activity. Learning and cognition . . . are fundamentally situated" (p. 32). Brown et al also suggested that situations structure cognition; and that "[k]nowing and doing are interlocked and inseparable" (p. 35). They defined learning as a process of enculturation--a process to which social interaction is central.

> Enculturation may, at first, appear to have little to do with learning. But it is, in fact, what people do in learning to speak, read, and write, or becoming school children, office workers, researcher, and so on. . . . Given the chance to observe and practice *in situ* the behavior of members of a culture, people pick up relevant jargon, imitate behavior, and gradually start to act in accordance with its norms (pp. 33-34).

The point about learning through observation and practice in social context is supported by several other researchers. Lave (1991) for instance called for situating learning in communities of practice. She posited a view of learning as *situated social practice*—"a process of becoming a member of a sustained community of practice" (p. 65), and "of assuming an identity as a practitioner, of becoming a full participant" (p. 67). In this view, learning consists of moving from relative incompetence to competence within a particular practice situation.

In light of the foregoing, I contend that in trying to understand what and how an experienced teacher contributes to the learning of a novice in a pre-service setting, one good place to start is the mentor's teaching practice.[4] We must first ask: What was there to be learned in the mentor's classroom? To address this question, we must answer the following: What are the objective features of the mentor's classroom? What are the distinctive features of his or her teaching practice?

Once we have answered these questions, we can pose the following: What did the novice learn? Did he or she learn what was salient in the proximate context of his or her learning, i.e., the distinctive features of the mentor's teaching practice? What else did he or she learn? What evidence is there for what he or she learned? How can we account for the learning (or lack of it)? Answering this last question calls for establishing connections between mentors' actions and novices' learning. To do so, we must ask and answer

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[4] Drawing on the work of Jean Lave, Martin (1994) made a similar argument. He identified the following as resources that structure student teachers' learning and cognition: "the children in the class, . . . the classroom organization that the cooperating teacher has already set (with embodiments, pedagogy, rules, etc.), and . . . the coaching (the tasks delegated, the models offered and the conversations)" (p. 6).

questions such as: What did the mentor try to teach the novice? What did he or she do to help the novice learn that?

These questions and those posed in previous sections are the questions that I pursued in this study. The main questions that animated the study:

   1. What frames do mentors bring to bear on their work with novice teachers?

   2. How do they act upon those frames?

   3. What are the consequences for novices' learning?

In chapter two I describe how I went about generating, gathering and analyzing the data. Chapters three and four are full-blown cases of two mentors at work. In chapter five I look across the cases. In this chapter I explicate with illustrations from the cases three key ideas that emerged from the study. They include *modeling, joint participation in authentic tasks and intentionality.* In doing so I lay out a normative view of mentoring.

CHAPTER II

METHODOLOGY AND RESEARCH PROCEDURES

Methodological Choice

As researchers, how we conceptualize the phenomenon or phenomena that we are interested in studying colors the questions we ask and how we go about pursuing them. How I conceptualized mentoring practice, the assumptions I made about it and the questions I asked as a result called for a case study design--a design that would allow me to get closer to the practice than has typically been the case to date in order to witness what the practitioners do and to understand the choices they make and the personal meanings they attach to what they do.

I chose to do a multiple case study of three mentors in the interest of depth over breadth of coverage while at the same time allowing the possibility of seeing and exploring variation and commonality. In doing case studies I hoped to shed light on the complexity and messy reality of a practice that is too often taken for granted by both those who theorize about it and those who do it.

> In studying a philosopher, the right attitude is neither contempt nor reverence, but first a kind of hypothetical sympathy until it is possible to know what it feels like to believe in his [sic] theories (Russell, 1945, p. 45).

> If you want to understand what a science is, you should look in the first instance, not at its theories or its findings, and certainly not at what its apologists say about it; you should look at what the practitioners of it do (Geertz, 1973, p. 5).

These contrasting perspectives on the study of practice/practitioners provide a convenient point of departure for describing how I went about studying mentoring practice. My conceptualization of practice entailed bringing both perspectives to bear on my work. The first perspective had two interrelated implications for my investigation. First, it

entailed entering into a relationship with each participating mentor with a view to knowing

what it feels like to believe in his/her theories of mentoring and learning to teach. Second, I

entered this relationship with the assumption that the mentor had something to teach me; in

other words, that I had something to learn from him/her. Operationally, this perspective

meant engaging in *frame analysis* as called for by Schön (1983) and as illustrated by

Barnes's (1992) discussion of the significance of teachers' frames for teaching (see chapter

one).

The second perspective called for providing vivid images of what the participating

mentors actually did in the service of their novices' learning, and for exploring the

relationship between their actions and their frames for action. Operationally, this meant

engaging in what Schön (1983) called *repertoire-building research.*

Having conceived of mentoring as an educational practice, I also needed to

understand what novice teachers learn in the company of these mentors. That meant

gathering evidence of novices' learning and exploring the connection between their learning

and the mentors' actions.

The Participants in Context

The context

To pursue the questions that animated this study I chose to look closely at two

secondary mentors at work in a Professional Development School (PDS).

> A Professional Development School [is] a regular elementary, middle, or
> high school that works in partnership with a university to develop and
> demonstrate
> ° fine learning programs for diverse learners, *and*
> ° practical, thought-provoking preparation for novice teachers, *and*
> ° new understandings and professional responsibilities for experienced
>   educators, *and*
> ° research projects that add to all educators' knowledge about how to make
>   schools more productive (Holmes Group, 1990, p. 1).

The fourth principle guiding the design of a PDS, i.e., "teach adults as well as

children," urges "teachers, administrators, and professors [to] collaborate in giving

prospective teachers practical experiences of how schools run and how teachers work. . . .

Student teachers will be emboldened to take up difficult problems because they can do so

with the help of wise, veteran teachers. . . . Experienced teachers of the school will

sharpen their own practice as they demonstrate and explain it to novices" (Holmes Group,

1990, p. 5).

The commitment of a PDS, at least in principle, to the reform of teaching and

teacher education, and in particular to helping novices learn to teach makes it a good context

for inquiring into mentoring as an educational practice. Because of this commitment it is a

context where one is likely to find experienced teachers who have thought seriously about

the learning-to-teach question; who are making or have made the transition from thinking

about teaching children and adolescents to thinking about helping young adults learn to

teach. Such mentors would fit Feiman-Nemser & Parker's (1993) definition of *educational

companions*.[5]

> When mentors take on an educational role, they still help novices cope with
> immediate problems [as local guides do], but they also keep an eye on
> long-term, professional goals such as helping them learn to uncover student
> thinking and develop sound reasons for their actions. Mentors work toward
> these ends by inquiring with novices into the particulars of their teaching
> situation, asking questions such as, "What sense did students make of that
> assignment? Why did you decide on this activity? How could you find out
> whether it worked?" (Feiman-Nemser & Parker, 1993, p. 716).

The participants

As I pointed out in chapter one, the present study grows out of and expands on the

"Learning from Mentors" study. I have been involved in the latter study since its inception

and contributed to its conceptualization, instrument development, data gathering, ongoing

analysis and reporting. I was one of the research assistants assigned to Hodges High

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[5] Feiman-Nemser & Parker identified two other roles that mentors can play: those of *local
guides* and *agents of cultural change*.

School.[6] Out of the four pairs in that site, I collected data with/about two: Ken and Mickey and Beatrice and Chuck. Another research assistant was assigned to Nancy and Betsy.

Ken, Nancy and Beatrice teach social studies/American history, science and mathematics respectively at Hodges High School.[7] 1992-1993 (the year when the first set of data were gathered) was Ken's twenty-eighth year of teaching and Nancy's twentieth. All three mentors had already made significant changes in their teaching practice and had been mentors to several novices. They were all part of a Mentor Teacher Program designed for teacher candidates enrolled in a teacher certification program of the local university oriented around the teaching and learning of subject matter.

A unique feature of this program was that at the beginning of their junior year, teacher candidates were matched with an experienced classroom teacher. In most cases they were placed with the same teacher for their eleven week-long student teaching during their senior year.[8] During their junior year they would visit that teacher's classroom to carry out course-related field assignments. These assignments were introduced gradually and included: interviews with individual students; interviews with the classroom teacher; focused observations; study and critique of curriculum and curriculum materials used by the teacher; planning and teaching lessons to small groups of students and eventually to the whole class. During the Spring quarter of that year, they spent a whole week teaching in their future mentor's classroom.

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[6] The name of the school and those of the participating mentors and novice teachers are all pseudonyms.

[7] Beatrice was part of my dissertation sample throughout data collection. I was particularly impressed by her social constructivist views of knowledge, learning and teaching, and her critical views of schooling and society. I decided to drop her case after drafting all three cases for various reasons. First, her 1992 student teacher was suspended before the end of the semester. Second, she shared him with another mentor and he spent more time with the latter than with Beatrice. The above factors made her case an outlier, although it raised interesting issues about mentor-novice relationships and the problematics of sharing a novice with a colleague whose views of the subject matter and of how it is learned/taught are strikingly different from one's views.

[8] In the Fall of 1992 the university switched from a quarter system to a semester system. As a result, although their student teaching was to officially end after eleven weeks, most student teachers stayed on for another four week period.

The certification program was phased out at the end of the 1992-1993 academic year and replaced by a five year program with a year-long internship. The new program is organized around three teams for elementary education and a cross-team for secondary education. During their sophomore and junior years, teacher candidates take introductory courses in education. Their senior year is devoted to subject matter/methods courses with field placements. This is followed by a year-long internship. Interns are typically placed with the teacher in whose classroom they carried out field assignments during their senior year. In addition to teaching in that teacher's classroom, interns take master level seminars focused on deepening of subject matter knowledge, professional roles, and teacher inquiry and reflection. Ken, Nancy and Beatrice had their first interns from the new program in 1994-1995. They worked respectively with Sheila, Bill and Larry.[9]

The selection of Ken and Nancy for my dissertation work was not simply a matter of convenience. I had been struck, since conducting the autobiographical interview with Ken by who he is as a person and an educator. Further data collection revealed a striking fit between his ways of thinking and acting as a mentor. He came across as a mentor who got many things done but he did not seem as thoughtful about learning to teach and mentoring as other mentors in the larger study sample. It was the contrast in the ways in which Ken and other mentors thought, acted and justified their actions as mentors that sparked my interest in mentors' theories of learning to teach and mentoring.

I chose Nancy for several reasons. From our ongoing project deliberations and preliminary data analyses, she stood out as the only mentor in our Hodges sample who seemed to have a systematic and well-structured way of working with novice teachers. Most importantly was the fact that she applied to mentoring a learning/teaching cycle on which she relied heavily as a teacher. She struck me as a person who had a well-developed conception of learning to teach linked to a well-defined role. She also seemed to have

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[9] In addition to Sheila, Ken accepted a second intern, Heather, toward the end of the Fall semester. This happened after Heather and her initial mentor parted company.

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figured out effective ways of acting upon her frames for mentoring. In a way, Nancy challenged my conjecture that mentors probably do not plan like teachers because they most probably do not have a clear conception of the subject matter of teaching and of learning to teach.

In addition to her ways of thinking and acting as a mentor, my decision to include Nancy was based on a consideration of several other factors. She taught science; had fewer years of teaching experience than Ken; made significant changes in her teaching practice long before he did; became part of the Mentor Teacher Program before he did; was different from him in terms of personality; and is female. Given these differences, examining Ken's and Nancy's mentoring practices comparatively held the potential of shedding light on issues such as the roles that subject matter, personality, gender and where the mentor is in his/her teaching career play in mentoring practice. It also held the potential of contributing meaningfully to the ongoing debate about the practice of mentoring.

Generating/Gathering Data

The data reported in this dissertation were gathered in two phases. The first set of data were gathered in the Fall of 1992 as part of the larger "Learning from Mentors" study. The second set of data were gathered specifically for the dissertation during the 1994-1995 academic year, from about the second week of November to late April.

First set of data

The generation and gathering of the first set of data was driven by the need to 1) learn about the *participants* involved in mentored learning--not just who they are as people, but what each brings to the relationship and the learning in the way of prior experience, beliefs, intellectual and interpersonal dispositions; 2) witness the participants' *teaching practice* and interactions; 3) understand the *time, place, frequency, form and focus of their interactions* and how their *relationship* develops over time; 4) understand the *learning* that occurs, both about the practice of teaching and about the role of teacher; and 5) explore

how *context* influences the relationship and the learning. As it will appear in what follows, the data were gathered by both insiders (mentors and novices) and outsiders (researchers). The purpose was to develop a triangulated view of mentored learning to teach.

Three principal sets of strategies were used to generate and gather data: 1) free-standing interviews, 2) logs, reflections and log/reflections interviews, and 3) repeated observations of mentors' and novices' teaching and interactions, with accompanying pre-/post-observation interviews.

The participants were first asked to fill in a *background questionnaire*. This was aimed at gathering demographic information about them as well as general information about their educational histories, significant work experiences (other than classroom teaching), and career plans.

Following this, a free-standing *autobiographical interview* was conducted with each participant. The purpose of this interview was to gain an understanding of the participants' biographies. The rationale is that prospective and practicing teachers' background and personal experiences in and out of school have a strong influence on their classroom behaviors and practices. So the participants were asked to talk through their schooling experiences from elementary school to teaching practice, with a view to establishing connections between these experiences and their ideas and beliefs about schooling, knowledge, learning, teaching and learning to teach. The interview had four major sections (schooling experiences, general learning experiences, becoming a teacher, and learning to teach and teaching) and a set of concluding questions that asked the interviewee to think ahead five years or so and talk about 1) the sort of teacher he or she would really like to be; and 2) how he or she would like his/her teaching to be characterized by colleagues.

Some of the questions in the autobiographical interview were revisited later in the semester in the context of a free-standing *learning to teach interview* aimed at eliciting mentors' and novices' ideas about learning to teach and mentoring--what needs to be learned, how that can best be learned, what the mentor can or is doing to assist the novice

in that learning. Some of the questions also asked about the school as a context for mentoring and learning to teach. Mentors were asked about becoming a mentor, what it takes to be a good mentor and what they get out of the job. Responses elicited in this interview supplemented and extended information gathered through the logs, reflections and log/reflections interviews described below.

In order to get a general topical, temporal and locational understanding of mentoring, the novices were asked to keep *periodic weekly logs* of daily interactions (including brief exchanges that might occur before, during or after teaching as well as more extended conversations) with their mentor and other adults in their school (including other teachers, student teachers, administrators or university personnel). Mentors kept logs only of their interactions with their novice. There were in total three log weeks, i.e., approximately one per month.

At the end of each log week each participant wrote a short *reflection* on particular interactions they chose to focus on from their logs. Novices wrote about something that they learned about teaching and/or learning to teach during the week and to comment on how the learning came about. Mentors wrote about something that they thought their novice learned or was learning about teaching and/or learning to teach and to comment on how the learning came about.

The participants were given the opportunity to elaborate on selected entries in their logs and to expand on their reflection during *log/reflection follow up interviews*. These interviews were conducted as soon as possible. They were designed to provide a better sense of when, where and with whom the novice interacted, and what forms the interactions took (e.g., informal talk, more formal conferences, co-planning of lessons, etc.). In particular, these interviews served the dual purpose of getting more information about what mentors and novices actually did together on a daily basis, and eliciting a more rounded description of what selected interactions were like and what the novice seemed to learn from them. So in addition to responding to questions for filling in details, the

mentors and novices were probed on the content and dynamics of selected interactions, on the patterns regarding topics, and on the forms of the interactions.

The logs were very useful. First they provided what can be thought of as a representative sample (or an activity sampling) of each mentor/novice pair's work together. Second, as the participants were free to put whatever they wanted in their logs, one gets a sense of what they think is important to report about their work--which opens a window onto their priorities and what they value. The combined set of logs, reflections and log/reflection interview data proved extremely valuable. Looking at them over time, one gets a picture of how the relationship and the work evolved and what the novice seemed to be learning from this.

The third major data generation/gathering task consisted in witnessing what the participants' teaching and interactions looked like. This entailed three sub-tasks: 1) *observing the mentors' teaching* (at least once) in order to understand them as models and guides of novices' learning; 2) *observing the novices' teaching* over time in order to understand how their teaching performance and reasoning about it changed over time; and 3) *observing the formal interactions* that mentors and novices had about teaching over time and exploring how these contributed to the novices' learning. For each pair, at least one lesson taught by the novice and one formal interaction were videotaped. Each observation was accompanied by *pre- and post-observation interviews* designed to understand how the participants reasoned about teaching (their own and the other's) and how they thought about the mentor's guidance and the novice's learning. Each observation was written up to provide as full a picture as possible of the slice of teaching or mentor/novice interaction that was observed. Finally, each *write-up* was supplemented with responses to a set of interpretive questions developed for each type of observation. These *interpretive responses* were based on both the observation and the accompanying interviews.

All interviews were audio-taped, transcribed and edited. The data set for each pair was thus composed of completed background questionnaires, interview transcripts, logs,

reflections, observation write-ups, interpretive answers and videotapes. The data sets also included written formal assessments of novices by the mentors and university field instructors; school and program level documents; and written assignments by novices where available.

Second set of data

I approached this phase of data gathering with ideas I had already formed about each mentor based on the experience of gathering data with/about him or her in 1992, preliminary analyses of those data and the literature on mentoring. My primary objective was to confirm those ideas, with an eye open for disconfirming evidence.

I used a combination of observations and interviews to gather data. I spent the first week and a half in the field hanging around all three pairs in my original sample to get a feel for what was going on--to see whether or not there were identifiable routines. This allowed me to later focus my observations on specific classes--which, in turn, allowed me sometimes to observe a second pair while focusing on a given pair.

The focused and intensive observations consisted of two *week-long observations* of each pair (one in Fall and one in Spring). I spent an entire week with one pair and then rotated to another pair. I observed both the novice and the mentor teach, but I focused my observations primarily on the classes taught by the novice. I also observed their formal interactions. In addition to daily mentor-novice formal interactions, I observed and/or audio-taped the required three-way mid-/end-of-semester and final assessment conferences each involving the novice, the mentor and the field instructor. During the classroom observations I watched in particular for interactions between the mentor and the novice. I was especially interested in what the mentor did while the novice taught. Did he or she get involved in the lesson? If so, how? Did he or she tune out or step out of the room? When the mentor led instruction, I watched for what the novice did or was made to do. I also watched for whether or not the mentor made explicit moves for the novice to (be able to) notice.

At the end of each week of observation I typed up my fieldnotes, amplifying them with comments and questions (in the text or in footnotes). I gave the typed up fieldnotes to the mentor, allowed him/her several hours or days to study them, and then had an *end-of-week interview* with him/her around these notes. Besides helping me elicit information to fill in missing details in my notes, the end-of-week interview was designed to probe the mentors' reasoning behind what I observed them do the previous week. My comments and questions constituted the protocol for this interview.

Sharing my fieldnotes with the mentors served a two-fold purpose for me. I saw it as a way of giving data back to their co-owners as well as a strategy for provoking further reflection on practice on the mentors' part. An unanticipated outcome of this move was that the mentors appreciated my transparency, understood better what I was trying to explore and became more forthcoming in providing me with information. Ken for instance liked the fact that I was pointing out things that escaped him either because he had stepped out or because he could not pay attention to everything even when he was present. It is worth noting that a very positive change occurred in our relationship after the first end-of-week interview.

A major data gathering event was the extended interview with each mentor around a display of the data gathered with/from him or her in 1992. The *display interview* was designed to fill in holes in the 1992 data set and to probe the mentors further on what they said or did then. When appropriate, I raised parallel questions about the work with the 1994-1995 novice. I created the displays in light of my inquiry questions and around a set of descriptive headings that I kept refining from one display to the other. For example, the first display (Beatrice's) was created around the following headings:

1. On schooling: Memories and views

2. On learning to teach: Memories and views

3. Assessing novices: In general and in particular

4. On mentoring: Views, intentions, actions, benefits, and dilemmas

Ken's and Nancy's displays were more refined. I created Ken's display around the following headings and sub-headings:

1. Telling life with an educational accent: Perspectives on schooling and learning

    ° From elementary school to college

    ° Graduate school

    ° The centrality of reading

    ° Making connections

2. Perspectives on becoming a teacher

3. Teacher preparation, first years of teaching and changes in practice

    ° Teacher preparation work

    ° Beginning teaching

    ° Critique of teacher preparation work and images of teaching practice prior to PDS

    ° Questioning competition

    ° The advent of PDS & images of current teaching practice

    ° A problem of practice--yet to be resolved?

    ° Looking ahead

4. Perspectives on novices, learning to teach & mentoring

    ° Some of the most important things in learning to teach

    ° Assessing novices

    ° Role definition

    ° Role enactment I: Stance, reasoning, and some characteristic moves

    ° Role enactment II: Some instances

5. Mickey's learning: Some evidence and connections to mentoring

6. Mentoring: Benefits and dilemmas

7. Perspectives on context

Nancy's display was created around the following headings and sub-headings:

1. Telling life with an educational accent: Perspectives on Schooling and Learning

    ° From elementary to junior high: Critical incidents/events and people

    ° From high school to college: Critical incidents/events and people

2. Perspectives on becoming a teacher, teacher preparation and professional learning

    ° On becoming a teacher

    ° On teacher preparation

    ° On professional learning

    ° Looking ahead

3. Perspectives on learning to teach and mentoring, and images of past and current teaching practices

    ° The most important things to learn

    ° Defining the good mentor

    ° Supporting novices' learning: Characteristic moves

    ° On (student) teacher development: Process and opportunities

4. Being a mentor: What is in it?

5. Mentoring, learning to teach and context

Under each heading or sub-heading I included quotes or excerpts from free-standing, log/reflection and observation-based interviews with the mentor as well as the novice. My selection of the quotes/excerpts--some of which appeared under more than one heading--was guided by the extent to which I thought they expressed the mentor's views about or described him or him in relation to a given heading. I highlighted words, phrases or sentences that stood out to me as I read and reread the data. I inserted my own comments or questions in footnotes. These comments and questions constituted the protocol for the display interview.

I gave each mentor his or her display several days to a week or two before the display interview, along with a cover letter explaining how I created the display and what I

would like us to accomplish during the interview. Creating the displays and sharing them with the mentors served the same dual purpose as sharing with them my fieldnotes for the end-of-week interviews. The display interviews were very productive. I think this was due to the fact that I had already had at least one end-of-week interview with each mentor. As a result, although the displays were long, they all read them thoroughly and showed a lot of interest in discussing my comments and questions. The interviews varied in length from two to four hours.

In addition to the display interview, I had a conversation with Ken around the videotape of a lesson taught by Mickey and the formal interaction they had subsequently about that lesson. I decided to have this conversation because I intended to carry out an analysis of this lesson and the formal interaction as part of Ken's case. However, this conversation was not very productive probably because it occurred at the end of the year during the finals week.

Although data gathering during this second phase was focused primarily on the mentors, I interviewed the novices using a *combined autobiographical/learning to teach interview* protocol. In preparation for this interview, I gave each novice the set of fieldnotes that I had already discussed with the mentor. I asked them to read the notes and share their reactions with me during the interview. In addition to the combined interview, I had at least one spontaneous interview with each novice to discuss his/her teaching and mentored learning experience thus far. I also obtained copies of most of the journals that they were required to write as part of their university courses during their internship year.

Data Analysis and Reporting

> Much ethnographic research . . . suffers from a lack of reflexivity in the relationship between analysis, data collection, and research design. The data required to check a particular interpretation are often missing, or the typicality of crucial items of data cannot be checked, or some of the comparative cases necessary for developing and testing emergent theory have not been investigated (Hammersley & Atkinson, 1992, p. 174).

The same criticism can be leveled against qualitative research in education, some of which is ethnographic. I tried to guard against this by engaging in data gathering and analysis simultaneously, so that each process informed and shaped the other. As it appears in the previous section and described in more details below, the analysis of the data was an iterative process built into data gathering.

Log/reflection analysis

The first data analysis task was carried out in preparation for the log/reflection interviews. For each interview, this consisted first in reading the logs and 1) making a note of any details that needed to be filled concerning time, place and focus of interactions; 2) identifying patterns regarding people and topics; and 3) planning questions to learn more about selected interactions. The reflection was also subjected to a content analysis. This analysis was guided by the need to get more details about an experience/interaction that contributed to some important learning--what happened, what precipitated the event, what role, if any, the mentor played in it, and how that learning was affecting how the novice thought and acted as a teacher.

Coding the logs

I coded the weekly logs using a coding system that I helped develop for the larger study. The coding system was designed to capture in broad brushstrokes the temporal, topical and locational shape of mentoring. Each interaction was coded along the following conceptual dimensions: length, people involved, initiator(s), place, type (face-to-face, over phone or in writing), frequency of occurrence, and topic/focus. The topics emerged from a collective look at all the logs in the larger study's database. Once coded, the log data were entered into a computer program and then graphically displayed.

Data displays

I created these displays in preparation for the display interviews. As the description of the creation of the displays in the previous section shows, this was a major undertaking. It required triangulating data from various sources. For each mentor/novice pair, I read

several times and reduced an impressive data corpus composed of edited interview transcripts, reflections, observation write ups, interpretive answers, and written assessments.

Creating the displays was very helpful in familiarizing myself me with the data corpus. The displays themselves constituted draft sketches of the individual mentor portraits that I wanted to create. Working back and forth between the displays and data gathered during the second phase, I was able to ascertain hunches I developed about each mentor while gathering data in 1992 and through preliminary analyses carried out up to that point. I indexed the data gathered in 1994-1995 in light of my inquiry questions and the headings and information contained in the displays.

Once I was familiar with the data corpus, I developed an outline for writing the cases. I used this outline consistently across cases, allowing variations within sections in order to be responsive to the uniqueness of each case. This allowed each case to stand by itself in response to the questions that framed the study.

Case outline

The outline for writing the cases was informed by the descriptive conceptual framework that guided the study. Barnes (1992), Feiman-Nemser (1991), Schön (1983) and Wasley (1991) provided more specific guidance for writing the cases. Barnes's discussion of the significance of teachers' frames for teaching was helpful in thinking about describing the participating mentors' frames for teaching. Feiman-Nemser's discussion of specific principles and strategies that shaped the actions of Pete Frazer, an exemplary support teacher, and of how he learned to do this kind of work provided me with an image of individual cases of mentors at work. Schön's and Wasley's work provided me with images of both individual cases and multiple case writing with cross-case analyses. I found Schön's discussion of frame analysis and repertoire-building research (see chapter one) particularly insightful. In sum, I engaged in both as I wrote the cases. I see the dissertation as an example of "reflective research"--a kind of research "which can be

undertaken outside the immediate context of practice in order to enhance the practitioner's capacity for reflection-in-action" (p. 309).

My primary objective in writing the cases was two-fold. First, I wanted to answer the questions that framed the study. Second, I wanted to provide vivid images of the participants as classroom teachers and as mentors. Given my conceptualization of practice, this meant describing both how they think and how they act as classroom teachers and as mentors.

In keeping with my assumption that a mentor's teaching practice--especially his or her frames for teaching--offers the first window onto his or her mentoring practice, in developing each case I needed to first create a portrait of the mentor as classroom teacher. This portrait was to contain the mentor's significant frames for teaching, that is, his or her ideas about 1) the subject matter he or she is teaching; 2) learning; 3) the students he or she is teaching; and 4) teaching.[10] It was also to contain images of what the mentor does as a teacher--in other words, images of how his or her ideas are translated into action.

In the second part of each case, I wanted to create a picture of each participating mentor's mentoring practice. As with their teaching practices, I needed to describe their frames for mentoring as well as provide images of how they acted as mentors. Hence, the first section of this part was to be devoted to the mentor's ideas about learning to teach, novice teachers, and mentoring. This entailed answering the following questions: 1) What does the mentor think novices need to learn? 2) How does he or she think the learning occurs, both in terms of opportunities to learn or contexts for learning, and from the perspective of cognitive psychological processes? What are his or her preconceptions about novices as learners? How does the mentor conceptualize or define his/her role? In other words, how does he or she think he or she can help novices learn what they need to learn?

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[10] I was aware that I might either not have evidence for each of these categories of ideas for a given mentor, or have different amounts of evidence for different mentors.

In the second section of this part of the case, I wanted to describe how the mentor enacted the role he or she defined for him/herself in support of novices' learning. I therefore needed to present the key features of the role enactment, i.e., the mentor's characteristic actions/moves, and carry out fine-grained analyses of some observed or recorded interactions that would further illustrate how the mentor enacted the role. This section was also to include discussion of the consequences of the mentor's practice for his or her novices' learning.

The title of each case reflects the biographical characteristic that struck me the most about each mentor. I called Ken *the performing artist* for several reasons. First, he is a professional jazz musician and describes himself as a trained performer. Second, just as in jazz performance, he improvises a lot in teaching and mentoring. Third, he sees teaching as performing and argues that he was good enough an entertainer that he became a good teacher. Fourth, he sees mentoring as helping others share one's artistry.

I called Nancy *subject matter specialist* because of her passion for the subject matter she teaches. She believes strongly that teachers must stay current. This is especially important for science teachers because scientific knowledge is continuously changing. Nancy is a member of several professional organizations in the area of science and science education and subscribes to many professional journals. Her passion for her subject matter supports her commitment to, and passion for teaching.

Cross-case analysis

Looking across the cases was an iterative process too. As I wrote the individual cases, I kept track of emerging insights and ideas in a journal. Among others, these included ideas about intentionality in mentoring; the relationship between teaching practice and mentoring practice; the relationship between a mentor's ideas about learning to teach and novices and his or her ideas about mentoring--especially how he or she defines the role of mentor; the role of modeling in mentoring; and the role of classroom experience and

independent performance in learning to teach. I approached the cross-case analysis with these ideas in mind and with the primary aim of assessing their "defensibility".

Treating the cases as data--going back to the raw data and products of preliminary analyses as needed--I first laid side by side the mentors' ideas about learning to teach; their role definitions; and the dilemmas and tensions that stood out in their work. I then proceeded to critically examine and compare 1) their personal, practical theories of learning to teach; 2) the relationship between their teaching and mentoring practices; and 3) the relationship between their ideas about learning to teach and their ideas about mentoring. Accounting for congruency (or lack of it) between these two sets of ideas helped me realize that the issue is less one of fit among ideas and between ideas and actions than one of quality of ideas. This led to the development of a normative view of mentoring around the key ideas that emerged from the study: *modeling, joint participation in authentic tasks* and *intentionality*. I then used these ideas as lenses for refining the cross-case analysis.

CHAPTER III

KEN, THE PERFORMING ARTIST AS MENTOR

Ken's Teaching Practice

Constructing a new practice

> One of the reasons I wanted to become a part of the social studies group
> with other people, is that I wanted help with what was going on in the
> classroom. I was not satisfied with that. I wanted things to happen that
> weren't happening. And I wanted to find out how to do that. I don't know
> if I knew that when I started out, but I think I did. I have been teaching for a
> long time. This is my twenty-eighth year. Why it took me so long to figure
> all that out, I have no idea but I think sometimes there needs to be a catalyst,
> an outside influence. Maybe something that disrupts the routine.

Ken made this statement in an interview that I conducted with him at the beginning

of the 1992-93 academic year--his twenty-eighth year of teaching American history/studies

at Hodges High School. He had already made significant changes in his teaching practice,

especially since Hodges became a professional development school. He reported having

made a lot of changes over the years, prior to the advent of PDS, "but none of them were

particularly dramatic." The changes that Ken made recently are documented in the

dissertation of Parker (1992). As Parker states,

> Ken made some significant interconnected changes in curriculum and
> instruction. He altered curricular content and goals to reflect sources of
> knowledge in addition to the textbook; he concurrently altered student
> grouping patterns which caused him to teach another way (one cannot
> lecture to small groups); conversation within and across small groups
> became a mainstay instead of individual student assignments (pp. 240-41).

These changes came as a result of Ken's active participation in sustained,

close-to-the-classroom collaborative work on and inquiry into curriculum, instruction and

student learning with what was called the Social Studies Team--a team composed of

himself, a colleague, two university faculty and a doctoral student. Ken's and his

colleague's classrooms were the contexts of the team's work, with focus on trying to

understand the diversity among students and the way they handled learning American

history in the various classes (fundamental skills, general level, and advanced placement

honors). According to Parker, "Ken defined for himself a rationale for participating in the

team. The team enabled him to create opportunities in his classroom where even less

successful students could learn. Furthermore, these students could learn in ways that made

them accountable" (p. 100). Parker argues further that

> The team provided Ken with the support that helped him question and challenge his views and practices for the sake of a new kind of student learning, learning rich in thought and complexity. Overall, both students and team members wrestled with a kind of American History content that differed from the traditional school history course that, as one group of students said on the first day of school, focused on "facts, dates, and dead people." Both students and team members faced revised curricular goals, scope, sequence and themes for learning American History in Ken Larson's course (pp. 245-246).

In Ken's own words, his teaching has changed radically:

> First of all it is not teacher-directed any more. Secondly it's un-tracked.[11] Thirdly there is cooperative learning. Fourthly the units and the things that we teach are based on conceptual changes. . . . We don't have tests anymore and we don't give out textbooks. And also, the way I operate and my expectations and tolerance in terms of student behavior and a lot of the hidden curriculum things have changed. . . . What I attempted to do was to look at what the research says and what the literature says and what the world over at the university says and try to figure out how I can apply it to my classroom, and whether or not it actually works. I decided that what I was doing wasn't the way to do it. That it wasn't working anymore, assuming that it ever worked. Kids were learning by virtue of the force of my personality, not their own. And to the extent that my personality was forceful enough, I suppose they learned. But I don't know if that has any lasting impact later.

Ken described the way he taught prior to that as follows:

> Most of what I had students do was outlining sorts of things, essays, testing in the standard way. I did a lot of talking to them. I did a lot of organizing the information and I gave it to them. I professed a lot, because I

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[11] In fact there is still tracking (regular American History and honors) but the difference is that under the current organization, the decision to be in a regular or honors class is made by the students themselves.

didn't know anything else. And also most everyone else did that too; and that was the way I was trained. . . . I was coaching two sports [football and basketball]. So I was really loaded up. But in terms of the type and style of teaching I was doing, I don't think it really made a lot of difference. I had already organized and brought the information so that I could present it to students. I already had a kind of a routine that I thought was good for students to do. It seemed pretty effective at the time. I had the reputation as being a very demanding teacher. I still do. . . . For me that was a sense of pride. . . . I changed a lot over the years. More of the change I think has happened in the last five or six years.

Ken now practices what he calls "concept-driven teaching." His teaching practice aligns in general with what reformers are currently advocating--a kind of teaching that is student-centered, oriented toward supporting students' conceptual understanding and helping them make connections between and among ideas. In his view, this kind of teaching requires different teacher-student relationships and interactions. It also requires being attuned to students' thinking and to their academic, social and emotional needs, and taking account of their (age-related) personality. Ken's overall goals are (1) to help students make connections and see the big picture in doing history and (2) to develop reading, writing and oral skills. To do that, he relies on thematic instructional units, cooperative learning and journals.

According to Ken, the purpose of his courses is to engage students in *doing* history as opposed to *hearing about/listening to* history as told by teachers and textbooks. He wants his students to develop a personal sense of what they study in class. This suggests a particular conception of history teaching/learning. In practical terms, it means learning history through/from engaging in what historians do, i.e., gathering information about authentic and worthwhile historical topics, issues, periods and events from multiple sources, and analyzing, interpreting and presenting the information to others through various media, including writing, exposing orally or acting.

One can also infer Ken's view of history from the stated purpose of his courses. It is a view that says that history (or historical knowledge) is interpretive, contentious and personal. That Ken holds this view is reflected symbolically in his use of phrases such as

"his/herstory" and "ourstory" in handouts and posters that he creates for students. It is also reflected in his willingness and propensity to entertain and encourage divergent views, ideas and opinions put forward by students during discussions among themselves and with him, as long as they can support such ideas and opinions with data or facts. Ken tries explicitly to make students understand that there are multiple ways of looking at a historical event, period or topic; and that these ways of looking are reflective of people's social, cultural, religious, ethnic, racial, economic and political backgrounds or affiliations. He introduces the idea of the multiplicity of historical interpretations with (and often revisits) a handout that describes "Four Ways in Which His/Herstory Has Been Interpreted." One of the things Ken requires students to do when reading and analyzing a text is to try to infer the author's perspective.

Describing the practice

In this section, I elaborate on the key features of Ken's current teaching practice. This is aimed at providing a more rounded portrait of how he thinks and acts as a teacher.

Helping students make connections to see the "big picture".

> One of the things I think that has been an emphasis in my classroom teaching is to try to help kids see relationships between one subject matter and another--which is one of the reasons why I am involved in an integrated class right now.[12]

"Change and connections" is the overarching theme of Ken's courses. He wants his students to see and make connections among ideas within and across lessons and/or courses, and between ideas and their own life experiences. In sum, he wants them to see what he calls the "big picture." What follows is a description by Ken of the big picture of a unit he taught in Spring 1995 on "Turn of the Century Europe":

> I want students to understand that at the turn of the century, the time period between 1880 and 1914 was a real crucial time. I thought about the big

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[12] This refers to an interdisciplinary American studies course (see last paragraph of this section).

picture: What's going on in the world? What's happening? We've got this world that is nineteenth century, colonial aristocratic empire, white man's burden stuff; the nation state--a lot of stuff going on. Grand and wonderful but at the same time there's anarchy and assassinations and just junk. . . . All this stuff has started. All the things that are coming on now. Rwanda is in 1890. . . . I'm trying to get them to think--the old thing, "what goes around comes around. It's not over until the fat lady sings." Well, she ain't sung yet. And it's coming around. And Africans are saying, "we're going to reorganize the place." Of course they obviously don't agree at all. And they're killing each other. And how long is that going to take? I have no idea. All I know is I'm not sure I want to be in some places. Because I took enough African history to know that that's a damn hard place to live. I mean, geographically. . . . The possibilities are infinite. Part of that has to do with what happened in the 19th century. A lot of those possibilities for death and destruction might still have existed, but. . . . It's going on today and I want them [students] to see when they say history repeats itself. And I want them to get the flavor of the beginning of the transition. So we need to look at Europe because that's the focal point of the world at the time. We need to look at Europe because we're going to study warstory and how did we go from then to then. So I think about the concepts, the big picture, the transition. Then I think, "okay, how am I going to organize this? And what's available as a resource?" So I found a resource and I copied it up. We're going to have some writing, some speaking and we're gonna do some research. And at the end we're going to say, "okay, what's this all about?" And hopefully they'll come up with some stuff along the lines of where I'm thinking.

Ken usually offers this kind of big picture introduction (in writing or orally) at the beginning of a unit. As described above, thinking about and crafting the big picture entails weaving together several kinds of knowledge: content knowledge, curricular knowledge and pedagogical knowledge. In fact, it seems that the big picture is bigger than that as far as Ken is concerned. In addition to what one wants students to learn, it has to do with why one is in the classroom in the first place. This is evidenced by the following fundamental and broad questions that he went on to raise after sharing with me how he thought about the turn of century Europe unit: "What's American Studies all about? Why am I teaching the course? What's the theme of the course? What are we doing this for?" He argued that "there's a lot of people in teaching that don't know that. They have no idea. . . . And then they're caught up in the minutiae and they don't understand why. That's a real problem for me."

Helping students develop critical thinking, reading, writing and oral skills. To help students develop critical thinking, reading and writing skills, Ken uses several strategies. They include the reading game, a handout for article analysis, weekly and semester reflective learning journals, and the writing game. Most--if not all--individual or groupwork in Ken's classes concludes with an oral presentation to the group or to the whole class. This serves the purpose of fostering oral communication skills in students.

The acquisition of the above skills by students seems more important for Ken than subject matter per se at this stage of his teaching career. Doing history is primarily in the service of skill acquisition. This is closely related to what the big picture is for him now.

> I think now I'm probably much more into process than I was in terms of content. I'm using content to get at process, thinking skills, writing skills--to be able to do things like write a paper or conduct a seminar from a certain point of view, read something and be able to analyze it, or use historical content. I don't think if you asked me that question fifteen years ago I would have given that answer.

The place and value that Ken accords reading and writing are notable. Asked to describe a powerful learning experience, he said:

> I think one of the most powerful learning experiences for me when I was a child, and it continues to be, is reading. I still learn a lot when I read. . . . Reading for me when I was a child was really important. I learned that was real meaningful to me. I still believe and maintain that students, somehow I've got to figure out how I can put them in positions where they are reading for meaning; they are understanding what they are reading; and they are thinking about what they are reading. That is real important for me. I believe it is important for them. And I think I have always thought that during my teaching career, but I haven't always understood how to put kids in a position to do it, until recently. In other words, with some help from my friends [e.g., the Social Studies Team]. Going alone, I don't think I ever really did that very well.

With respect to writing, Ken is "of the opinion that when we are forced to write things down in some sort of logical way, the discipline of writing it, and the discipline of having it appear publicly on a piece of paper forces us to think about it more logically than

if we just had a conversation." As will become apparent in the rest of this case, the skill or

habit of writing is something Ken insists upon as a mentor.

Thematic instructional unit planning. Ken's teaching is no longer textbook-driven.

He develops his own curriculum packets. These are instructional units that he designs

around themes, topics, or historical periods/events of his own choice. He has a routine of

gathering primary and secondary readings, offering an introduction, and designing

individual as well as small group assignments. The materials are assembled into a course

packet. Each student gets a copy of the packet. Students work through these packets over

several weeks.

Organizing students in cooperative learning groups. Ken uses a combination of

individual and collective tasks, but groupwork is the most prominent feature of his

classroom environment as far as organizing students for instruction and learning is

concerned. Students typically work in groups of three or four which are formed either by

him or by students themselves. In any case, he insists that the groups be integrated with

respect to gender and skills, not ability. Group composition changes from unit to unit.

Included in the general description of the course--which is also distributed to all

students--is a description of groupwork/cooperative learning and what it entails. He writes

in the opening paragraph that

> Most of the class activities/assignments/tasks will involve a strategy called
> "Cooperative Learning". Research and our own experience over the past
> [number of] years tells us that this strategy is the most effective way in
> which we could organize the classroom and have every student learn to the
> best of their individual and collective abilities. We believe that you will learn
> more and enjoy the work because of the above organization.

Ken does several things to facilitate the functioning of groups. One example is "the

reading game" developed by a university participant on the Social Studies Team. At the

beginning of the year, students are given and walked through a handout describing the

game and the roles involved. They are instructed to rotate roles so that everyone gets to

play all of them. The roles include: reader, reactor/analyzer, questioner/analyzer, summarizer/recorder.

Ken introduced another game more recently in his classes: the "writing game." Like the "reading game", this game has norms and roles. The norms are that everyone contributes written work; everyone encourages everyone else to participate; no one person dominates; everyone contributes to the writing of the group; the final product is agreed to; and roles are alternated. These roles include the following: writer/recorder; motivator/encourager; checker; and summarizer. Unlike the "reading game", I did not see students engaged in the "writing game." That may be because they did most of their writing outside the class, whereas I witnessed several occasions where time was provided during class for reading.

Using reflective journals as a principal means of assessing students' learning and monitoring instruction. Ken got the idea of learning journals from a professor at a nearby university. His rationale for having students write journals is that effective learners are learners who are aware of the ways in which they learn; and that people can become more effective learners if they think carefully about what they are learning and how it connects to what they already know. In addition to helping students be introspective and critical and become more effective and responsible learners, Ken uses the journals as a means for uncovering student thinking and monitoring their learning as well as his own teaching practice. The journals enable him to "connect what is being taught and what I planned."

The instructions/questions for journal writing went through several iterations over the years. Ken initially did not grade the journals. He began doing so after he realized that students would not put in much effort if the journals are not evaluated and graded. So he gave them instructions and criteria for a C, B, or A grade journal.

The learning journals now constitute one of the main modes of assessment in Ken's classes. The weekly journals serve the purpose of ongoing assessment, and the end-of-semester journal constitutes the final exam or summative assessment for 20-33% of

the semester grade. Ken has made it a policy to give immediate feedback to students on their journals. He consistently returns the weekly journals a day or two after students have submitted them. He commented that getting the journals back quickly allows him to address problematic areas or share with the class insights of their classmates--which sometimes means copying a model journal for distribution to the whole class.

Ken seems to have a lot of faith in what the journals can help both the students and himself to achieve. As he observed in a tone that showed satisfaction and a sense of personal reward and pride: "If you want to read some extremely accurate assessments of what happens in the classes, those students have written it [in their journals]. . . . I think the journals help students get the big picture."

Improvising content and/or delivery. Improvisation is an important skill in the kind of teaching that Ken now practices. The teacher cannot predict all of students' responses, reactions, insights, confusions and questions as he prepares for instruction. To be really responsive to students, he must make many important interactive judgements, decisions and moves about content and learning activities. For example, out of the many questions asked or comments made by students, he must decide on the spot which ones are worth pursuing. When a student exhibits confusion, he must decide whether he should address it immediately or wait until later--a decision that depends not only on the kind of confusion but also on the academic as well as personal needs, strengths or weaknesses of the student exhibiting it. Being responsive to students thus often implies entertaining ideas that transcend the lesson plan.

Ken's ability to improvise seems to rest on four things: his knowledge of and passion for his subject matter and other subject matters, e.g., philosophy, political science, religion, and other social science areas; his love of reading; the fact that he is a professional jazz musician; and related to that, his personality. In relation to the latter, it is worth noting that humor is a characteristic feature of Ken's classes. He frequently picked on students to

make his points--based on things that are true or that he made up about them. He seemed to know which students can handle being put on the spot in this way.

I witnessed several instances of improvisation in Ken's classes in response to students' comments or questions about content, tasks or activities. In fact I was struck by the high frequency of their occurrence. I was struck also by the fact that, in most cases, these instances of improvisation entailed lectures by Ken. Sometimes they were brief digressions or deviations from the agenda of the day. On other occasions, they meant setting aside the agenda altogether. Ken seized these moments to provide information he felt students needed; to share with them his wealth of knowledge--which extends beyond American history; and to demonstrate making connections.

However, at times I wondered what the students were getting out of such lectures. They rarely took notes. Instead, they listened attentively to Ken, obviously mesmerized by the breadth of his knowledge, his excitement about the subject, and his performance. It seems to me that this kind of improvisation constituted an outlet for Ken to do something he has always enjoyed doing, but something for which the kind of teaching that he now practices does not have much room, i.e., lecturing.

At this point, it is worth introducing a relevant biographical piece for understanding who Ken is as a person and educator. Besides having grown up in a family of teachers, Ken's experience and interest in performing since his childhood were very influential in his decision to become a teacher. In his own words:

> I was singing in front of people before I was five years old. We were always performing. Teaching is performing, at least as it was perceived then. To some degree it still is. So I'm a performer; I'm a trained performer . . . The professorial lecture, I like to do that. I can go out and give presentations. We do this here and I can talk to other teachers or other people and give performances. . . . I like doing that; it's fun. Probably it's a heavy case of ego, but that's been part of my life. And I think teaching may have been a natural extension of that. . . . I was good enough an entertainer that I became a good teacher.

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Responding (in the context of another interview) to my comment that I read a magazine article that talked about how jazz musicians feed off each other as they perform, Ken described himself as an improvisationalist. "That's very natural for me to do," he replied, and went on to say, "I am a jazz player and an improvisationalist. . . . I listen to what others do and then I respond. I come up with whatever. I do that a lot." As it will appear later, Ken does that a lot in his work with novices.

Ken's father was the band director at the junior high school he attended. So Ken took music courses with him and was in the school band. Ken's involvement in bands continued in high school and he was active putting on shows such as musical events. While a junior and senior high school student, he went to Interlochen (a renowned music camp for youth) for about six or seven years, but eventually decided he was not going to major in music. By the time he was eighteen, Ken was working in various bars as a jazz musician. In college, he majored in history, but maintained his interest in music. He was involved in his university's wind ensemble and jazz orchestra. Now, besides teaching American history, Ken also works with Hodges high school's band. A final note is that according to Ken, learning to be a professional musician is part experiential, part intuitive. "I think part of it is genetic. Improvisation is an ability that's genetic. If you don't have it, you don't have it! . . . There are a number of fine classical musicians who don't have it."

In addition to the key features of Ken's practice described above, it must be noted that he is a strong advocate of teacher collaboration. This seems to be primarily a result of his involvement in the Social Studies Team. Besides the changes Ken made in his teaching practice, for him an important outcome of this involvement and of his being a mentor was the opportunity to co-teach several courses at the university with teacher education faculty members.

After the team ceased to exist, Ken initiated an interdisciplinary American studies course aimed at integrating American literature and American history. He co-taught this course with an English teacher. As they both had student teachers, the latter were involved

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in teaching the course. However, he decided to quit after a couple of years because, according to him, he and his colleague did not have the same work ethic.

Taking on a new role

After Hodges High School became a PDS, Ken was asked by a university instructor to be part of the Mentor Teacher Program. "I didn't know what that [i.e., mentor teacher] meant," he said. He thought it was "a little different approach" from how he may have worked with student teachers before. He had, in fact, worked with student teachers on and off since his third or fourth year of teaching. There are no data on what that looked like; however, given his current mentoring practice, I suspect it would fit the critical descriptions of how cooperating teachers have traditionally worked with student teachers-- serving as hosts that lend their classrooms to student teachers to practice what they have learned at the university. Seen through this lens, student teaching appears as a culminating point in learning to teach. The assumption is that (successful) completion of it signifies that one has become a full-fledged teacher.

Ken reported having received no formal preparation for the new role of mentor. As a result, to enact his new role, he primarily drew on ideas he formed from his own learning to teach and teaching experiences, as well as from his earlier experiences being a cooperating teacher.

Ken's Ideas about Learning to Teach and Novice Teachers

Of the things that novice teachers need to learn or develop, two seem particularly important for Ken. They include making a mental shift from thinking about and focusing on self to thinking about and focusing on students, and learning to be a professional person. The next important thing on his list is learning to collaborate with colleagues. Ken mentioned three other learning to teach tasks: learning to plan lessons that challenge yet do not overwhelm students, learning "how to evaluate [student] materials on a subjective basis," and learning to deal with "issues of equity in terms of opportunity and treatment of students."

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Making a mental shift from self to students

According to Ken, making a mental shift from thinking about and focusing on self to thinking about and focusing on students is the most important and difficult task that novice teachers must accomplish in learning to teach.

> One of the difficulties that people new to this profession have is they are so focused on themselves and what they are doing, they have trouble with the students. They don't know how to read them. They are focused on what they are doing rather than what students are doing. Maybe that is one of the most important things they need to learn: "What I do is dependent on what is going on with the clientele."

What makes learning to accomplish this task for novices is that it is the first time in their life that they have to think about learning--their own and someone else's.

> And that's because when we go through high school and we go through university we don't often think about how we--particularly how other people--learn. We're focused on ourselves. We're focused on doing the work and the studying and whatever else we need to do in order to get what we need to get. It's a whole different role to look at a whole group of other people and say "alright, what do I want them to learn and how am I going to get them there?" I've had practice doing that and maybe one of the better things--assuming that we don't stagnate--is that the further away we get from being a student the better we are at being a teacher. Maybe that doesn't make sense.

The sense that I make of this is that for Ken, the accomplishment of this task is primarily developmental. In other words, it has to do with maturity. Accomplishing this developmental task is particularly critical for operating in a student-centered classroom like Ken's. Indeed, operating in such a classroom entails, among other things, being responsive to students' interests, capabilities, needs, and concerns; creating learning opportunities that are challenging but not overwhelming for them; being attuned to their thinking; and being able to monitor their understanding and "tell the con artist from the truly confused student." In sum, it requires focusing wholeheartedly on students as opposed to self.

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Asked what are some good ways for novice teaches to learn to make this mental shift, Ken answered:

> Being in classrooms. In other words, that does not happen when they [novices] are in a classroom as a student. It only happens when they are in a classroom as an adult teacher type of person. . . . Then they get to know what students are about; they become comfortable with them; watch them and interact with them from the standpoint of an adult rather than another student.

In other words, it is from inside the role that novices can experience the central responsibility of seeing that students learn.

Ken reported having himself learned to do that probably by just teaching. "It would be nice if I had learned more prior to it. But it wasn't really important then. Then it was mostly, I was the expert and they were the children and they were to be quiet, listen and learn." There is little room for this conception of teacher-student relationships in the kind of teaching that Ken now practices.

Learning to be a professional person

> The problems that they [novice teachers] have are the problems that have to do with becoming a professional person. Being here on time, getting things done, etc., etc. Those are things that I will be very harsh with and they may not change those patterns. I can help them learn to evaluate papers, I can help them learn how to do all that kind of stuff, and they'll get better at it, but there's some basic work ethic.

Learning to be a professional person as defined by Ken entails first and foremost developing a good work ethic (if one does not have it already). Ken describes himself as someone who is "very work ethic-oriented" and gets "a lot of things done ahead of time. I'm very into organizing and getting it set up before we do it, and not waiting until the last minute." He considers a strong work ethic as a prerequisite for learning to teach and teaching, requires it of the novice teachers whom he mentors, and expects it of the colleagues with whom he collaborates. "The first thing with me--if I have a choice--is a

work ethic. If they [novice teachers] are a hard working person, then I figure we can teach them some things."

Ken believes that novices do not often have the work ethic of a professional teacher right away. "That's where I think most student teachers break down. If they break down it is the work ethic; and also the unwillingness to think about and to learn about how they can develop that professional presence." He cited the student teacher he had in 1991-92 as an example. "I had to get extremely harsh with him because he was always late in terms of getting things done; he didn't plan stuff ahead of time; he didn't write it out; he was busy doing other things. And finally I had to say to him 'look if you don't, then you are not going to become a teacher because I'm going to write a recommendation that'll guarantee it.' So I had to threaten him and say 'this is it, push comes shove'." Ken was pleased that he did not have to do that with Mickey--his Fall 1992 novice--because she was a very diligent and hard working person.

In Ken's view, like the task of making the mental shift from self to students, the task of developing a strong professional work ethic is a developmental one to some extent. In fact, as evidenced in the following statement, the two tasks seem closely related.

> [T]he change from the student role to the teacher role often is difficult for some of these young folks, or older folks, depending on their age obviously, because of the work ethic involved. As a student, being prepared is quite different from being a teacher and being prepared.

In addition to a good work ethic, for Ken, being a professional person entails many other things.

> I think it's a way of looking obviously. . . . This is a place where we do business. This is education and there is a certain way of behaving here that may be different than some other place. I think teachers should foster that particular notion. . . . When we're here what we're about and what we think about and what we talk about has to do with what we do here and every once and a while of course you get it out in conversations but--particularly between my student teacher and I, we discuss the fact that we're not here to become friends. We're here to be colleagues and to know each other and learn how to teach.

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Learning to collaborate with colleagues

Ken believes that it is extremely important for novice teachers to learn to collaborate. And the best way to learn to do so is through collaboration. "Early on in the teaching experience there is a teaming that goes on with the mentor, I would hope. But that's all still [from] a subordinate position." In light of this, Ken is keen on having his novices work with other novices on various tasks of teaching. "I think it's a good experience for novice teachers to have a situation where they team because they may run into that more likely in the school they get a job at because more schools are teaming."

What else is important to Ken in learning to teach

The three tasks discussed so far are the ones that Ken seems to have thought about the most. One could argue that this is a function of data gathering. But it is striking that he readily identified and had a lot to say about making a mental shift and learning to be a professional person--with little probing--in the contexts of more than one interview. In the Learning to Teach Interview, after he had talked at length about the task of making a mental shift from self to students, he was asked if he could think of any other things that are really important to learn. He responded that Mickey had come up with a couple the day before:

> How to tell the con artist from the truly confused student? In other words, the sincere stuff from the bulls--t. The other issues that I think student teachers have trouble with that are important to learn are issues of equity in terms of opportunity and treatment of students. And how to deal with the bulls--tters and the confused. The people who have difficulties and that sort of thing. How to balance those equity issues out. The other thing is how to evaluate materials on a subjective basis. That's real hard and important for kids. I don't know how they learn that prior to and other than [through] classroom experience, as I've said before. It is an experiential sort of thing because it deals with practice. . . . And these are things that are practical matters--how to plan lessons and what to do when they are too long or too short. How to adjust or how to set up a lesson that is really intriguing, that is challenging, that puts somewhat of an anxious level in the students that they want to get it done but it doesn't overwhelm them. All of those sorts of things.

That Mickey came up with a couple of learning to teach tasks suggests that the novice assumes some responsibility in identifying/recognizing what she needs to learn as

she engages in the work of teaching. It seems that Ken abstracted the learning tasks mentioned in this quote from conversations with Mickey. This is congruent with my argument later that Ken works essentially with the data provided by the novice's performance, questions and comments. It may be interpreted as being attuned to the novices' needs and concerns. The problematic aspect is that it can potentially limit both the assistance provided and the learning that takes place as a result, to the extent that the issues and needs that the learner brings up cannot transcend where she is in her learning/development. In other words, the learner's zone of proximal development (Vygotsky, 1978) cannot, in such circumstances, be opened beyond the limits set by what she is currently able to do, see or feel in the context of her apprenticeship/learning.

Among the three tasks in the above quote, "how to evaluate [student] materials on a subjective basis" is the one that is most directly related to his teaching practice. His novices are bound to confront this issue because he assesses students primarily through learning journals and collectively or individually written article analyses, movie reviews and research papers. Grading such student work is less straightforward than grading objective/standardized tests where answers are right or wrong. It requires making judgements.

To me, what is missing from the foregoing is the task of developing the big picture in designing a thematic instructional unit. This is striking in light of the importance that Ken accords having a big picture for why one is in the classroom and why one teaches a given course or unit. However, it is understandable (although it does not justify its absence from the list) given his belief that developing the big picture is a developmental phenomenon; that some teachers never get it; and that a teacher's big picture may change over the years--as his changed from content to process.

> They [Sheila and Heather] don't know what to study and why we're studying it. They can now set it up though. They're real good at organizing who's in what group and what groups do--how to organize a seminar and all that stuff. But they pick up the erroneous sorts of things in the seminar. . . . They don't see logical inconsistencies yet. . . . I'm not sure they're ready

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to do that yet. Maybe they never will. They really don't know it. They'll say, "will you run me through it?"--things they just have real trouble with because they took a lot of courses that didn't seem to have anything to do with learning. They just did it for the grade. [Sheila] wants everybody to be less gender-biased and less racially bigoted. Well, fine. Now you're gonna design a course on that. She might be able to do that, I don't know. She hasn't been able to go, "okay, now if that's one of the things that I value, then how can I build that into what we do?" Well, one of the ways I can do that is, "Let's look at the Boer wars and let's look at African American soldiers. Let's look as how come black women weren't with white women in the protest?" That makes sense to me. I don't know if [Heather] has even thought about that because she's so panicked with what she's doing. She's not ready yet developmentally. I tried to explain that to her today too--that "developmentally we differ and that there's certain stages that we go through. And that you're maybe at a different stage than [Sheila or Mickey] or somebody else."

It's a developmental thing. I think as a result of the internship they have a better idea. But I think it's going to take them probably ten years to figure it out. And then they might lose it and get it back again.

Ken made these two statements in late March and mid-June, 1995 respectively. Both are about the two interns he had during the 1994-1995 academic year. He made the second statement in response to my wondering about how novice teachers learn to develop the big picture. During the interview around the display, Ken commented that Mickey also could not figure out the big picture in 1992 and that she was still not sure about it two years later. Having framed the task in developmental terms, there is not much that he can do as a mentor to help the novices but place them in the hands of time and experience.

Ken's Ideas about Mentoring

You are going to be a practitioner. So how in the hell do you become a practitioner if you never practice? Theoretically it doesn't work. So the more practice they [novice teachers] have [the better].

My job is to critique them and point out all the things that I see, both positively and negatively. Hopefully a lot of positive. . . . To me student teachers have got to be excellent at the level that they're at. And it's my job to get them there and if I can't get them there then I've got to make sure it's not something that I was unable to do. It's something that maybe they were not suited for.
I'm sort of the idea man. What do we want kids to connect to? I'm the lead person in this regard. . . . But she [Sheila] is on her own with respect to individual lessons and instructional forms. That sort of thing will continue throughout the year. She'll figure out the details. I still have responsibility for my classes. I don't want to leave my students all year.

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These three quotes (from three different data sources) capture the essence of Ken's thinking about learning to teach and mentoring. *Doing* and *learning from experience* are central to his thinking about the content and process of learning to teach. This in turn, shapes how he thinks and acts as a mentor. Ken believes strongly that one learns to teach best by teaching, by making mistakes and learning from them. This is rooted in how he himself learned to teach, as well as in other aspects of his personal and professional life, including being a professional jazz musician, and learning to coach high school football by coaching. It is also rooted in his view of the nature of teaching:

> It's probably the performer/entertainer in me. But I still believe that a large part--I don't know how much because I can't put a percent on it--of teaching is art. . . . And I think it has to do with the way that we are human. It can be programmed and mechanized and quantified to a certain degree and then there is something else that comes in there and that's the human element. . . . So that I think that teaching others to teach, there is that we can only do so much. . . . There is that performer, art personality that I have seen some [prospective teachers] never, ever have, at least in that I saw it. Maybe they developed it later.

Ken talks about mentoring as helping people share one's artistry.

> In terms of training teachers is that it has been sort of an exclusive activity. That somehow we are going to help people share our artistry. But they really can't because we are an artist and it is sort of a genetic thing. . . . I think as a result of this school being a professional development school and because of my relationship with people at [the University] and because I was able to teach there a couple or three times and also participate in the choosing of students and the training of the students, the world of the university and the world of here have melded more and it's become less exclusive in my mind and less maybe a question of genetics and artistry and more a question of training.

There is some indication of change in the above in Ken's thinking about learning to teach and mentoring. This change may have come as a result of co-teaching teacher education courses on several occasions. However, in keeping with his belief in the primacy of doing and experience in learning to teach, and his conception of teaching as a performing/improvisatory art, he conceives of his role primarily as provider of

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opportunities for novices to practice teaching--to have experience, to perform--and as a critic of their performances. This conception of the role of mentor seems to be based on the assumption that knowledge is more in the action than "in the head." Thus, in order to assess what novices know and use that as a basis for giving them appropriate feedback and support, novices must display their knowledge in action. This is reminiscent of Schön's (1987) discussions of the paradox and predicament inherent in learning a design-like practice, and of the dialogue between coach and student. Of the latter, Schön writes:

> In their dialogue, coach and student convey messages to each other not only, or even primarily, in words but also in the medium of performance. The student tries to do what she seeks to learn and thereby reveals what she understands or misunderstands. The coach responds with advice, criticism, explanations, descriptions--but also with further performance of his own. When the dialogue works well, it takes the form of reciprocal reflection-in-action (p. 163).

A statement that Ken once made to one of his honors classes helped me better understand his perspective on mentoring and learning to teach. After telling them that Sheila was a fastidious and fast working person, he added that he makes himself superfluous to facilitate her learning. "What a liberal idea!" he concluded.

The idea of rendering himself superfluous is indeed an idea that Ken seems to live by as a mentor. It is congruent with his belief in the more experience practicing independently the better. One could interpret this as a way of making the learner responsible for his or her learning. In my view, however, it denotes an individualistic perspective on learning to teach. This is puzzling given that Ken is a strong advocate of cooperative learning and of collaboration; and that the changes he has made in his teaching practice came as a result of participating in the work of a team.

I now turn to examining what Ken does as a mentor in support of his novices' learning. I first discuss the key features of his enactment of the role. In doing so, I draw on data collected both in 1992 and in 1994-95. I then look closely at how he mentored Mickey.

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Acting in Support of Novices' Learning: Key Features of Role Enactment

Let us first consider what Ken said when he was asked what would be most important to film, and why, if one wanted to make a videotape of his work with Mickey. Although this question was asked in the context of a free-standing interview (the learning to teach interview), it elicited contextualized information about what was actually happening in the mentor-novice relationships under investigation. The mentors could not possibly answer the question without reference to the particulars of their work with the novice they had at the time. Since the question also asked mentors to justify the focus of the video, it opened a window onto several other aspects of mentoring, e.g., places where mentoring takes place, its substance/focus over time, and mentors' theories of mentoring and learning to teach.

Ken began answering the video question by saying that "first of all it would be tough to do that." He went on to suggest that it would probably be important to film Mickey's

> reactions and her answers and her thoughts. Because really what she comes up with--I suspect the way she operates in the classroom as a teacher--is a direct result of whatever I fostered in her I guess, to use not a very good term. In other words she is the results of my mentoring efforts. And the changing that she has undergone and the maturing that she has done and the proficiency in which she operates--which you [outside researcher] have witnessed. And if in our collective estimation, that proficiency has increased and her mastery of being a teacher has been enhanced considerably from where she started to where she ends.

Later in the interview Ken reported not being purposefully around as much at this stage of the game--which suggests that he was satisfied with Mickey's proficiency, whatever that means. However, the outside researcher's account of what he witnessed was not so positive. Given that his account was based on observing only one lesson, it cannot be the basis for assessing the novice's proficiency. Nevertheless, it is important because this lesson occurred at the beginning of the ninth week of a student teaching assignment

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scheduled for eleven weeks (though Mickey ended up staying for another four-week period). Note also that it was the introductory lesson to the last unit of the semester.

The interview continued as follows:

> I: So would I film her talking to you?
>
> K: Yeah!
>
> I: In your room or in the staff lounge?
>
> K: Either one, I don't know, it is all over the place. There is no formalized [way]. A lot of times it is in the computer technology room in the back of the teachers' lounge. That is where we do a lot of talking, usually in front of her computer because she is doing something or I am doing something or we both are.

Asked about who initiated their interactions, Ken answered that they both did. He went on to give an example where he was the initiator. Having noticed that students in the interdisciplinary class where having difficulty staying on task when working in groups, he asked Mickey if splitting the class into smaller groups might be better.

> K: She thought about that and we had a discussion. That is something I initiated. Sometimes it will be things that she initiated and I am not sure I can think of an example right now because she initiates a hell of a lot of it.
>
> I: How much would you say it is looking back and how much is it looking forward?
>
> K: You mean in terms of the way we should have done something or the way we are gonna do something?
>
> I: Or her talking about what happened in a particular lesson or you saying "well, I happen to see you doing such and such. What can you tell me about what happened at that point? What were you thinking about?" And how much is it saying "well, that is how we look at those materials."
>
> K: I think in the early part it is more looking back and now it happens to be more future. But that's a guess.
>
> I: And does that mean that you're perhaps now spending less time in her classroom than you were a few weeks back or a couple of months back?

K: And I am doing that on purpose. There are a couple of reasons. Number one, she needs to be empowered as a teacher in terms of the students and also in terms of her. She needs authenticity as a teacher from the perceptions of her and them. It needs to be her show. And if I am there it isn't. Because irrespective of anything else, I am the man. And the other thing is that I have trouble keeping my nose out of things. I mean if something occurs to me or I see something or there's something that needs to be thrown out, or said or asked, I am liable to do that. And it is not always a situation where I can ask her permission to do that. So it is best that I not be there. So that when you were watching her, you said "do what you normally do." Well at this stage of the game I am not there as much. And that is on purpose.

What does the foregoing tell us about Ken as a mentor? Without looking at data from other sources, we can make several interrelated claims about how Ken enacts the role of mentor. First, the opening statement of his response indicates that his way of operating as a mentor is most probably unsystematic. He confirmed this later by declaring that his work with Mickey is "all over the place" and that "there is no formalized [way]."

Second, Ken did not, or could not provide specific images of his practice or pinpoint his mentoring efforts until probed. This is not surprising in light of the first claim. Since the practice is "all over the place" and not formalized, it is indeed hard to connect specific instances of it to a novice's learning. This is reflected in a general statement such as "What she comes up with--*I suspect* the way she operates in the classroom as a teacher-- is a direct result of *whatever* I fostered in her *I guess*, to use not a very good term. In other words she is the results of my mentoring efforts."

Third, it appears from Ken's response that independent practice is the main goal of student teaching for him--which, as will be shown later, shaped the way he operated as a mentor to Mickey. I will discuss this goal in chapter five and argue that it is problematic.

Related to the third claim is an apparent dilemma/tension in the work, i.e., resisting to step in, especially given that "it is not always a situation where [one] can ask [the novice's] permission to do that." This dilemma is not specific to Ken; it is inherent in mentoring and must be managed. Different mentors manage it differently. Ken chose not be there--to step out of the room.

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Finally the response gives us a sense of the phases of Ken's interactions with Mickey: looking backwards in the early part of their work together (with him in class) and looking forward later (with him out a lot). This suggests that earlier their interactions focused on teaching episodes that they both witnessed. Later, as Ken left Mickey to practice independently, they tended to discuss what was to happen in the classes she was teaching. This is somehow counterintuitive. One would think that when the mentor is out a lot, the conversations with the novice would be primarily about what happened in the classes. However, as Ken himself said, "that's a guess."

Based on Ken's self-reports and my observations, the following stood out as elements of his mentoring repertoire:

° modeling/demonstrating;

° playing dumb or doing the all shots routine and rear-loading;

° involving the novice in reading, commenting on and grading student journals;

° throwing out ideas;

° improvised co-teaching;

° giving specific verbal and written feedback on the novices' classroom actions/behaviors, e.g., taking notes and writing comments/questions and giving them to the novices to think about;

° stepping in, tuning out, or stepping out of the room while the novice is teaching;

° drawing the novice in when he is leading instruction;

° subbing from time to time for the novice; and

° providing opportunities for the novice to collaborate with others.

This is an impressive repertoire of actions, but it should not lead to the conclusion that Ken had a systematic, formalized way of working with novices. The way he mentored was very informal and indeed tough to capture. Sheila's statement that she was trying to figure out Ken as much as she was trying to figure out the students is illustrative in this respect. Also, although Ken had a daily preparation period, he did not use it to talk with

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his novices about teaching, learning, and students, or to plan. In general, conversations happened when the occasion arose--in the classroom (before, during or after lessons), in the hallway, in the parking lot after school, or over the phone. During preparation periods he would be in and out, while the novice would be working by herself--grading journals, planning lessons, or completing some university coursework assignment. As Mickey put it in an interview following a formal interaction she and Ken had for the purpose of data gathering:

> Our normal routine is usually a little bit more hurried than not. I mean it's very rare that we actually sit down like that and talk to each other about stuff like that. He's usually standing up because somebody's always on the way in and will strike up a conversation and it might end up being that long, but it's always like walking and doing something at the same time.

Issues of when, for how long, and where things happen take back seat when one operates in this way. It is understandable that Ken did not report and could not remember these aspects of mentoring in the logs.

I now turn to describing in more detail the key features of Ken's enactment of the mentor role.

Modeling and demonstration

On several occasions Ken reported modeling when asked how he helped a novice learn something. Like most mentors, he modeled and demonstrated certain aspects of teaching practice for his novices. Mickey, Sheila and Heather all reported that he was one of their role models as far as teaching is concerned. By virtue of being the mentor, Ken modeled being a professional person as defined by him, i.e., being on time, getting things done efficiently, being business-like in manner and attire, addressing or referring to the novice or other colleagues in front of students by their last name preceded by the title Mr., Mrs. or Ms.

Ken not only modeled being a professional person by virtue of being a mentor, it is something that was part of his conversations with novices. For instance, early in his work

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with Mickey, he reported an interaction that focused on this issue and led them to discuss the role of the mentor explicitly. He described it as follows:

> It was in conjunction with our colleagues [of American Studies], and she [Mickey] observed to me something that I had observed and had trouble with in that what was happening between those two--who happen to be females--is that the forty-two year old was becoming the twenty-one year olds that are in sororities, that are dating people and that sort of conversation. The professional conversation about where we are going, why we're going to do it and how we are going to plan it didn't seem in place. She brought that up and we had a conversation about that and then the role of the mentor and we both agreed that my job is to help her learn how to be a teacher and her job is to help me as well and the other things that we have going in our lives we may or may not wish to share but shouldn't be the focus of what we are doing. That discussion was initiated by her but I had already been thinking that way anyway and about work ethic and how it's difficult to work with someone whose work ethic is not quite the same.

Principally, however, Ken modeled the performative aspect of teaching for his novices. What follows is illustrative in this respect. Sheila and Heather had developed a unit on the American frontier for their three honors classes. They began teaching it about a week before Christmas break. During the third week of the Spring semester, they realized, based on students' weekly journals, that the students were not understanding what they wanted them to understand. They therefore asked Ken to come in and lecture to help the students pull things together and see the big picture. Ken prepared a complex concept map and used it to lecture during first and third hours.

> I observed Ken lecture during third hour. Sheila was putting the concept map on the white board when the students began drifting in. After they settled down, Ken posed the question: "What is an American?" He asked an exchange German student what he thought. The boy began by saying that "Americans are lazy." Ken followed up by talking about the German educational system--with the boy's help. He argued that "in Germany, schooling is based on socio-economic class. The school system tends to perpetuate the socio-economic structure. In America we have the same but it's not formalized. We separate ourselves informally." Ken then directed students' attention to the concept map. He announced that "the ladies asked me to do this. I didn't want to "lecture" [using his fingers to show quotation marks]." He then made some comments about student journals. He thought many students looked things up in encyclopedias. "So I'm going to clear this up!" He then prefaced his lecture with the fact that it is his interpretation. This led to a brief digression about knowledge and authority--about people's tendency to refer to others for information, especially to TV. He began the lecture with *Social Darwinism*, asking

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students if they knew what was common to Darwin, Spencer and Chamberlin. No one knew, so he gave the answer: "They were all English!" He then shifted to *Germ Theory*, touching on *ethnocentrism*. To illustrate the latter concept, he talked about muslims and how Americans are ethnocentric towards them. He shifted back to Germ Theory, defining it as a biological theory to support Darwinism. He proceeded to pull all the ideas in the concept map together as "*a belief system set up in the 19th century.*" He also talked about efforts to "keep the [white] race pure" and tied that to Apartheid. He then diverged briefly to talk about gypsies and to tell students about *yellow journalism*. The lecture ended with the controversy over US troops operating under UN command. Ken concluded with a comment about religion being a central feature of American life and repeated that he was not trying to offend anyone in the class. (Note that Ken typically prefaced his comments--especially about religion--with this disclaimer.) Before leaving the stage, he told Sheila that he was not going to do any more lectures. She then told students that she and Heather made him do this one.

I thought this was a very informative lecture/discussion on the frontier. Ken displayed the breadth and depth of his content knowledge. The students were obviously engaged and interested in what he had to say. Although I do not have evidence to show it, I thought the lecture achieved what it was intended for, i.e., to help students (begin to) see the big picture.

In a conversation I had with Sheila about fourth hour later that day, I learned that Ken taught first and third hours in order to model this kind of lecture for her and Heather. They had observed him with great interest and attention with a view to doing the same thing during fourth hour. This suggests that there was some shared understanding of the purpose and focus of the modeling/observation. In other words, the modeling did not start with Ken's performance. However, because Ken had other engagements, he could not stay to observe the novices do what he modeled.

Sheila reported that her class was very different from Ken's, although she used the same concept map that he created. The class did not run as smoothly as his. She had a difficult discussion with the students about issues of race and social darwinism. "It is scary," she said, "to realize that many of my students are blatantly racist." In an effort to be persuasive, she shared some personal experiences with them, e.g., dating a black man. Reflecting on this teaching episode and earlier ones, Sheila observed that one issue for her

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to deal with is how to suppress her personal feelings/emotions in order to discuss issues in a less passionate way.

Sheila would certainly have benefitted from Ken's presence, not just in terms of assisting her performance, but especially with respect to the feedback he could have given her on her attempt to lead this kind of lecture/discussion. The fact that Ken had other engagements may have been an unfortunate coincidence. The lecture/discussion was not something planned ahead of time. It was one of the adjustments that a learner-centered teaching requires. However, Ken probably would have stepped out during fourth hour anyway, with the thought that modeling the lecture/discussion twice was enough to allow the novices to do the same thing unassisted. This is a plausible conjecture given Ken's apparent focus primarily on the performative aspect of teaching in his work with novices.

The conjecture is further supported by the fact that the next day Ken came in twenty minutes before the end of third hour, went to his desk and then handed me a copy of a memo he had given Sheila and Heather earlier that day. The memo was addressed to both novices, from him and was titled: "On Your Own." It described The "Rules" of "On Your Own," and concluded with: "I will be out of the classroom much of the time for the next two months. I will, however, be in to observe and record what is happening." I thought this was an interesting development given that just the day before, at the end of the invited lecture, Ken told Sheila that he was not going to do any more lectures.

One thing that I saw Ken do on many occasions is to demonstrate for his novices specific teaching moves. He did it with or without forewarning--usually without. This happened both while he was leading instruction or when he stepped into a novice's lesson. Once in the middle of teaching first hour, Ken announced out loud that he was "varying from the lesson plan by the way."

> The original plan was for students to pull together their individual lists of the characteristics of the first way in which history has been interpreted, i.e., the traditional interpretation, and then present their groups' collective lists to the whole class. But after some housekeeping, Ken raised a question that a student posed during fourth hour the day before, i.e., "Why do we

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have banks?" He raised other related questions: "What are banks for? Why do we have a second national bank? Who in this class has money in a bank? Which bank? Do you know the interest rate? What was the inflation rate?" He then proceeded to explain the banking system as it currently exists and as it existed in the early part of the 19th century. After that, he asked students how much physical cash their families had. Several students responded. It was at this point that Ken announced that he was varying from the lesson plan. He then talked about liquid assets, salaries, taxes, expenses, checks and cards. He explained the credit card system, showing students his mastercard and visacard, and commented on the role of banks. He then launched into a mini-lecture about Americans' tendency to assume that someone is better because he or she has money and power. A boy gave Ross Perot as an example. Ken brought up the issue of Haiti and the value of money--something a student discussed in his weekly journal--and drew Sheila into the lesson. She made a very brief comment and returned to what she was doing at her desk. When Ken introduced the original agenda, there were only twenty minutes left in the hour.

The following day, still while teaching first hour, Ken informed Sheila that he was "coming with an assignment." During this lesson, Ken wanted students to compare their responses with his own responses to a small group homework assignment that asked students to describe the characteristics of the four interpretations of American history using the handout "Four Ways In Which History Has Been Interpreted." Several students reported their group responses. On Ken's probing, they pointed out what was different in their responses from his. He then posed the following question: "Can any of these four ways of interpreting history be combined?" It was at this point that he told Sheila he was coming with an assignment. Students were to answer--individually then in their small groups--the following questions: 1) How are the four interpretations of history similar? 2) Can any ones of them be combined? As students were leaving the room Ken told Sheila that he was "not sure what to do with this, so I decided to give an assignment."

These two instances can be considered instances of demonstration of improvisation or interactive adjustment. However, whether or not Sheila recognized them as such remains an open question. A later example of demonstration of a teaching move by Ken happened the day after he gave Sheila and Heather the on-your-own memo.

Ken and Heather struck a conversation in the back of the room during third hour while Sheila was monitoring groupwork. I overheard Ken tell Heather

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that she should think ahead of time about the things that he does automatically because he has been teaching for thirty years. Shortly after Ken finished talking with Heather, he stepped into the lesson, asked one boy to stand up, and proceeded to ask him several very specific questions about what his group was discussing. The students were surprised. So were the novices and myself. Ken then said openly that it was a demonstration. (I realized that he had obviously just demonstrated what he had been discussing with Heather.) He went on to say that it was to ensure/check active engagement. My realization was confirmed immediately after when Ken briefly talked with Sheila and Heather about what he did and why.

I thought this was quite a dramatic demonstration. I wondered how the students--the boy in particular--felt. I wondered why this way and not others, e.g., having the novices observe him teach and watch for instances of ensuring/checking for active engagement.

Playing dumb or doing the all shots routine and rear-loading

Playing dumb is a strategy that is characteristic of Ken, both as a teacher and as a mentor. He used it especially early in the year. In his own words:

It seems to me that teaching, and learning about teaching, is a never ending process. By helping [Mickey] learn to teach, I will be able to learn how to teach as well. This, in fact, is already starting to happen because I try to continually play a role that looks to [Mickey] for answers to the questions that we have about teaching and student learning. This is sort of a *"playing-dumb"* role, but I believe that although I may have "answers" to our questions based on past experience, the answers may not be very rational or effective. The irrationality of my answers are set within paradigms that have been established for me, and by me, over the last 27 years. I want to continually question them so that I, or may I write "we", may learn the "better" answers together. I also know that the answers are ongoing ones and may change at any time, especially if we are diligent. These last few sentences sum up what I hope [Mickey] will learn, among other things, from our experience this fall.

I saw Ken play dumb several times in class. His reasoning behind using this strategy is to put students in positions where they have to figure things out. Using the same strategy with novices is, according to him, an extension of his teaching. "The idea is to put [Mickey] in a position where she has to figure things out and then I come back later and say `OK this was great. Have you thought about this?'" He also called this doing "the

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`all shots routine' in which I protest that I don't know anything, that I can't figure this out and maybe she ought to."

Related to playing dumb, is what Ken called rear-loading. It consists in letting the novice do something first and make mistakes and then pointing these out to her so that she can learn from them. Rear-loading stands out as a modal strategy in Ken's mentoring repertoire. He uses it to help his novices accomplish the most central tasks of teaching: planning for and managing instruction, assessing students' learning, and reflecting on action. The idea of rear-loading is in keeping with Ken's belief in the centrality of experience in learning and learning to teach. As I argued earlier on, it undergirded most of what he did as a mentor. Below, I give several examples of rear-loading that I observed or that Ken reported.

Ken and Mickey discussed the role of the teacher in a cooperative learning environment only after Mickey had some experience operating in such an environment. This is evidenced in the following excerpt from a letter Mickey wrote to her student teaching seminar colleagues.

> I began to re-read selections from Elizabeth Cohen's *Designing groupwork* . . . because I have questions and I'm using it as a reference guide. The reason I picked this book up last week was because I remember [the instructor] giving the Social Science group selected chapters, one of which explained the role of the teacher. This is the chapter that caught my attention. It is no secret that my mentor, [Ken], is a strong advocate of groupwork. Therefore, when, on the second day of class the third hour class found themselves engaged in groupwork, I found myself engaged in confusion! I proceeded to walk around the room and listen to progress (or lack of progress!) and offer encouragement. By the end of the hour I really questioned my responsibility as teacher and what I was to do in a groupwork situation. . . . I had asked [Ken] about the role of the teacher before I even read Cohen and he told me to let him know! (ggrrr). Then further conversations led us to the conclusion of support and making them [students] work. When a question is asked, not necessarily answer it but ask them what they think and always serve as a tool for encouragement to solve their own problems in the group.

It was also through rear-loading that Ken addressed issues of planning--arguably the most central task of teaching--in his work with novices. Having defined one of his

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roles as "the idea man", his assistance of novices' planning consisted primarily in supplying ideas. The novices would take those ideas and plan, generally according to Ken's format, adding their own ideas and activities. Thus, for instance, it was after Mickey had designed and began enacting the Vietnam War unit that he asked her to write the big picture of the unit. Two and a half weeks passed and Mickey still had not written the requested essay--which Ken justified as follows:

> She hasn't done that yet because I think the thing is she does not know yet. She made all of this stuff, and she had something in mind, and she did the stuff. And the stuff did or did not work out the way she thought it would. . . . She is now doing the same sort of thing with another class, she is refining it so she can do a better job. And I think what is going to happen is that she will finally figure out what she was doing after she's done it. And maybe that tells us a lot about teacher education. Why do we ask students to do all these elaborate lessons plans in a total vacuous context? Maybe it would be better for them to try to figure out the big picture, overall perspective, after they've done it [i.e., taught]. And then of course have another chance to do it.

The issue of the big picture of the Vietnam War unit itself--which I shall discuss further later--illustrates rear-loading. On Mickey's request, Ken gave what he called "a 'patented' lecture concerning the total perspective of Vietnam." The lecture was aimed at helping students pull the pieces together, but it was scheduled on a day when Ken subbed for Mickey. So she was not there to observe (and learn from) it. Another example is the lecture that Ken gave on the Frontier unit on Sheila and Heather's request. But he was not there to watch them try to do the same. Finally, how Ken and Mickey came to discuss the problematics of working with other teachers also illustrates rear-loading.

Involving the novice in reading, commenting on and grading student journals

As I pointed out earlier, grading weekly journals is the main mode of assessment in Ken's classes. His novices are therefore confronted with how to evaluate journals from the very first one the students write. This was the major focus of Ken and Mickey's interactions during the first log week. As she wrote in her first reflection:

While it is obvious that I have a lot to learn, [Ken] continues to enlighten me! [Ken] and I discussed the learning journals quite a bit this week but we also had to discuss them with the students as well! It is interesting how as I am learning to manipulate the content of these journals--in terms of grading--the students are also learning how to write them! I like to parallel my learning with that of the students, even though our subject matter is a little different. While I learn how to grade they learn how to get a good grade.

The pair's interactions were mostly prompted by the fact that Mickey did not know how to evaluate the journals, or what Ken expected to see in the journals. He thought she was a little too stringent when she evaluated the first journals.

We talked about that. That was to some degree my fault, but not really. I don't know. I wanted to see how she would evaluate them, and let her see how I would evaluate them, and then talk about it after we've done it; in other words a rear load sort of thing rather than a front load. And what she was doing I think was trying to be really stringent; and initially I don't start off trying to be that stringent until they [the students] get in the swing of how to do it.

According to Ken, the journals are very helpful not only for the novice, but for himself. They allow him to stay in touch with his classes when he steps out to let the novice practice independently.

I think the journals really helps her as they help me, let me know what students picked up last week; what they thought about, what they learned and also the things that they didn't learn or that they mislearned or that were inaccurate. Journals I think are very helpful to mentors to find out what is going on with their student teachers. When I read the student journals, then I know what she is doing in the classes. I don't necessarily have to be there because I know it from the students' point of view.

Improvised co-teaching/stepping in, tuning out or stepping out of the room and drawing the novice into lessons

On several occasions, Ken alluded to co-teaching with his novices. I suspect stepping in while the novice is teaching and drawing the novice in when he is teaching are what Ken referred to as co-teaching. I saw him take those two actions many times. I also saw the novices draw him into their lessons several times. Typically, they did that when

they were stuck, could not provide some information students needed on the spot or wanted Ken to bail them out of a problematical situation. At times, Ken would tune out and not respond. Since that was difficult for him to do, he would opt to step out of the room and let the novices experience managing instruction on her own.

One thing that I noticed consistently was that the novices seemed unable to respond to being drawn in when Ken was leading instruction or to Ken stepping in when they were leading. I believe this has to do essentially with the improvisatory nature of both actions. As I suggested earlier, improvisation is a skill that Ken has practiced a lot as a jazz musician and it permeates his teaching. He is able to improvise in teaching because of the depth and breadth of his knowledge. His personality seems to be an important factor too. Like the students, the novices were mesmerized by his virtuoso performances but, or as a result, they could not readily feed off him or jump into the act when he was running the show. As Mickey put it:

> [Ken] knows so much more than I do. . . . The only way I'm going to learn everything he knows is by having as much experience as he has. . . . One other thing is that it's really hard to follow him. He's a hard act to follow in the sense that he knows everything and the kids know that. And they can say the stupidest thing and he can turn it around into this major history lesson. And they say the stupidest things to me and I'm like "why would you say that?" . . . I really try to make connections, but it doesn't always work. . . . And it's because I don't feel I know enough about history and about the subject matter.

I devote the rest of this case to looking critically at how Ken worked with Mickey. After a broad temporal and topical view of their work together, I do an in-depth, critical analysis of the Vietnam War unit. My purpose is to provide a more rounded picture of Ken's mentoring practice as well as point out its potential for, and limitations in fostering novices' learning.

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Mentoring Mickey

In broad brushstrokes

> We've pretty much behaved as colleagues in a kind of co-equal way. I tried to put her in a position where she has to come up with things. I look through all stuff, and what's happening now is that she tends to do things automatically.

> We're not here to become friends. We're here to be colleagues and to know each other and learn how to teach. Now supposedly I'm doing most of the helping but I'm not entirely sure about that all the time. That's okay, 'cause she really helps me think about a lot of stuff--the way we're doing stuff, different ways of doing something and it really helps me change some things. I told her that's one of the reasons that I have a student teacher is that I want her to develop things and come up with things that I haven't so that I can steal them and use them. It depends on the individual novice teacher as to how much they need to know from me.

Ken made these statements during the fifth week of Mickey's student teaching. The statements capture well how the pair worked together throughout the whole semester. Overall, it was a front-loaded mentored learning to teach experience. In other words, Ken devoted more time to working with Mickey at the beginning of the practicum than later, fading as she took on more responsibility for planning for and managing instruction and assessing students. An indication of that comes from looking across the pair's three periodic weekly logs. The number of reported interactions decreased from 22 during log week 1 (mid-September), to 13 during log week 2 (mid-October) and finally 5 during log week 3 (mid-November). This decrease may be thought to reflect selectivity on the part of the parties over time. In my view, however, it reflects the way Ken enacted his role as mentor.

From day one Mickey was thrust into the classroom and wondered what her role should be in a cooperative learning environment. Next she was confronted with how to evaluate students' weekly reflective journals. Also, as Ken was involved in team teaching an interdisciplinary American Studies course, Mickey found herself in a position to collaborate with another mentor-novice pair. As Ken wrote in his first reflection, she had to confront "the "good, the bad and the ugly" of team teaching." It is not surprising, then,

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that Ken and Mickey's interactions during the early weeks of school focused on student journals (how to evaluate them, what they say about students); groupwork and cooperative learning (the teacher's role); the problematics of working with other teachers (issues of work ethics and teacher professionalism).

With respect to the latter topic, discussions about their colleagues of the interdisciplinary course created opportunities for Ken and Mickey to talk about learning to teach and mentoring (the learning tasks and the mentor's and novice's roles). Having framed the colleagues' problems in terms of poor work ethics and lack of professionalism, they agreed that learning to teach was centrally about learning to be a professional person and developing good work ethics.

In addition to the above topics, the logs suggest that Ken and Mickey's interactions during those early weeks revolved around students and their learning, individually and collectively. The focus on students continued throughout the semester. It was especially salient during the third log week--which coincided with the third week of the Vietnam War unit. In fact, focusing on students was the main item on Ken's mentoring agenda. As he stated:

> I believe that those people who want to learn how to teach have to be with teachers--teaching and collaborating--in the classroom. Because they need to know about students. One of the things I will be having her [Mickey] focus on--which will be hard for her, maybe not so hard, it depends, but it's hard for most novice teachers in the beginning--is, they are thinking so much about themselves and what they are doing, they aren't reading the students. So what I'm going to try to get her to focus on is what's going on with them, and then what will you do in response to what is going on with them? You've got this thing you want them to do. Now, they do things. What kinds of adjustments, if any? Or what else do we do to facilitate the learning? Or do we just say "let's go on to something else?" But focus on them. That's the major thing. And I think that if they're in a university classroom doing stuff, either cooperatively or just passively, that's not going to happen. They need to be in classrooms with students.

Ken argued that Mickey had a smattering of this aspect of teaching when she took the social studies methods course that he co-taught the spring term prior to her student teaching. He thought that course really helped Mickey. One of the things they did in that

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course was to have the prospective teachers prepare a lesson for Ken to teach to his high school students.

> They [the prospective teachers] watched it and gave reactions and then what happened, of course, they got engaged in teaching it as well as I because there were all kinds of questions and things that weren't set up. The kids would ask me and I would defer to the students, i.e., the university kids. And they had to deal with that. So right away they got a smattering of what perceptions are like.

Mickey herself attested to the value of this activity. She reported that it gave them a good example of how careful one has to be in preparing lessons. As she explained:

> [Ken] was just going through the motions. He was just doing what we told him to do. So then we got to see "oh, we should have made this clearer; we should have done this." That was really essential because if you can watch somebody take your stuff and manipulate it, then you can see better what you have to improve upon and what the strong points of a unit plan really are. We've been taught in our classes, especially with [Ken], that if your lesson is well prepared and concrete, you can have the most unruly class in the world and it will work. You don't have to worry about discipline so much. Your unit should cover the management of the class. That's a big thing that I learned through [Ken]. I think new teachers get so caught up in the material and having the knowledge there that they don't worry so much about the cohesiveness of it and about how the class is going to receive it.

In addition to this course, Mickey spent a week in Ken's classroom during that same spring term. She developed a political cartoon assignment whereby students worked in groups to analyze a given cartoon and write a one to two-page essay about it. Students were also to create their own cartoons reflecting their World War II topic.[13] According to Mickey, Ken did not want a very complex lesson because it was the end of the year and the students had several projects in progress already. "So I developed this political cartoon assignment." She learned from that experience that "You have to figure out where everybody is coming from and that they [students] all learn in different ways . . . without letting it interfere with the task that has to be done. . . . You have to have high expectations

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[13] Ken deals with World War II as part of a unit on "Warstory."

for them because if you don't, you are going to disappoint yourself more than letting them down."

Mickey also came to value cooperative learning. She cited cooperative learning in response to the autobiographical interview question that asked her if she has come across an idea that changed the way she thought about or looked at things. In her own words: "When most of us went to high school it was straight forward lecture. . . . History really becomes fantastic when you . . . get students involved into it. . . . My whole perspective now is engaging students."

She reported having encountered this idea primarily through Ken. She recalled having had cooperative learning experiences in fifth and sixth grades in a school of arts. In particular, she remembered fondly her social science teacher who had them do a lot of groupwork. "Everything was cooperative learning, but you didn't know to appreciate and you didn't even know what it was then. It was very avant-garde for the time. He [Ken] has gone so much further with it and at such a higher level. It's so exciting."

Mickey chose secondary teaching because she wants not only to challenge students and but be challenged by them. She came to student teaching with the idea of getting her students to know that high school is not just about learning facts. "I want to open the mind not just stuff it with stuff," she said. She added that

> [Ken] does that really well. He encourages them [students] to argue, to have
> a mind of their own, and not just accept everything that they hear. Because
> history is so interpretive, you [the teacher] can't just sit up there and say
> "you know this and that, and then the other thing happened and that's the
> way it is."

Like most other novice teachers, Mickey had several concerns. Something she saw in Ken's class in spring and about which she had some apprehension was how he established authority in the classroom. "I just saw the last part of the year. So of course I saw all these polished students. So it's going to be really fun to see how he horsewhips them into that stage."

Mickey also reported panicking during summer as she thought about student teaching. She thought she was going to have ten weeks of lesson plans set in stone and show up on the first day and say "Okay, this is what we are going to do first, second and third." It turned out not to be like that. "You can't do it that way," she commented. "Because if you do it that way, they [students] are not going to get anything. You are going to be so worried about your lesson plans that they are going to miss the whole point." This is an important point because it is precisely what happened with the Vietnam War unit.

The idea of developing curriculum as one goes appealed to Mickey for several reasons. First she thought "you get a lot more out of it because you can concentrate on each thing better than have each thing set and you are just doing it. Then you go through the motions." Second, she thought "you have to be *in* the lessons *with* [the students] while they are doing it. Otherwise it is not cooperative. I don't think that cooperative is just with the students. I think cooperative learning is with the teacher and the students." The third reason--which is equally important--is that "I've always been a compulsive procrastinator. I hate to admit it, but it's true. So it's probably best that we are kind of doing this as we go."

Mickey made several statements on various occasions that suggest that she came to student teaching with a strong commitment to teaching and a sense of professionalism as defined by Ken. Consequently, there was not much work to do with respect to her learning to be a professional person. It was more a matter of enhancing than developing her dispositions. "I'm not really worried about [Mickey] at all," Ken said, "she's going to be fine. The only problem she's going to have is getting a job. I mean literally." Ken made this statement five weeks into Mickey's student teaching. According to his criteria of assessment, Mickey *was* already a teacher--a colleague.

> She tends to do things automatically. She's very quick. Not all student teachers are this way. . . . She's very organized and has a very good work ethic. . . . I'm very work ethic-oriented and I get a lot of things done ahead

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of time and I'm very into organizing and getting it set up before we do it and not waiting until the last minute. She is that way as well and what happens now is when I go and ask her to do something and I go and look for some stuff I find she's already done it. She picks up on things right away. She reads people quite well. She's already figured me out. . . . She already knows I think the way I'm thinking and she knows the kinds of things I like to see happen in the classroom. Like today I couldn't keep my mouth shut when she was in there. I thought "well did you ever think about this?" She said "I was going to do that." And I thought I got to get the hell out of there because I'm superseding her, you know what I mean. . . . I really shouldn't have, so what that tells me is when she's interacting with students in a large group discussion I've got to get my butt out of there or just decide that I'm going to keep my mouth shut, 'cause she's already going for a lot of things that I would go for.

In my view, what this suggests is that after five weeks of mentoring, Ken was not sure what else he could "teach" Mickey, or how to challenge her and further her learning to teach. It appears that in his estimation, she had learned what was essential to function as a teacher in his classroom. She had confronted and clarified her role in a cooperative learning environment; learned how to evaluate student journals; confronted what it means to work with colleagues and was learning to collaborate through collaboration; was becoming comfortable with students and had been involved in instructional design. Whatever else there was for her to learn about teaching would come with time, more practice and experience.

I now turn to a closer look at the Vietnam War unit. I chose to focus on this unit to conclude the present case for three principal reasons. First, Mickey planned and enacted it independently. Second, it spanned the last six weeks of her student teaching experience and was therefore framed as the culminating event of that experience. Third, the role Ken played in the planning, enactment and assessment of this unit seems paradigmatic of his mentoring practice. An analysis of the role highlights the potential and limitations of this way of working with novices.

Teaching the Vietnam War.

> I kind of wanted to do this by myself and then see how it flies (Mickey).

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I kind of knew . . ., but [told myself] "we'll see what happens" (Ken).

These two brief statements provide a convenient point of entry into my fine-grained analysis of the Vietnam War unit. I first describe how Mickey planned the unit, how she enacted it and how it was assessed. Along the way I also describe the role Ken played in the accomplishment of each of these tasks. I end with an issue-oriented discussion of what Mickey learned from the experience of planning and enacting this unit and Ken's role in it and the consequences of his actions for Mickey's learning.

Planning the unit. The Vietnam War unit is part of Ken's regular curriculum. When he teaches this unit, he usually focuses on such issues as why the United States got involved in the conflict. Should the United States have been involved? Mickey decided to approach the unit differently. It was originally designed for the interdisciplinary class. Mickey "added a few things, changed it around, and now I'm using it for my honors classes." The data upon which I draw for my analysis of the unit were gathered in the honors classes.

Mickey's central goal was for students *to understand the many perspectives on the Vietnam War*, and that they are shaped by one's affiliations (national, political, social, and occupational). Starting from the assumption that what happens everyday is subject to various interpretations, she thought it would be "neat" to look at the Vietnam War from different perspectives. She wanted students to understand the War from five perspectives: American government, American soldier, counter-culture, South Vietnamese soldier, and North Vietnamese soldier. This was reflected in the overarching theme of the unit: **"Different strokes for different folks!"** In her own words: "I wanted them to get the idea of depending on who you are and where you're coming from, you're going to look at it [the Vietnam War] differently. And I don't know if that kind of question [i.e., Ken's above] would necessarily facilitate that."

Following Ken's planning format, Mickey assembled a packet titled "WE — AT —NAM": A look at the varying perspectives of the VIETNAM WAR. The packet contained instructions and reading materials and was distributed to all students and Ken. Mickey used several of Ken's handouts and activities, e.g., the reading game and the article analysis. Students were instructed to choose one of two articles included in the packet and write individual analyses.[14] Then they were to work in small groups to create group analyses using each member's ideas and criticisms. The major assignment of the unit was group research projects. Students were to choose one of the five perspectives on the Vietnam War and do some research on the War from that perspective. The culminating activities of the unit were 1) a student debate--with each group or participant assuming the perspective from which they researched the war; and 2) a final assessment activity consisting in playing Family Feud based on the students' research.

Mickey thought this flowed nicely with the previous unit on the presidential election to the extent that students learned in that unit that you have to know each candidate's perspective before you can make a decision to vote or not for him. The parallel with the Vietnam War unit, according to her, was that "you have to know everybody's perspective before you can formulate a position on Vietnam."

What role did Ken play in planning the unit? Ken's contribution to the planning of the unit took various forms. Besides the unit planning format, the reading game and the article analysis--which Mickey used as a matter of course--Mickey reported having gone through some books that Ken has. "They give you ideas, like possible handouts and lessons plans." Looking through such books, she came across terms that were repeated and added those to her initial list of concepts and terms that she had already and about which she wanted students to carry out their research (see appendix). Something Mickey

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[14] Both articles--"Lessons from a lost war," and "A bloody rite of passage"--were clipped from the April 15, 1985 issue of *Time*.

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said but which I cannot explain for lack of data, is that Ken would double check the subject matter.

In addition to the above, Ken suggested Mickey have students interview "family members or people that were at Vietnam. He definitely wants me to do that. I didn't originally have that plan and he said `No, I think it's a very important thing for them to do'." Mickey herself gave the following explanation as to why this is an important thing for students to do:

> At their age they can just about find anybody who was alive during the Vietnam War. Whether they were there, or whether they were part of the counter-culture, their role is insignificant. It's that they know somebody who lived through it. I think he [Ken] wants the students to realize that people are a valuable resource, not just textbooks and that sort of thing.

Eventually Mickey did not include this activity in the unit. She attributed this to lack of time. On the other hand, this points to the degree of independence she had in planning the unit.

Enacting the unit. Mickey approached the enactment of the unit with much apprehension because of her limitation in the subject matter. She had not taken any American history course in college yet.

> And now I'm teaching American history. So, I'm like, "I've got to rely on high school level classes." So it is kind of difficult in that if they come up and ask questions, I will just kind of always say "I don't know." But down those same lines, I always say "well, what do you think? Have you tried to find it?" And I would do that even if I knew the answers. So it works out either way.

On the opening day of the unit, she wondered about the reasonableness of what she was asking her students to do, and she went on to state yet another purpose which seems to have eventually driven the enactment of the whole unit.

> I don't know if I'm expecting too much, . . . but I have those goals and I will try my best to get there. I want them to be responsible. I hate to say this but, whether or not they grasp the subject matter is kind of on the back burner right now. It's "are they responsible in their tasks? Do they

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accomplish things? Do they understand that they have to get A done to get B done to get C done, to accomplish Z ultimately?"

Mickey started off with going over "Vietnam in twenty one questions" with the students--a task she conceived of as "kind of just an overview for the students." It wasn't a test, "just a worksheet . . . [to give] them an overview of each topic before they actually start their research, so they are familiar with everything before they focus on one specific area." Her subject matter knowledge was tested during that introductory lesson when the topic of the My Lai massacre was raised.

> I knew that there was something that occurred that created an anti-war movement, or more of a precedence for it. And they [the students] were like "well what exactly happened?" And I was like "Good question! You will find that out later." I just kind of glossed over it, and tried to make it look like I did know. I didn't want them to lose confidence in me. "She doesn't know what she's talking about." So I just left it like "You will find that out!"

The second task of the unit was the article analysis. It was aimed at helping students become familiar not only with this task and how to do it, but also with Vietnam. Following these preparatory activities, the students started their research projects. Each group took on the responsibility of researching the Vietnam War from a particular perspective. Students also watched a video of the Broadway production of "Hair"--which Mickey thought of as "one of the most accurate accounts of the counter-culture during the Vietnam War."

According to Ken watching this video was a good idea, but students did not understand it because they are not musically literate and because Mickey did not teach them how to watch a musical. Ken realized this while reading students' weekly journals. As he explained,

> It suddenly occurred to me that these kids don't really understand what musicals are about; that it's part of the European operatic culture, etc. So, I then spent a little time yesterday, about ten or fifteen minutes, explaining that to them. And they were all, "Oh, yeah, okay!" That is something that she [Mickey] wouldn't think about. Part of the reason is that she doesn't have as much experience with that sort of thing as I do.

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The research papers that the students wrote revealed further misunderstanding on their part. Indeed, upon reading the papers, Mickey decided to have open meetings with both honors classes to discuss what went wrong with the unit. She wanted in particular to discuss students' responsibilities and hers in accounting for the unsatisfactory quality of the papers. According to her, students had plenty of time to carry out their research projects. But she anticipated that they might argue that they did not have enough time to do a better job. She hoped "to get some confessions of `we didn't use our time wisely'. Because they didn't."

Although Mickey had some apprehension, she anticipated that she would learn from the experience of facilitating this kind of improvised discussion.

> This whole conversation's going to be very difficult for me because I haven't completely sorted out in my head what I'm going to say or what I'm going to do. I'm gonna just kind of go with it and find out what comes out and what their response to it is. And there's a reason why I didn't do it. What I want to do is try to figure it out in my head in front of them. So I just tell them what I'm thinking and vice versa.

The open discussion with the first class turned out not to be a flat out conversation as she had planned. Mickey did most of the talking, blaming herself when she could not get the students to confess that they did not use their time wisely. One student in particular challenged her on perspective understanding versus perspective taking. He wanted to know if she was asking them to write their research papers in the third or first person. He argued that he can understand one of the perspectives on the Vietnam War, but that does not mean that he has to write as if he held that perspective. Mickey argued briefly that he should, but decided not to pursue the issue any further.

At this point, Ken stepped in, prefacing his action as follows: "Excuse me for interrupting because this kind of is going nowhere." He interrogated several students about their understanding of the assignment and what they had done. As he spoke, he progressively took center stage while Mickey backed away to the writing board. Ken criticized the students for producing encyclopedic research papers with no theses, for not

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letting the teachers know what they do not understand about assignments and for sitting and not saying anything during the open discussion. He argued that based on his reading of the papers, the student who was challenging Mickey was asking the right question and was the only one who understood the assignment. "He is the only one," he said, "who tried to do what she [Mickey] was asking for, assuming that she knew what she was doing--which I'm not clear about."

Ken also talked about people's tendency to think about research and learning in dichotomous terms; about the fact that the students have been "trained" for ten years to think that way. He criticized university faculty as well for doing the same thing and gave a personal example to illustrate his point. Mickey concurred with Ken's remarks and shifted the blame from herself onto the students.

Overall, Ken played a rather limited role in the enactment of the unit. Note that in mid-October he and Mickey had discussed the fact that he would be increasingly absent from class while she taught because, as he reported in his second log, "I can't keep my mouth shut, and more importantly, she needs to be alone with the students without my influence." Subsequently, Mickey took primary responsibility for planning for and managing instruction, grading journals and other assignments. Ken read some journals to stay in touch with the classes. The enactment of the Vietnam War unit came at a time when he was stepping out very often. However, Mickey reported that she would go to him with specific factual information questions or questions about what to anticipate from students after she has sent them to find things out for themselves. Ken's responses helped re-activate what she learned about the Vietnam War in high school.

> I will remember some things or be able to make connections. So when they [the students] tell me stuff, and if it's down the same line, then I will push them a little further to think about things, just from what [Ken] told me and from what they've told me.

In addition to the above, Ken shared the grading of the research papers, and it was he who brought to Mickey's attention the unsatisfactory nature of the papers.

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What happened was that I started reading those papers last night. (I was assigned [by Mickey] to read them so I did). And I read them and I thought to myself, "this is not good." I mean they don't know what the heck they're doing. And I could pick that up right away.

Mickey and Ken had a phone conversation that night. She told him she thought the students only had a general idea of the Vietnam War. They learned about North Vietnam and what the North Vietnamese were trying to achieve. Ken thought that was enough--which contradicts the above quote--but Mickey thought her expectations were a lot higher.

I thought they would have this profound knowledge of the different perspectives of the Vietnam war and all this and I don't think it was caught. But, I also think "well that's because something was wrong with my [unit] plan".

It was during that conversation that Mickey came up with the idea of open discussions with her honors students. According to her, Ken just told her she might want to figure out how she wanted to facilitate the meetings. "That's just where he left it. So, it's my decision. He doesn't really know about it."

Assessing the unit. There are many indications that this unit was Mickey's most prideful event during student teaching. She invested a lot of time and effort in planning and enacting it. However, as the foregoing suggests, it turned out to be unsatisfactory as regards the achievement of the ultimate objective. The assessment of the unit was done by both Mickey and Ken on different occasions and in different ways. First, as it appears in the following excerpt from Ken's third end-of-week reflection, he and Mickey had several conversations related to curriculum, instruction and learning.

It seems that as we ([Mickey] and I) go on with this learning how to teach "thing", we are conversing more and more about the timing and the scaffolding of lessons. We both are concerned that the ideas, topics, and skills that we are teaching occur in some logical progression so that each item builds on the other and is reinforced by the other. We are both concerned that students learn to be articulate both orally and in the written forms. We both are concerned that everything that we have students do

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reviews, reinforces, and creates learning for all of the students. The task, of course, is to find the right sort of timing for all this as well as the right sort of combination of lessons.

The timing of the third reflection (end of the third week of the enactment of the unit) suggests that these conversations were prompted primarily by what was happening with the unit. Interestingly, it was during the third log week that Ken asked Mickey to write a 'big picture' paper about <u>why</u> she had the students do certain activities and how they pertain to the overall unit. As she put it, "Ken . . . impressed upon me the importance of an "overview" write-up or "big picture". This write up is to consist of why I chose to do certain lessons as well as their importance to both the students and the continuity of the [unit]."

This assignment came in the context of an extended conversation during which Mickey was going over a "lesson plan of sorts" for Ken to substitute for her. According to her, Ken asked her to write this paper because he wanted to know exactly where she was going with the unit. Also, "he thinks by writing it I'll know better what I'm trying to do with it and where I'm trying to go." Ken's reasoning behind this assignment was to get Mickey to think about what she had done and what she had asked the students to do. He said he wanted her to write her own version of the "scaffolding" she was doing with respect to the classes she was teaching.

> She has produced masses of material for the students and as she explained it to me I was lost. If I was lost, then what must be the situation for the students? Maybe she can't see the forest for the trees in that she is so concerned about the viability of the lessons and the activities that she is no longer sure of what she wants students to come out of this whole set of lessons with, i.e., "the Big Picture"!

In the context of the same extended conversation, Mickey asked Ken to come in and give a lecture to pull things together for the students. As she put it, "I wanted him to talk about Vietnam (share his vast array of knowledge with the impressionable masses)." Ken

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did give the lecture, but it was on a day he subbed for Mickey. He wrote that this enabled

him to "touch base" with his students.

> It was particularly nice for me to be with the Honors students as they are
> really enthusiastic about learning. The students and I were able to have a
> "conversation" about what was going on in their lives and also have a
> discussion concerning the larger, global historical picture in relation to
> Vietnam (European, American colonialism and related conflicts).

There is indication in the foregoing that there were some problems with the unit.

This was confirmed later by students' research papers. Indeed, the papers forced Mickey

to recognize the problematic outcomes of the unit. Hence her decision (two and half weeks

after Ken had requested the big picture essay) to have open meetings with her students.

These meetings were followed by a formal interaction between Mickey and Ken. I must

preface what follows by saying that this interaction was staged for the purpose of data

gathering for the "Learning from Mentors" study. It was the first time that the pair sat with

the purpose of having a focused discussion of a specific issue.

The formal interaction took place in the classroom three days after the open

discussions and lasted about twenty-five minutes. It began with Ken asking Mickey to

remind him of what happened during the discussions. She reminded him that she and the

students talked about the research papers and the unit as a whole.

> [Was it] something with misinterpreted instructions? Was the [unit] too
> confusing or not clearly stated? Or was it they didn't use their class time or
> was it a combination of the two or what? And I think you were talking about
> starting to get them into the practice and habit of doing research papers and
> that sort of thing and using such controversial and difficult medium to
> practice that.

These questions triggered Ken's assessment of the whole unit. He thought the unit

was too complicated, too complex, so much so that the students divorced their learning

from the research they carried out. For him, this was due to the fact that they had no

purpose for their research. He conjectured that what they did was to look stuff up in

encyclopedias and regurgitate it without understanding it. As a result, there were many

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inconsistencies and inaccuracies in their papers. Many of them cited works without

knowing what the word "cite" means. Ken thought also that students got confused about

counterculture and who were hippies and who were not--which he attributed to their lack of

background and an experiential frame of reference. His summation was that:

> They needed a simple issue because what we wanted them to do was, I
> think, or what I would like them to do and I think you would, too, is I want
> them to learn how to do research for a particular purpose and to construct an
> argument based on the research and the documentation and what the
> assignment of the lesson asks them to do was a bit complicated. It assumed
> that they had been doing this kind of stuff all the way along and they
> haven't really ever done that. Now I kind of knew that, but [I told myself]
> "we'll see what happens".

Mickey concurred with this purpose of the unit, but what she said elsewhere

suggests that her primary purpose was different. For her, research was the instructional

strategy, and the ultimate educational end was attainment of "profound knowledge of the

different perspectives on the Vietnam War." On the opening day of the unit she had

articulated yet another goal: "I want them to be responsible."

In any case, a good portion of the conversation was about the use of research to

foster student learning--which seemed to be what Ken was primarily interested in in terms

of what students could get out of the unit. Asked why he chose to focus so much on

research and learning during the formal interaction, he responded:

> Because I wanted her to think about that. That's the crux of the whole issue.
> Kids did all this research. Now what did they learn? And the debates and
> the family feuds, that sort of thing is the culmination of what they learned
> and it didn't turn out very well. And part of the reason is because they
> divorced their research from their learning. It became one of those
> meaningless exercises that we have kids do in school. Only much much
> more complicated.

In reaction to Ken's comment that the research papers were "lousy," Mickey made

several confessions/excuses. First, it was difficult for her to switch gears from thinking

like a college student to thinking like a school student because it had been a while since she

was a high school student. Second, she never learned how to do a research paper in

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college, so obviously she could not teach others to do one. Third, the unit was already in progress when she realized that the school library did not have the needed resources for students to carry out their research. As she planned, she just assumed that the resources would be there.

With respect to the issue of lack of resources, Ken counterargued that "maybe that's where lecture comes in." To the first two arguments his counterarguments were that it had been even longer since he had been in high school as a student; and that the real issue had to do with the fact that it was the first time in Mickey's life that she had to think about learning--both her own and someone else's. In his view,

> that's because when we go through high school and university we don't often think about how we learn, particularly how other people learn. We're focused on ourselves. And we're focused on doing the work and studying and whatever else we need to do in order to get what we need to get. It's a whole different role to look at a whole group of other people and say "alright, what do I want them to learn and how am I going to get them there?" I've had practice doing that. Assuming that we don't stagnate, maybe the further away we get from being a student the better we are at being a teacher.

The interaction ended with yet another assignment that Mickey was to carry out. Ken suggested that what she needs to do is to go through all the papers after they have evaluated them and write down some things that are common to all of them. "In other words what did I write all the time and what did you write all the time? . . . What I would do is maybe kind of generalize the sorts of things that were done with this paper."

A point worthwhile noting is that on more than one occasion during this interaction, Mickey tried unsuccessfully to get some feedback from Ken on the positive aspects of the open meetings "for my own peace of mind.". In fact, her expectation was that this interaction would be about these meetings, but it turned out to be about the whole unit.

Mickey's learning and Ken's role throughout the unit

The questions that I want to speak to in this final section of the case are: What did Mickey learn from planning and enacting the Vietnam War unit? What learning

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opportunities did it hold out for her? Did she take advantage of these opportunities? What role did Ken play in her learning?

Transition to pedagogical thinking. There is evidence that Mickey recognized the need and difficulty for her to think like a high school student, and to know students and their prior knowledge. This is reminiscent of what Feiman-Nemser and Buchmann (1986) call a shift to pedagogical thinking or professional thinking in teaching. Teaching may be an everyday activity, but thinking pedagogically is not natural. Making a shift to this kind of thinking marks a move to look beyond the familiar worlds of teaching and learning.

> [P]edagogical thinking is strategic, imaginative, and grounded in knowledge of self, children, and subject matter. Perhaps most difficult for the novice is the shift of attention from self or subject matter alone to what needs explaining to children. . . . A major challenge for teacher educators is to help prospective teachers make a complex conceptual shift from common-sense to professional view of teaching (Feiman-Nemser and Buchmann, 1986, pp. 238 & 240).

As pointed out earlier, helping Mickey focus on students instead of herself was central to Ken's mentoring agenda. Consequently, to say that this was the first time for Mickey to think about others' learning and hers in justifying the problematic outcomes of the Vietnam War unit raises issues. On the one hand, one could argue that this highlights the complexity of this shift. On the other hand, since this unit came at the end of Mickey's semester-long student teaching and given that Ken talked about the accomplishment of this learning to teach task in developmental terms on several occasions, one must wonder about the extent to which Mickey was assisted earlier in the semester in making the shift from self to students. The first weekly logs show that this was part of their conversation, but it seems that it became most central in response to what was happening with the Vietnam War unit.

Thinking about resource materials. Another important aspect of teaching that Mickey seemed to have realized is the teacher's responsibility for making sure students have access to needed resources for carrying out assignments. This points to an important

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dimension of what Zumwalt (1989) calls a curricular vision of teaching. Indeed, knowing what resources are available and accessible in one's school is critical. Here again, questions can be raised about Ken's role not just during the planning of the Vietnam War unit, but earlier in the semester.

Assuming that Mickey was involved in planning previous units, one would expect that, by the time she embarked upon planning the Vietnam War unit, she would have developed the reflex to think about resources for students when designing curriculum. I conjecture that this was not brought to her attention since most of the materials for the previous units had already been assembled by Ken over the years. I submit that it is only through engaging in discussions of purpose and content-related issues in content-specific terms that that would have happened. But as already stated, Ken *is* the idea man and his novices are on their own with respect to the details and instructional forms. Had Mickey and Ken discussed the reasonableness and practicality of their divergent purposes, and talked through her plans, not just in terms of format but most importantly purposes and substance, the issue of resources might have been brought up.

Learning about thematic instructional unit planning in context. Most centrally, Mickey recognized that there was something wrong with her unit plan:

> I think basically clarity of task. The tasks themselves were very clear but like when I gave them an outline of what to research it was a little ambiguous, though it was very clear to me. We learned how to do unit plans in our teaching classes and that system just didn't work for me. . . . I had such a difficult time with it. . . . I did this my own way and now when I would do a lesson again I would incorporate the two because my own way worked very well to a certain degree but then there's this big picture paper Ken wants me to do—writing an overview of what you want them to get out of it. Now when I did it my way, I had an idea what I wanted to get out but I didn't have like... I mean I had a goal. I wanted them to understand the varying perspectives of the Vietnam War. But now I think I should have defined that. What it means to understand the varying perspectives and I didn't do that. So the combinations of those two methods would probably be the best way to do something like that.

Planning for instruction is one of the central tasks of teaching. Teachers and classrooms rarely function effectively without some kind of planning (Yinger, 1980).

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Teacher planning has been documented as a significant area in which teachers make a variety of decisions which have a bearing on teachers' and students' classroom actions and behaviors, and ultimately, on what the latter learn (Clark & Peterson, 1986).

Planning for instruction is dealt with in one way or another in the course work component of virtually all teacher preparation programs. However, completing a planning assignment in partial fulfillment of the requirements of a course is different from planning in context. For most prospective teachers, student teaching provides the first opportunities for learning to plan and planning *in situ*, i.e., selecting particular contents and appropriate representations and ways of presenting in order to connect the selected contents to a particular group of students in a particular classroom at a given time of the year and foster their learning. But planning for instruction entails more than selecting, representing and presenting content. It entails understanding context, attending to students' thinking and assessing their understanding. It also entails justifying curriculum decisions (Scheffler, 1958).

There is evidence that novice teachers are in general more preoccupied with the pressing questions of "how," than with questions of "what," and "why." Yet, as Zumwalt (1989) argues,

> If prospective teachers do not understand that questions of "what" and "why" are as central to teaching as the understandably pressing questions of "how," not only is the range and quality of their decision making drastically limited, but teaching can easily drift into a meaningless activity, for students as well as for teachers (p. 174).

Experienced teachers who serve as mentors to student teachers are in a good position to help them understand the relative centrality of each of these questions, and develop the habit of answering all three when thinking about creating learning opportunities for students.

Mickey did answer the "what" and "why" questions, but did she ask the right questions? She wanted students to understand the many perspectives on the Vietnam War

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and the fact that these perspectives are shaped by people's national, political, social, and occupational affiliations. The last sentence of her introduction to the unit packet suggests her answer to the "why" question: "It is very important for you to know each viewpoint before you draw a conclusion." One obvious implication of this statement is that students should research all perspectives. However, the way the assignment was framed, they were to research the war from one perspective.

Planning a thematic instructional unit entails thinking about curriculum beyond the individual lesson--a task Zumwalt (1989) considers essential for teachers. She argues that "[t]his broader vision is particularly important for the novice who is often overwhelmed not only by day-to-day survival in the classroom, but also by the vast, often seemingly irrelevant knowledge accumulated in a teacher preparation program" (p. 176).

The unit concept has a long history in educational circles, but it means different things to different people (see Oliver, 1958). For some social studies educators, it means a set of chapters dealing with a single historical period or event. Others think of units in terms of issues--in which case, a unit could cover several historical periods or events. For instance, one could design a unit on immigration in the United States or in various parts of the world; on women in society; on World War I or II; on the two World Wars; on civil wars; or on wars/conflicts in general. In dealing with World War I, for example, one could focus just on how it unfolded, from a chronological perspective, and on its destructiveness; or explore also what else was going on in the countries involved, before and during the war. Discussing who lost, and who benefitted from the war, directly or indirectly, might be worthwhile too.

The unit that Mickey designed focused on a single historical event, but it was issue-oriented. As it appeared in the present case, thematic instructional unit planning is a complex task to accomplish--especially for a novice teacher. It requires weaving together several kinds of knowledge, e.g., content knowledge, knowledge of students, their abilities and what they bring to the unit by way of prior knowledge, and knowledge of

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curricular resources available in the school or locality.[15] Most importantly, it requires having a defensible "big picture" that guides planning and instruction. In thinking about thematic units as a special case of the unit concept, having a big picture stands out as a necessary starting point. Otherwise, one ends up with a series of activities/tasks that have no conceptual link.

From her involvement in previous units, Mickey may have learned about the importance of having a big picture to start with. But the data suggest that she did not have the capacity or reflex to start with a big picture when it came to planning a unit independently. In fact, the issue is not simply about having a big picture. The issue is centrally about the quality of the picture. Mickey wanted her students to acquire a profound knowledge of the Vietnam War by understanding--through research--the varying perspectives on this war, but she did not define for herself or for the students what that means; nor did she teach students how to carry out a research project of that nature. As a result, the final products of their research turned out to be "a bunch of encyclopedic stuff," according to Ken.

How can we account for this? It seems that with respect to thematic instructional unit planning, Mickey learned primarily about form earlier in her student teaching experience. This may have been the case because she had limited access to Ken's thinking and reasoning when they worked on previous units. He had already figured out the big pictures and created or assembled most of the materials for these units. Mickey, therefore, had access only to the products of his thinking.

A related conjecture is that Ken mis-assessed Mickey's competence, thinking that because she was involved in "co-planning" previous units, she would automatically think about the big picture in planning the Vietnam War unit. This conjecture raises other issues: 1) What does it mean to co-plan? 2) To what extent is what is learned about planning from

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[15] See Grossman (1990) for a more detailed conceptual framework of the domains of teacher knowledge.

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co-planning one unit transferrable to planning independently? 3) How much scaffolding is needed in learning to plan thematic instructional units? 4) How much assisted performance do novices need in planning and enacting such units independently?

It is safe to argue that Ken and Mickey certainly did not have the same answers to the question: Why teach the Vietnam War? Answering this question calls for justifying curricular decisions in ways that a novice might not be able to do on her own.

> Decisions that confront educators are notoriously varied, complex, and far-reaching in importance, but none outweighs in difficulty or significance those decisions governing selection of content. . . . If it is true that no one teaches anything unless he [sic] teaches it to someone, it is no less true that no one teaches anybody unless he teaches him something. We do not, moreover, consider it a matter of indifference or whim just what the educator chooses to teach. Some selections we judge better than others; some we deem positively intolerable. Nor are we content to discuss issues of selection as if they hinged on personal taste alone. We try to convince others; we present ordered arguments; we appeal to custom and principle; we point to relevant consequences and implicit commitments. In short, we consider decisions on educational content to be responsible or justifiable acts with public significance (Scheffler, 1958, p. 461).

Being in the company of an experienced teacher who primarily plans in the form of thematic instructional units holds promise for learning to accomplish this complex task. However, this case suggests that just being in such company is not a sufficient condition in itself. Learning to plan beyond individual lessons, or learning any teaching task, may be limited unless novices have access to the thinking that underlies the curricular and instructional decisions mentors make as classroom teachers, and their classroom teaching actions. Whether and how a mentor makes his/her thinking accessible to the novice to support the latter's learning becomes an issue of importance to both practitioners and researchers.

Several issues emerge from Ken's assessment of the unit. First there is the issue of knowledge of students and their prior knowledge. Second, there seems to be a divergence of purposes. In his assessment of the unit, Ken revealed his knowledge of the particular group of students with whom Mickey was dealing. He withheld sharing that knowledge

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with her, telling her at the end of the unit that what she asked students to do was too complex for them; that she assumed incorrectly that the students were familiar with such a task. Such information would certainly have been invaluable for Mickey as she planned for the unit and began to enact it.

The "Vietnam in 21 questions" worksheet may have helped Mickey assess students' prior knowledge about the Vietnam War, but it was not intended for and could not help her find out whether or not they could accomplish the central task of the unit, i.e., researching the war from one of five perspectives and writing a research report from that perspective. In sum, for her, gaining and taking a particular perspective on the war was the main purpose of the unit. As for Ken, he apparently was mostly concerned with helping students learn "how to do research for a particular purpose and to construct an argument based on the research and the documentation." The focus here is on developing inquiry, reading, and writing skills. These purposes are not necessarily mutually exclusive, but a unit will take a different shape depending on which one of them is in the foreground.

Mickey did not write the big picture paper. There is little doubt that she will teach the Vietnam War unit differently the next time, just from having taught it once. However, she could have benefitted from having access to Ken's thinking had he shared with her how he would structure the unit differently, maybe using some of her materials. In a way, his choice about role enactment constrained her learning.

Planning and facilitating an open large group discussion. Besides getting students to make some confessions regarding the way they used their time, one of Mickey's purposes for having open discussions about the outcomes of the Vietnam War unit was to practice thinking on her feet. She anticipated that the discussions would be very difficult for her because she had not thought through them herself, yet she did not seek Ken's guidance and assistance in thinking about preparing for and orchestrating such discussions. She wanted to try to figure things out on her feet, interactively. As a result, Ken's one sentence piece of advice was sufficient for her: "You might want to figure out how you

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want to do it." Although "that's just where he left it," Mickey could have asked him for specific input. On the other hand, what Ken said was phrased more like an assignment than an invitation to engage in a discussion. This is consistent with the stance each of them adopted since the planning stages of this unit.

One might have envisioned a fruitful conversation between Ken and Mickey in preparation for the open discussions. They could have addressed both procedural and substantive issues--the purpose of the discussions; how to facilitate them; why the unit took the shape it did; what could be done differently next time, etc. However, just as Ken argued that Mickey could not come up with a big picture for the unit prior to the experience of teaching it, he might argue here that having a conversation after the open discussions was more fruitful than in preparation for them. Unfortunately, the formal interaction turned out to be primarily about the unit--in particular connecting research and learning--and not about these discussions (see end of section on assessing the unit). This can be construed as yet another missed learning opportunity for Mickey.

Learning to connect research and learning. For Ken, what was important was that Mickey understood the issue of connecting research to learning. He thought she was probably in a quandary at the end of the unit as to how she would do it differently the next time around.

> But that's okay, because she's got to figure that out. What I know is that if I
> do the Vietnam thing in a class myself--I will structure it differently and will
> use maybe some of the materials that she has, but I won't do it that way at
> all.

This provides further evidence of the fact that Ken and Mickey thought differently about what to teach about the Vietnam War, why and how. Ken's statement that Mickey has got to figure out how she will teach this unit differently next time is further evidence of the centrality of learning from mistakes in his thinking about learning to teach. It also suggests that Ken's theory of learning to teach rests in large part on individual constructivism. The social constructivist dimension of the learning process appears to be in

the background. This is puzzling because Ken is a strong advocate of cooperative learning and it is through sustained, close-to-the classroom collaborative work on teaching, curriculum and learning that he came to teach in the way he does now (see Parker, 1992).

Learning subject matter. For me, one of the central issues that the Vietnam War unit raises has to do with the role of subject matter knowledge in teaching and its place in mentor-novice interactions. There is ongoing debate among educators regarding the role of subject matter knowledge versus procedural routines for teaching. This is reflected in statements such as: "Procedural routines appear to be the sine qua non of teaching" (Kagan, 1992, p. 162) versus "Understanding of subject matter is a sine qua non in teaching" (Feiman-Nemser & Parker, 1990, p. 40).[16]

On several occasions Ken talked about the role that Mickey's limitation in subject matter knowledge played in the outcome of the unit. He once commented that she did not have much background in political science or history, and went on to say:

> She really is doing extremely well and acts as though she knows a lot about the subject matter when in point of fact she doesn't. She needs more course work. That's part of the problem I noticed. She covers it up really well. She does really well with this style of teaching. You don't have to be extremely knowledgeable because you're not lecturing. Last year I had a young man who was very knowledgeable. He was a history freak. The ones I've had before didn't know squat and they couldn't teach either.

Mickey herself acknowledged her limitation in subject mattter on various occasions. As early as at the end of her first month of student teaching, she voiced concern about subject matter knowledge. "How can I devise a lesson plan when I don't know everything about it?" But she went on to argue that "the more I think about it, you don't have to know a lot. You let them [students] find it out. You're just there to set up the task. The only

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[16] For more on this debate, see for instance Ball & McDiarmid (1990), Buchmann (1986, 1984), Grossman, Wilson & Shulman (1989), Kennedy (1991, 1990), Shulman (1987 and 1986), Wilson (1989), Wilson, Shulman & Richert (1987), and Wilson & Wineburg (1988).

way I'm going to learn everything [Ken] knows is by having as much experience as he has."

Since Ken was aware of Mickey's subject matter limitation, I wonder why he did not take a more active role in the planning and enactment of the Vietnam War unit, and a more proactive stance sooner. I conjecture that this reflects the relative role that subject matter now plays in Ken's own teaching practice. As he pointed out, "I think now I'm probably much more into process than I was in terms of content. I'm using content to get at process, thinking skills, writing skills."

In Mickey's own words, "aside for helpful criticism on what occurred in the classroom, Ken's advice regarding the creation of the unit was given per my request. Ken's input and patience to let me do what I wanted to do was great! This way I was accountable for errors and inconsistencies and I could learn from my mistakes." She appreciated the fact that he was not "controlling and saying 'this isn't what I want my students to get.' He's letting me get it out. Plus, I think there's a certain amount of it where he just thinks it's fine. He didn't have serious qualms with it."

The above suggests that Ken's contribution to the planning and enactment of this unit was co-constructed. First of all, the unit coincided with Mickey's lead teaching period. Second, she accordingly was to assume a more prominent role in planning and enacting curriculum. Third, both she and Ken conceived of this task as independent practice. Fourth, Ken took cues from her and let her do what she wanted. Fifth, this was congruent with Ken's belief about the value of experience, mistakes, and trial and error in learning to teach. But, alternatively, could it be that he thought that her subject matter limitation was too great for him to do something about it, or that the subject matter preparation of novices was not his business, but the university's? The second possibility seems the most plausible given his statement that Mickey needed more coursework.

Mickey's confession of her lack of subject matter knowledge raises questions about mentors' role in helping novices learn subject matter in context. Feiman-Nemser and

Parker (1990) identified two factors that help explain the lack of attention to subject matter in the literature on beginning teacher and teacher induction. These include the widespread belief that, until novices learn to manage students, they cannot concentrate on teaching them, and the belief that beginning teachers already have adequate subject matter knowledge. They argued that "[e]ven when beginning teacher assistance programs focus on instruction, they tend to be construed in content-free terms" (p. 32). From their analysis of the conversations between four mentors and four novice teachers Feiman-Nemser & Parker came to the conclusion that "[i]t seems probable that conversations about teaching will be most helpful to novices when they address content-related issues in content-specific terms" (p. 42). In other words, mentors <u>can</u> help novice teachers deepen their subject matter understanding.

This task appeared not to be on Ken's mentoring agenda. He did not simply open his classroom for Mickey to practice what she learned at the university, but he did not assume the role of a liberal arts instructor or a pre-service teacher educator either.

In the absence of an assigned textbook, Mickey's taking on the challenge of building an independent unit must be appreciated accordingly. If using a textbook is a complex task in and of itself for beginners, building one's own units of study in ways that are responsible to subject matter goals and responsive to students can be said to be a much more complex one. As Ball and Feiman-Nemser (1988) have argued:

> Using materials thoughtfully requires an understanding of the meaning and possible consequences of the way they are designed and what they include. . . . Whether they use textbooks or not, novice teachers need help in seeing that decisions about what to teach to which students have important consequences (Goodlad, 1984; Scheffler, 1958). Without direct instruction in these matters, such choices may be based merely on individual preferences (Cusick, 1983; Buchmann, 1986), commonsense views of what is meaningful or "fun" (Dewey, 1938/1977; Floden & Buchmann, 1984), or stereotyped notions of what particular students "need" or "can" learn (Anyon, 1981; Brophy, 1983) (pp. 420-421).

The issue of subject matter knowledge is critical in this case: How could students acquire a profound knowledge of the Vietnam War when Mickey herself did not have such

knowledge? As Mickey admitted herself, she relied primarily on her high school memories and selectively on Ken when students asked her factual questions she could not answer. This question and Mickey's own confessions challenge Ken's earlier argument that one does not need to be extremely knowledgeable to practice the kind of teaching he has embraced.[17]

Still another question is: Why is it that Mickey seemed more willing to seek and accept input or feedback from her peer as opposed to her mentor?[18] Could it be that she did not want to exhibit too much of her limited subject matter knowledge to someone whom she considered an expert and admired so much? Related to that: Did she want to impress him with some sense of confidence and competence?

The data support affirmative answers to the last two questions. During an interview that took place two weeks before the end of the unit, Mickey described the amount of work she had to do and went on to note the fact that

> the mentor teacher/student teacher relationship is so unusual. It's like friends, colleagues, . . . and I have this feeling of I don't want to let [Ken] down. I know teaching is for my benefit but at the same time I really want to impress him. I really want to be good for [Ken]. Because I look up to him and I like to impress him, I guess. I was so upset that I wanted him to realize that I've got all this other stuff to do but at the same time I didn't want him to think that I couldn't do it all. I feel like I have to be able to do it all and do it well.

She thought that chances were that Ken was thinking that she was doing fine; that there were no big problems. She reported not having shared those feelings with Ken because she did not want him to think that she was "a soft touch. Like a whiner." She wondered if Ken knew how much she looked up to him; how much she really wanted to

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[17] Interestingly, Mickey used the same argument earlier in the semester after acknowledging and worrying about her subject matter limitation. So did Sheila and Heather toward the end of their internship.

[18] Mickey was supposed to design the unit in collaboration with another student teacher who was part of the team that taught the interdisciplinary course. She complained that she did most of the work by herself although she sought her peer's contribution. She thought the shortcomings of the unit would have been avoided if the work had been truly collaborative.

impress him; and whether or not he looked at it that way. "It's like a little kid impressing their parents or something" without letting them know. She concluded that "the funny thing about it is that it's not impressing him just because he's writing my evaluation. It's impressing him because I respect him."

The foregoing opens up a window onto the dynamics of a mentoring relationship. The relationship is multifaceted: teacher-student, friend-friend, colleague-colleague, and child-parent. It is indeed unusual to have all these thrown into one dyadic relationship. It is the sum of these sub-relationships that makes up a mentor-novice relationship. How these are combined, or which one(s) weigh(s) more seems to have a bearing on the process and substance of the relationship. In the present case, although the parties spent a lot of time talking informally, it appears that there were many unspoken expectations and feelings.

Summary and Conclusion

This case illustrates several issues in mentoring and learning to teach. First, it highlights the influence of the definition of the learning to teach tasks and of the mentor role conceptualization on what mentors actually do in their work with novices. Second, it shows that what a mentor does has consequences for what his or her novices do or do not learn. Third, the case illuminates the relationship between teaching practice and mentoring practice. Fourth, it--especially the analysis of the Vietnam War unit--highlights the complexity of learning to teach in ways that are responsive to students and mindful of the integrity of the subject matter at hand. In this concluding case, I want to speak in particular to the third issue. The importance of this issue lies in the widely held presumption that good teaching leads automatically to good mentoring. This case problematizes this presumption.

The dramatic changes that Ken made in his teaching practice are, in part, reflected in his work with novices in at least three ways. First, Ken's way of mentoring has changed: he says that he is less directive now, and more a facilitator, just as he sees himself more as

a facilitator of student learning. He also says that he has come to see learning to teach as less a question of genetics and artistry and more a question of training.

Second, Ken's novices are exposed to a kind of teaching that reformers of social studies education are advocating--a kind of teaching that fosters higher order and critical thinking; that treats history as interpretive and contentious; and that seeks to help students make connections between their lived experiences and school knowledge. It is a kind of teaching that novices may not have experienced themselves as students. The company of experienced teachers who are practicing that kind of teaching offers potentially an appropriate context for learning it, though this should not be taken for granted.

Third, as Ken has come to value collaboration through the work of the Social Studies Team, he purposefully provides opportunities for his novices to learn about collaboration through collaboration. However, he seems to think about collaboration primarily in terms of peer collaboration, i.e., students with students, novice teachers with novice teachers, and experienced teachers with experienced teachers or university faculty.

The work of the Social Studies Team obviously involved classroom actions, but that was only part of it. What really sustained the team's work was the intellectual work--discussing the content and nature of social studies, crafting curriculum together, talking about student learning and how to assess it, observing lessons and discussing the data generated in a structured, systematic way (Parker, 1992). This side of the team's work did not appear to be central in Ken's work with novices.

In a way, by virtue of being in Ken's company, Mickey, Sheila and Heather benefitted indirectly from the team's work through the changes he made in his teaching practice as a result of his membership on the team. However, a critical aspect of the novices' learning context, i.e., Ken himself, was made marginal by the role Ken chose to play. Given the contextual constraints of life in classrooms, in particular time, it may be unrealistic to expect that Ken could recreate the team's work with his novices, but it is something to contemplate--especially in the context of a year-long internship. Ken did take

notes or wrote down questions from time to time when a novice was managing instruction and gave those notes and questions to her to think about or respond to in writing or verbally, but he primarily defined his role as provider of opportunities for novices to practice independently as early as possible, letting them make mistakes, pointing those out to them with the view that they will learn from their mistakes.

The fact that Ken puts so much emphasis on doing and experience and on independent performance in learning to teach suggests that the core ideas that he formed from his own learning to teach and teaching experiences prior to his involvement in PDS work remain strong. He does not seem to have conceptualized the process of change through which he himself went in order to use that as a resource for mentoring novice teachers in more educative ways.

This can be accounted for by the fact that helping novices learn to teach was not central to the Team's work. This issue was on the agenda of the university people who were members of the team, but they realized quickly that it was not a priority for the classroom teachers. The latter's priority was to receive contextualized help with their teaching. As a result, Ken had the opportunity to think a lot about curriculum, teaching and student learning, but he did not get the same opportunity to articulate and examine his own experiences as a learner, his assumptions and beliefs about what novices need to learn, what mentors can do to help them learn and how they may go about that in less haphazard ways.

Epilogue: Images of Change and Constancy

What I learned was to have a conversation about how we're gonna co-teach. "How you feel and how I feel." And maybe the idea more this year [1994-1995] is, "okay, if you do this, these sorts of things might happen. So be ready! When you do this and do that, you'd better have a set of... Where's your rubrics? If you're going to do this, how are you going to grade it? What if they don't do exactly what you're going to do?" So I think probably I'm *a little more nurturing or guiding* in some of these things than maybe I was then [in 1992]. I tried to let them [the interns] know what I think might happen and therefore, "just in case, you might want to think about doing this." So I tried to warn them and also talk to them about the fact that I might be interrupting from time to time. "You might feel awkward

or uncomfortable because I did this--thinking that somehow I've stolen the baton or whatever. I might do that and the reason is that it's a professional decision, not a personal one." And that I think *I learned from [Mickey]*. I think I learned a lot from being her mentor.

Ken made this statement at the end of the 1994-1995 academic year, during our last interview. The statement captures some of the changes that I noticed in Ken's mentoring practice as I observed him work with Sheila and Heather. I noticed for instance that he placed great emphasis on assessment. He instructed Sheila and Heather to come up with rubrics for assessing whatever assignment they gave students. The two interns introduced the idea of a college seminar in the honors classes whereby small groups of students took turn in preparing and leading seminar sessions on assigned topics/readings. Ken liked the idea and helped the novices operationalize it by pushing them to think concretely about logistics, participation and assessment.

The statement also carries a theme of constancy in Ken's mentoring practice in that it suggests that the novices did a lot of things *on their own* while Ken warned them about potential consequences of their actions. I noticed that Sheila and Heather worked jointly a lot and then presented their ideas or the products of their collaborative efforts to Ken for feedback. Mickey also had the opportunity to collaborate with another student teacher, although they did not work together as well as Sheila and Heather did.

Another aspect of constancy in Ken's mentoring practice is how he deals with the issue of the big picture, that is, letting the novices figure it out after they have taught a unit, with him coming in at some point during the enactment of the unit to pull things together *for students*. The big picture lecture that he did during Sheila and Heather's frontier unit and the big picture essay that he asked Sheila to write after she taught a unit on turn of the century America are illustrative in this respect. This is reminiscent of the "patented" lecture he gave during Mickey's Vietnam War unit and the big picture paper he asked her to write.

The foregoing both supports and challenges my argument that we cannot claim to have a definitive word about someone's practice based on data gathered at a given point in

time (see chapter one). It supports it to the extent that I perceived some changes in Ken's practice as I observed him mentor Sheila and Heather. It challenges it to the extent that I saw constancy in how he worked with three novices at two different times.

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CHAPTER IV

NANCY, SUBJECT MATTER SPECIALIST AS MENTOR

Nancy's Teaching Practice

Constructing the practice: Influential people and critical experiences and events before entering teaching

<u>Mrs. L.</u>

I always thought I wanted to be a teacher. When I really decided that's crystal clear. That was in seventh grade. And it was because of [my] English teacher, Mrs. L. She was incredible. For some reason I felt very comfortable in her class. You wouldn't call her nice necessarily. She wasn't a mother substitute or anything like that. She was very interesting. She obviously liked what she was doing. There wasn't a day that went by when it wasn't obvious to me she was happy to be there. She had control, like it was magic. We didn't get away with anything in our class. . . . It's like she read your mind. Like she knew exactly what you were thinking. I wasn't a strong English student, but I did well in her class. I wanted to be a teacher like she was a teacher. I wanted to have the effect she had. That made it clear that if she can have fun doing it, so can I.

Nancy made this statement in an interview at the beginning of her twentieth year of high school science teaching. Most of her own students would describe her the way she described Mrs. L. Nancy is certainly a nice and caring person, but not a substitute mother. Several of her former students come back to see her and thank her for making them stay in line. Like Mrs. L., Nancy is a very effective classroom manager. "Her classroom management," Nancy explains, "is what I wanted as a teacher."

Being an effective classroom manager allows Nancy to create and maintain learning environments where students feel comfortable and are willing to participate--to make both their understandings and their confusions public. She tells students at the beginning of the year that there is only one rule in her classes: "No one in here is allowed to interfere with anyone else's learning." Together they talk about what that means and what sorts of things disrupt other people's learning. "And the kids come up with them all. Then they know darn well what they're supposed to do and not do. . . . So it's very clear to them what is acceptable behavior in the classroom." Knowing that "students are big on being fair and

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consistent," she holds them accountable to this contract, and reminds them of it whenever she feels that they are getting out of line.

Like Mrs. L., Nancy obviously likes what she is doing and where she is doing it. She would not trade either for anything. As she reported, "over the last few years I've had a lot of offers to go other places . . . but to be perfectly honest with you I've got the best job. Where else can you work with kids and still learn about your profession than in a PDS? I've got the best of both worlds." As these offers suggest, Nancy has a reputation beyond her school. Indeed, she has conducted many workshops for teachers, consulted with school districts in curriculum development, and collaborated with university science and science education faculty members in various configurations. Reflecting further on her situation, she commented: "In other districts they have to almost sneak out to do stuff that I'm encouraged to do here. I don't know how they do it. I don't know if I would persevere like they do. I'm really lucky!"

Besides her encounter with Mrs. L., Nancy had several formative experiences that must be examined in understanding who she is now as a teacher. The most pivotal of these experiences were 1) an incident triggered by her and her brother's and sister's placements in lower tracks when they moved from a rural to an urban school; and 2) an independent genetics project that she carried out during her senior year in high school.

Formative experiences and events. Nancy had her first close encounter with one of the problematic aspects of schools at the beginning of her first year in junior high school, but it did not register until she was in high school.

> One problem we had when we first moved that really upset my parents was that when they [the school administrators] found that we [Nancy, her older brother and younger sister] were coming from a rural school, they automatically put us in lower tracks. My father had to go in and demand that we be tested and they of course did. They were very cooperative. They just prejudged us, which we were really upset about. And so they did test all three of us and then we were put into upper tracks. . . . That was kind of something that I'll always remember. I wasn't as aware of that until I was in high school. It happened and I really didn't know it. I probably knew it, but it didn't register and my parents didn't bring it up in front of us. They just took care of it. And then one day I was in one class and the next day I was

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moved. And I asked "why" and my dad said, "well, this is a better place for you," and that was it. I didn't question it, I just let it go, but then later he mentioned it when I was in high school. And it impacted me more then.

Nancy recalled how hard this event was on her brother. Because he was older, he understood what was happening and was affected by it to the point of almost dropping out of school when he was sixteen.

He thought he was dumb and he didn't know how to overcome that and it was a real struggle. My parents had to work with him a lot, to let him realize that he had potential. And they were successful. He's a Phd. in theoretical physics. He talks about it today. . . . He likes to ask about my students, 'Do you have any kids like this?'

Reflecting back on this event, Nancy wondered what schools and teachers do to students when they prejudge and label them. As a teacher, "I've often thought about how we shouldn't prejudge kids. Wait and see what their potentials are." This stance is apparent in Nancy's interactions with students and in her interactions with colleagues about students--in particular students that are labeled. How she came to accept Betsy as her student teacher also illustrates this stance.

Except for the placement incidence, Nancy's experience in school has been pleasant throughout. She has always enjoyed school. She was always a serious and well organized student. She was also a self-motivated learner and did well academically.

My father always said to me "why don't you get a B once in awhile or a C once in awhile, it'd do you good!" I wasn't one where they had to tell me to do my work. I was very organized--probably too much. I always tried to loosen up a little because of that. But I guess I wanted to do well. I wanted to succeed, and I felt that was necessary to do that.

Nancy remembered her elementary teachers as very good and caring for all of their students. She found junior high school challenging but she liked it, in particular because of the various innovative curricula that they had. High school was challenging and enjoyable too. So was college. "I really enjoyed [college]," she commented. "I never wanted it to end."

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Nancy's passion for science, especially for genetics, began in high school. A formative experience in this regard was an independent project she did in her senior year in the context of a two-hour-block-a-day science course. The class met as a group three days a week and students did independent work during the other two days. It was an all biology course with a unit on genetics.

> And once we had that unit, I wanted to do more with it. And the teacher let me do my independent project with that. I was working with fruit flies and how they inherit eye color. And our textbook said that one eye color was dominant and the other was recessive--which you see in all textbooks, even today. This is gross: I cut off the heads of a bunch of flies after I killed them. And I ground them up to get the pigment out of the eyes. And I did a technique where you separate the pigment on paper with a solvent. And I proved that, by doing this, that it's not necessarily true that one's dominant and one's recessive; but that's the way it appears. But if you look at it chemically, it's not true. So there was a contradiction there, and it really made me wonder? And I had to really think about it. And I still think about it today.

Nancy attributed her interest in genetics to this class. "I never would have gotten interested in it if it hadn't been for this one class." This class--and her independent project in particular--shattered Nancy's existing view of science. She realized the messiness and uncertainty of doing science, and the provisional nature of scientific knowledge--which was later confirmed by her experience working in a laboratory as an undergraduate student.

> Up to that point, my idea of science was totally wrong. I thought scientists discovered things and those were the things that were true and that was it and they were never wrong. I learned that you don't always believe what's in the book and that with more investigation you can look at things differently. And I learned that you could question what you read; when they do things don't just believe them. Question it as they have to do. I didn't realize that up to that point.

Nancy connected her belief about science and scientists prior to this experience to the way she had been taught science up to that point. "We read the book. We did the labs in the book. They always worked. Science is supposed to work. It always worked." This way of teaching and learning science jarred with her experience doing and learning from her independent genetics project.

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The fact that I could do something hands on and really question it, I think is what helped me learn more than anything. The teacher wasn't up front giving me information. I was digging. I had to dig through the literature and stuff. I didn't know how to separate pigment and eye. My teacher helped. He found articles that I could read. We kind of put it [the experiment] together. We didn't think that it would work. We thought there would be too much else in the head to interfere, but they are mostly eye. It worked. We were lucky, I guess, in some respects. And it wasn't real good; it wasn't real clear, and we didn't repeat it. But it was interesting and really made us wonder.[19]

Not only did the teacher help Nancy design the experiment, he also helped her make sense of the experience.

It was very frustrating for me at the time. Something you think is solid and substantial and trustworthy, all of a sudden isn't. There can be holes in it. We had a conversation. I said to him, "but how can this be?" He then realized my idea of what science was like and he sat down and explained to me that this is what it's really like. My experiences working in the lab later confirmed it. It wasn't a big shock then, but it was in high school. It was a little unsettling at first, but it makes it more exciting now.

In high school, Nancy was selected and sponsored by a company that looked for promising students who could not afford to go to college. They put the students through college with the expectation that, upon graduation, they would work for the company, doing research. Although Nancy was up front with the company that she wanted to be a teacher, not a researcher, they sponsored her hoping that she would change her mind like many girls they had had before "that wanted to be nurses and learned when they got to college that there's other things." Because of this sponsorship, Nancy's college curriculum was very strong in the sciences.

I felt obligated to take that kind of curriculum. [I was] very interested in the sciences, but interested in a variety not a narrow focus that research [entails]. I went so far as to work on campus in a research laboratory for two or three years with [a scientist] who's now a big shot. He was just getting started then.

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19 The publication, in *Scientific American*, of an article by someone else along the same lines (shortly after Nancy's experiment) validated her findings and further reinforced her new view of science and of herself as someone who *can* do science.

Nancy found working with this scientist interesting, but it reinforced her belief that doing laboratory research was too narrow and isolating for her. "I needed to be with other people. So that made me realize that I needed to be a teacher." Although she wanted to become a teacher, Nancy took very few education courses in college. These courses left her with a poor impression of teacher education in general.

Constructing the practice: Influential people and critical experiences and events after entering teaching

Mrs. L. remained Nancy's image of herself as a teacher. Besides this teacher, there were several other people whom she described as influential in her professional development. These include the instructor of a graduate methods course she took while pursuing a master's degree in science curriculum,20 two university-based science educators, and her younger sister.

The instructor of the graduate methods course. It was during her master's program that Nancy had her second touchstone learning experience, specifically in the context of a graduate methods course. Nancy took this course toward the end of her program and referred to the course instructor (a graduate student) as someone who left a strong impression on her. She could not remember the specifics, but reported being particularly impressed by the things that this instructor said about engaging students, getting them involved, being current, and doing things that are related to students' interests and not necessarily what the book has to offer. As Nancy recalled, this instructor "had a lot of good ideas about kids and how to work with them. She had a lot of neat activities that would work well with kids. . . . My mind was exhausted when I got out of her class. And I thought 'that's learning!'"

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20 She completed this degree over a period of five years while teaching (1972-1977).

In Nancy's view, this instructor planted the seeds for her to embrace the kind of teaching that she now practices. She acknowledged that she probably would have continued to teach the way her teachers taught her if she had not had that graduate student and had not met two science educators with whom she developed a long-term working relationship, from about her eighth year of teaching on.

Working with two university-based science educators. Nancy often wonders what would have happened if she had not met these two educators. "They were really pivotal in what I did." In understanding how Nancy came to be the teacher that she is, arguably the most influential experience to consider is this professional relationship. She worked with these science educators for eight years facilitating curriculum development workshops for teachers.

The workshops had two related foci--curriculum restructuring and constructivist teaching--and were tailored to the participating teachers' needs--from how to teach a particular concept to overcoming common classroom management problems. Participants would typically bring their curricula and redesign them with assistance from the workshop facilitators. Nancy was in charge of the life science part and her two university collaborators were in charge of chemistry and physics respectively. As she put it,

> we were more active as facilitators. We would sit down and see how they
> were doing and help them. We actually modeled one example and then
> coached them on theirs. So we moved from topic to topic and it was really
> hard on your head, trying to remember where they were at or seeing if they
> were having trouble.

Working with these two educators is what really helped Nancy break out of a mold of teaching in which she delivered content and embrace a kind of teaching where she plays a more facilitating role. She refers to them as probably the most influential people as far as her current teaching practice is concerned. They would provide her with literature about

teaching that is informed by constructivist theory. They would also model this kind of teaching for her.

> They were like mentors to me. I didn't realize it until about three years later when I finally figured out what they were doing. They found out where I was at and they would pick me up and move me forward. They would feed me research and we would have casual conversations over lunch.

The questioning technique used by one of these educators is what seems to have influenced Nancy the most. She describes him as "probably the most outstanding teacher as far as modeling that kind of teaching." She was particularly impressed by his ability to "take you from point A to point Z and you'd have no idea you've traversed that distance. Just by questioning, you're just kind of on the edge of your seat the entire time." Nancy tries to do the same thing as a teacher and a mentor. "You're modeling the kinds of questions you want to ask yourself when you're learning. That's how we learn. We ask ourselves questions and make connections. Kids don't know how to do that. So we have to teach them how."

Nancy observed her mentors'/collaborators' ideas evolve over the years regarding what science education should be. According to her, the changes that they have made in their own practice parallel shifts in science and science education. "They've gone from heavy in the process to process with content, with less teacher delivery and more facilitation." Nancy observed also that "they stay very current and they share everything." The same statement can be made about Nancy herself. As Betsy--her Fall 1992 novice--put it,

> She's like a sponge. She's always reading new material in genetics. Everyday there's almost a new thing that's happening and she's always really current with that information and she always will share that with her students and she will always try and relate it to out of school context.

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For Nancy, the problem with science is its pace of acceleration--which she attributes partly to technology. Rapid changes in scientific knowledge makes it difficult for both school practitioners and publishers to stay up to date. "Our textbooks have a lot of mistakes in them," she commented. "And I would feel pretty silly to be teaching stuff that wasn't correct. So it's important, I think, for teachers to stay current."

Nancy's commitment to, and passion for teaching and her passion for science as a discipline are mutually supportive. Besides completing a master's degree, she did and continues to do many things to "stay current." Worthy of note among these are: 1) her participation, with teachers from other states, in two summer molecular biology programs sponsored by the Natural Science Foundation21; 2) her regular participation, since 1988, in a bi-weekly retreat sponsored by the College of Natural Science of the local university with which her school is in partnership. This retreat is organized throughout the school year. As Nancy explains, "we go in Friday night and then Saturday and do a seminar with someone doing research in our field." In addition, Nancy belongs to several professional organizations, including the National Science Teachers' Association and the National Association of Biology Teachers and their state chapters. She also belongs to her state's Association of Science Education Specialists. She attends the annual meetings of these organizations and subscribes to several professional journals, e.g., *The Science Teacher*, *The Biology Teacher* and *Science News*.

Conversations with her sister. In thinking about an idea that changed the way she looked at things or the way she thought about something in particular, what came readily to Nancy's mind were some of the conversations she has had over the years with her younger sister. She describes the latter as a deep thinker who comes up with questions that they talk about for hours.

> Like for instance she has been reading a lot about religions, comparing religions, finding the similarities and the differences, and trying to figure

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out why certain religions exist and so on. And she's become quite religious herself. One time we were talking and we came up with this idea about what if (I can't believe I'm saying this on tape!) the world wasn't really as we perceive it? Since our brain is locked in our skull and we only have a certain amount of sensing that feeds the brain, what if there are other things around that we can't sense? Or there's no way for our brain to know those things are there? There could be another world living in this same space that we are, but we can't touch or smell or see it at all. We would probably call that another dimension--but what if that was true? Is there any way we can prove it? Well, there isn't any way! We thought, "How could we prove it?" So we were kind of playing with that and that made me really think about how limited we are as organisms. We're limited to what our senses can pick up.

Nancy observed that such conversations have made her really wonder about things, a little more open-minded, willing to think about what other people say or suggest. She has become more aware of the fact that everything we hear we interpret with our own experience; that it is important to understand that other people have had other experiences and consequently may interpret things differently. Therefore, one needs to keep an open mind. This has a connection to how Nancy acts as a teacher. She tries very systematically to find out what her students bring to each new unit of instruction in the way of experience and prior knowledge. She first addresses any "misconceptions" they bring and builds on what they know to introduce new scientific concepts or issues. She takes students' ideas seriously, even if they appear "silly" at first. She explicitly tells them that her ability to teach them depends on her knowledge of what they know. So she encourages them to give their best in any assessment task.

Acting as a teacher

If the independent genetics project altered Nancy's view of science then, it did not alter the ideas she had formed (from her apprenticeship of observation) about teaching science.22 Indeed, she reported having taught pretty traditionally for several years until she met people who helped her embrace the kind of teaching that she now practices. She

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22 This is not surprising but significant. She made sense of the experience as a student, not as a teacher.

described herself (prior to the changes she made) as a deliverer of information. "When we taught back then [in the early seventies] we delivered information more than facilitated." Like other science teachers back then and even now, she had students do what she calls "cookbook labs" that always worked. She followed the textbook closely and used standardized/objective tests to assess students' learning.

The kind of teaching that Nancy now practices is dramatically different from the one briefly described above. Most central to her current teaching practice is a *modeling-coaching-fading* cycle undergirded by the idea of asking good questions in the right sequence to help students attain conceptual understanding of science content. Modeling entails showing to or demonstrating for students the skills or tasks she would like them to develop or accomplish, e.g., designing and carrying out an experiment. Coaching entails providing students with opportunities to practice--with guidance--what she modeled earlier. In other words, coaching means guided practice. Finally, she fades to allow students to practice independently, e.g., designing and carrying out their own experiments.23

Nancy goes through this cycle with every new unit or concept she teaches. It serves as a conceptual framework for everything else she does in her classroom. She no longer follows a textbook step by step. In fact she is critical of textbooks and only uses them as a set of resources among many.24 Nancy's students no longer work on textbook labs whose results are pre-determined. "I thoroughly disbelieve in handing a ditto and having everyone do the same thing and get the same answers. They see no value in it and I don't either." She starts the year with a unit on the scientific method in which she tries to

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23 Note that this teaching/learning cycle was promoted by the teacher certification program from which Nancy received novices. It fit with what she was already doing so she incorporated it in her professional vocabulary.

24 A few years ago, the science department of Hodges High School revised their curriculum in light of the state guidelines. The resulting document is a specification of contents and objectives, but not of pedagogy. So each teacher tries to cover the contents and realize the objectives in his or her own way.

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convey to students that doing science is a systematic, disciplined yet uncertain process. Besides conveying this message to students, the unit on the scientific method is aimed at providing them with the tools for inquiring into natural phenomena themselves. As she explains,

> We're trying to show them that they can design their own experiments like real scientists. They can carry out the experiments, collect the results like real scientist and they can collaborate like real scientists. And we also want to show them that real scientists don't always get the results they expect--that it's okay to be wrong. And you can still learn from being wrong.

Nancy believes that doing science can help students develop skills and dispositions that transcend the discipline of science. She wants all of her students to like science and realize why they are taking it.

> That it is not to be a scientist, but to function. . . . I want them to be responsible for things; to be able to make decisions based on information; to be able to gather and analyze information and draw conclusions. That's all! And a lot of that we can take from science.

Nancy now writes her own tests and they are all essay type tests. She also regularly assigns journal questions to her students as homework or in-class fast writes. The journals serve the purpose of assessing students' prior knowledge or their understanding of course content. Reading and discussing articles from scientific or popular magazines, watching and discussing science-related films, and listening to and interacting with guest speakers are not uncommon features of her classes. For example, a DNA profiling/typing specialist who teaches at a local community college has become a regular guest of her genetics classes. He comes in, lectures briefly, models DNA fingerprinting and gives students a chance to do it too.

If you walk into Nancy's classroom now, you are likely to see or hear one or several of the following:

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<u>Students working in small groups preparing for labs or presentations, or sitting at lab tables conducting experiments that they designed themselves</u>. An example of that is a series of student-generated experiments on pizza. Nancy starts it out by asking students what makes pizza dough rise? "And they have to develop an experiment, design one, and carry it out to prove that it's the yeast. Then, I ask them, how did yeast do it?" The third in the series of experiments is designed to answer the question, "is yeast alive or dead?" Students work in small groups to design and carry out their experiments. Each group then prepares a report to present to the whole class. Each presentation is followed by questions and critical comments from the rest of the class about the design and results of their peers' experiment. Nancy also takes part in the discussion, raising questions to push students' thinking further and providing needed additional information and clarification.

<u>Pairs or triads of students "teaching" the rest of the class about a topic they researched or reviewing something the class has already learned</u>. This is different from group presentations following experiments. The unique aspect of this feature of Nancy's teaching is that the students doing the teaching "can't tell anything; they can only ask questions. It's kind of a little game and it engages a lot of kids." It parallels one salient feature of Nancy's own teaching--asking good questions in the right sequence.

It's worthy of note also that on several occasions Nancy made arrangements for some of her high school students to teach elementary school children. She went as far as having one of them team teach with her one semester. According to Nancy, it was the first time that the idea of a high school student student teaching was tried in the school. In preparation for this experience, the student in question spent the Fall semester in Nancy's classroom "doing extra content research and watching teaching techniques. She's exceptional and she really thinks that if she can teach the stuff, she'll understand it better."

<u>Nancy using a sequence of open-ended questions to assess students' prior knowledge before introducing a new unit or concept, or to help them attain the understandings that she hopes they will attain</u>. Asking good questions in the right

sequence undergirds how Nancy thinks and acts as a teacher. It is a basic modality in her teaching practice, and rests on her belief that students are capable thinkers and have the answers in their heads. All the teacher needs to do is to "scaffold the questions to get to the main ideas, align the things in their brain and put them in the right order so they can draw conclusions." The best way to do that, in her view, is to think about how the material at hand makes sense to oneself, and about the pieces or the next logical piece that one needs to work up to the desired answer. Nancy sees this as a way of modeling for students "how to ask themselves questions that will pull out what they need to solve a problem."

Nancy is constantly attuned to students' thinking. This allows her to anticipate problem areas and address them while preparing for or during instruction in order to facilitate student learning. She believes strongly that students construct knowledge for themselves, and that the teacher's responsibility is to make sure they construct knowledge that is correct or conventional. In a way, Nancy has espoused the idea of constructivism with constraints (Resnick, 1987).

Nancy letting students in on her thinking. I was struck by how frequently Nancy justified to students her curricular, pedagogical or assessment practices, e.g., asking and discussing with them why she embeds extra credits in a test; or why she puts chromosome mutation and population genetics units together, and what's hard about them. This seems to serve the dual purpose of checking student understanding of content and ensuring that they understand what is going on.

Another way in which Nancy lets students in on her thinking is when she makes comments about the state of their knowledge and understanding and about their responsibility for their own learning. Often she would also reassure them that things will fall into place, even if they appear confusing at the moment.

Nancy using analogies to facilitate student learning. I witnessed several instances of Nancy's use of analogies. They are an important part of her pedagogical content knowledge. She uses them to help students make connections between difficult concepts

and things with which they are familiar. For instance, to help students understand the process of locating genetic markers, she used the analogy of following instructions for finding her house--from the state, to the city, the neighborhood, the street and finally to her house.

In sum, the kind of teaching that Nancy practices requires deep knowledge of subject matter--in terms of both substance and syntax25; knowledge of students and which topics or concepts might be hard for them; and knowledge of appropriate representations, analogies and explanations. It is a kind of teaching that novice teachers are likely not to have experienced themselves as students. Therefore they may not have images for it. Most importantly, novices may not have the depth of subject matter knowledge that it takes to teach this way. Consequently, to induct them into this kind of teaching presents multiple challenges.

Taking on a new role

Nancy became a mentor in 1987 at the suggestion of the two science educators with whom she had been working for several years. By then she had made significant changes in her teaching practice. With no precedence for the role--except having served as a cooperating teacher for a novice six years earlier--Nancy, like many other mentors, had to invent her role. In fact, she reported having received no formal preparation for the role. She primarily learned on the job. She recalled

> sitting down with other people in the same position and talking about issues that we felt were problems with the student teachers that we thought we needed to address with the university folks together. They wanted us to kind of work it out I think. And then they would get that information from us--what we think we should and shouldn't do. They would collect that. And I think the program is developed around that pretty much.

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25 By substance I mean the key ideas and main concepts of the disciplinary area(s) on which a given school subject draws. By syntax, I mean not only the ways of knowing but also how knowledge is viewed and validated in the said area(s).

Nancy found these meetings very helpful "in that I heard what other people were doing with their student teachers. I really didn't know what to do at first. So hearing ideas from other mentors was real helpful in the beginning." Besides these meetings, what really helped Nancy become the mentor she is was the above-described long-term professional relationship with two science educators. Working with them not only helped her make dramatic changes in her teaching practice, but it also provided her with images of how to work with novice teachers. In her own words,

> they were so good at teaching me without my being aware of it. . . . Once I saw what they were doing to me I thought, "wouldn't it be nice if I could do that with my students teachers?" I'm not as good as they are [but] I try to model what they did to me.

Nancy described one of these science educators as being particularly subtle. "I think about this a lot," she says. "It was almost like he was mentoring me. He really mentored me without me knowing it, but he did it intentionally. . . . He would get you to recognize what you did without him having to say it. You would be analyzing your own teaching and correcting it." Nancy argued that that is what she tries to do as a mentor--questioning novices to get them to recognize and accept their own teaching.

As it will appear in the rest of this case, in addition to thinking about her own learning in the company of the two science educators and using that as a resource for thinking about supporting her novices' learning, Nancy reflects continuously and systematically on her mentoring practice. Thus, over the years, she developed a set of ideas about what novices need to learn and what makes the learning easy or hard, while clarifying at the same time her role and how to enact it in support of their learning.

Nancy's Ideas about Learning to Teach and about Novice Teachers as Learners

According to Nancy, the most important things that novice teachers need to learn or tasks they need to accomplish include: 1) breaking the mold of delivering information; 2) asking good questions in the right sequence; 3) knowing students and what they might know; 4) developing a bag of stories; 5) resolving the emotional (and logical) dilemma of wanting to be friends with students versus teaching them; 6) looking at the big picture; and 7) managing one's time efficiently. In what follows, I elaborate on each of these learning to teach tasks.

Breaking the mold of delivering information

From a deliverer of information Nancy has become a facilitator of students' knowledge construction. Making this shift is critical in learning the kind of teaching that she now practices. For her, this is hard for novice teachers because "they want to stand up there and talk." To stand and deliver is the image of teaching that they have constructed from their apprenticeship of observation (Lortie, 1975). As Nancy put it, "when they were in school--and I was Betsy's teacher and I'm guilty of this too--I was more of a deliverer. I delivered information. . . . I would rather see them become more facilitators."

Learning to ask good questions in the right sequence and developing contextualized knowledge of students

Learning to ask good questions in the right sequence is arguably the most central task in learning to teach the way Nancy does. As pointed out earlier, this is what undergirds her teaching. She believes strongly that teachers must be good questioners. They need to assess their students constantly by asking them questions as opposed to delivering information. This is an important skill that novice teachers need to acquire. Not only must they learn how to ask good questions, they must learn how to sequence the questions to build up to what they want their students to know. In her view,

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> what [novices] don't understand is that quite often kids have the pieces in their head that they need in order to solve a problem, but if you just give them the problem they don't know how to do it. But by asking the right sequences of questions, you can pull those pieces out and line them up and the kid ends up solving it themselves. And that's very powerful for the kid and it's very hard to do it as a teacher.

For novices, this is especially hard because it requires a depth of subject matter understanding that they typically do not possess. It is also compounded by their image of teaching as information delivery and their own success, as students, with this mode of instruction. The task is compounded even more "if you don't know the students and what they might know." According to Nancy, teachers need to find out what students know and then build on that for instruction. They should not assume that students come with the same amount of knowledge or with no knowledge at all. Neither should they assume that just telling students everything will ensure that they learn it.

One thing Nancy noticed that happens every year, almost to the week, is that student teachers give their first test and get very depressed when some students fail.

> They don't understand how a kid could fail a test. They say, "I taught it all to them. Why didn't they all get A's?" They don't understand that the kids all come in with different amounts of knowledge, different tools to learn; that they learn differently; and that telling isn't going to assure that they learn.

Developing contextualized knowledge of students, their thought processes and ways of knowing, and learning to assess their prior knowledge stand therefore as important tasks in learning to teach like Nancy. In her view, assessing students' prior knowledge and building upon that to teach conceptually is something on which a teacher must continue to work throughout his or her entire career. It is not something that one learns how to do once for all. "I am still struggling with it now," says Nancy. "Every batch of kids I get is

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different. It's a problem not having time enough to interview all of them. So it is hard but having that in the back of your mind helps."

The way Nancy talks about asking good questions in the right sequence and knowing students and what they might know suggests that these two tasks are reciprocally related. The first is about subject matter knowledge. The second is about the psychology of learners. To consider both together entails psychologizing the subject matter (Dewey, 1902/1964). As Dewey argued, to psychologize the subject matter is "to take it and to develop it within the range and scope of the child's life" (p. 357). This entails "reinstating into experience the subject-matter of the studies, or branches of learning. It must be restored to the experience from which it has been abstracted. It needs to be *psychologized*; turned over, translated into the immediate and individual experiencing within which it has its origin and significance" (p. 351). In sum, to psychologize the subject matter requires two important kinds of knowledge: knowledge of the subject matter and knowledge of the learners. It also requires breaking the mold of information delivery.

Nancy's novices are thus presented with multiple tasks in one. Indeed, as opposed to experienced teachers who have developed over the years a situated substantive and syntactical knowledge of their subject(s), a general knowledge of particular age groups and a repertoire of questions to ask and stories to tell them, for novices the development of these types of knowledge involves several interdependent and simultaneous sub-processes.

Nancy reported having herself probably struggled with this issue earlier in her teaching career, until she was exposed to constructivism. Her exposure to this theory of learning not only helped her "understand why kids aren't learning and how I should approach teaching them," but it also "made it easier for me to help my student teachers understand."

Developing a bag of stories

An important part of teachers' practical knowledge is what Nancy calls "a bag of stories." This refers to stories that teachers tell to help students make subject matter

connections. Nancy describes them as "experiences that the students can relate to." Teachers tell these stories in response to students' questions, insights or confusions, or simply to release tension sometimes. The stories grow out of teachers' professional and personal experiences, and many of them are grounded in classroom experience. For example,

> in order to make a connection, students will ask a question, like, "Is that why this is true?" Then they bring an experience forward. I collect all their experiences and I'll say to my class, "Once I had a student who told me about this." And then someone will try and explain that. That helps them make connections.

More broadly conceived, Nancy's "bag of stories" parallels or is part of what Shulman (1986, 1987) has termed *pedagogical content knowledge* (PCK)--a special kind of knowledge that is unique to teachers and that distinguishes them from lay people and other practitioners. PCK includes "for the most regularly taught topics in one's subject area, the most useful forms of representations of those ideas, the most powerful analogies, illustrations, examples, explanations, and demonstrations--in a word, ways of representing and formulating the subject that make it comprehensible to others" (Shulman, 1986, p. 9). A teacher's PCK is what allows him or her to build a bridge between his/her sophisticated understanding of the subject matter and the students' developing understanding; and to adapt instruction to the variations in ability and background presented by the students.

Developing "a bag of stories" or PCK is therefore an important learning to teach task. But its development depends on both subject matter knowledge and knowledge of learners and learning. According to Nancy, it is a task that novice teachers are in a hurry to accomplish. Novices' tendency to ask for stories or tricks is reflective of an instrumental and technical conception of teaching and learning to teach. What they do not realize and need to understand is that even if they are given such stories, they may not be able to use them appropriately "because they don't have the experiences that go with the stories. They

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need to learn that the stories will come with time." This points to the personal and experiential nature of accomplishing this learning to teach task. It also raises the issue of the role of experience in learning to teach.

Nancy values classroom experience and believes strongly that it is important in learning to teach to the extent that it helps novices make connections between what they are told or what they read and the realities of classroom life. However, she is of the opinion that experience must be guided to make it educative. This is because, for a novice, there is too much to focus on in a classroom. She conceives of experience as a necessary but not sufficient condition for learning. For her, one needs help to make sense of whatever experience one has--hence the centrality of significant others. Reflecting on her own experience, she argued that she did not make changes until she was exposed to people who modeled for her a different kind of teaching and coached her.

> I think you need to be working with someone--a mentor. Even if you're a hired teacher, you need to have someone that can show you things. You may discover them on your own by trial and error. You may try it one day and see if it works and do a little bit more. I think that would take a long time and it's pretty risky.

What makes learning through trial and error risky is that when you do so, "you learn about little pieces that are not connected." The message that this statement carries is that learning teaching must reflect the complex and holistic nature of teaching. It also carries a cautionary note about the commonly held view that experience *is* the best teacher. Novices *can* and *will* learn from experience, but they need help to direct their learning from experience in more productive ways than if they are left to make sense of experience on their own.26

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26 See Dewey (1902/1964 and 1938)--especially his concept of an educative experience--for a more elaborate discussion of the role of experience in learning. See also Feiman-Nemser & Buchmann's (1985) discussion of the pitfalls of experience.

Resolving the emotional dilemma of being friend of and liked by students versus being the teacher and disciplinarian

According to Nancy, one thing with which a lot of student teachers and beginning teachers struggle emotionally is the problem of wanting their students to like them. For them, this seems more important than teaching the students. In fact,

> Even when they know that it is more important for them to teach and then the kids will respect them and like them naturally, they still have that emotional tug in them. They somehow think, "the kids don't like me." They see that as a dilemma.

Nancy wishes novices could just understand that "if you go out there and you are fair and you are consistent and you smile and you are pleasant and you show them that you enjoy what you are doing they will respect you as a teacher, they will learn and they are going to love you to death." In other words, she believes that being liked by students will come as a by-product of good teaching.

Nancy confesses not knowing how to help her novices resolve this dilemma other than just exposing it and letting them deal with it. She herself resolved this dilemma with the informal help of a physical education teacher.

> I must have been showing it--my own depression my first year here with that dilemma. And he said to me, "Hey sweetie don't worry about it. You are not here to be their friend. You are here to teach them. It will all come out in the wash." And I thought about that for a long time. It must have been that he said it right at the appropriate time in my struggle because it really hit home.

This points to one of the complexities of mentoring, i.e., knowing what kind of support to provide when. Just as in teaching, it requires knowing who the novice is and where he or she is as a learner, and then providing appropriate support and guidance.

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Learning to manage one's time and looking at the big picture

The last two tasks on Nancy's list of important things for novices to learn are closely related. She places the issue of time management in a broader scheme than the individual lesson. She worries about novice teachers because they seem to have a real struggle with breaking up their time efficiently. As a result, they would spend too much time on one thing and not enough on the other.

> Quite often they put things off until the last minute. They might have a test the next day so they will have to write the test, get it run off, administer it the next day, grade it and have the unit ready. You can't do that in one day. "Get the unit ready a week ahead, then go ahead and get the test. And have the unit ready to go so you can take your time grading those tests and not worry about the unit starting." They don't see the sequence. That is what I mean by time management.

In order to resolve this problem, Nancy suggests that novices learn to look at the big picture. Describing how she went about helping Betsy address this problem, she said: "I talked to her. I questioned her about it. I said, 'now you have this new unit coming up and you have got a test. How are you going to handle all of that? Plus all of these papers to grade?' She came up with a plan to handle it. I didn't tell her how but I brought the question up." In other words, Nancy intentionally guided Betsy's learning from experience.

As described by Nancy, to look at the big picture requires thinking about curriculum, instruction and learning beyond individual lessons. It requires thinking about these areas not only in terms of instructional units but also in terms of sequence of units across the year. In sum, learning to look at the big picture entails developing what Zumwalt (1989) calls a *curricular vision of teaching*. This is hard for novices as they are typically concerned with day-to-day survival in the classroom and have a limited understanding of the scope and sequence of their school subject(s).

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The picture of learning to teach that emerges from the foregoing is quite complex. All the tasks described are difficult to accomplish in and of themselves. The complexity of the process is compounded by the fact that most of the tasks are interrelated and must therefore be accomplished simultaneously. Nancy does not think that her novices can learn all that there is to learn during the time they spend in her company. She believes that they can-- through guided experience--acquire the tools needed to continue to learn to teach, but they will need to do some teaching before they can put it all together. Besides learning in the company of a mentor, Nancy believes that novices should take advantage of other professional development opportunities available in their school.

I now turn to examine Nancy's ideas about mentoring and how she conceptualizes and enacts her role. I begin with a general discussion of her ideas and the ways in which she acts as a mentor. Then I provide a more rounded picture of her mentoring practice by looking closely at how she worked with Betsy.

Nancy's Ideas about Mentoring and Her Ways of Acting in Support of Novices' Learning

Ideas about mentoring and role conceptualization

In Nancy's own words, the way in which she works with novice teachers has changed a lot. She confessed being pretty naive when she had her first few student teachers. She was not sure what to do. She asked herself questions such as: "How much should I tell them? Or how much should I let their style come through? How much help do they need? Should I give them my units and let them teach it and work on their style? Should they do their own units?"

Nancy pondered these questions over the years and now has answers to them. "Things have gotten more certain in my mind as to what I should and shouldn't do with student teachers. It is easier now than it was in the beginning." As described below, she has developed a systematic and well-structured approach to mentoring that combines

showing, telling, questioning and analyzing teaching practice. She plays the roles of guide, model and coach.

In her work with novices, Nancy begins by modeling her best teaching so that they can "pick and choose what they want to do from what I do." Typically she would simultaneously have them take ownership of a class later in the day so that they can observe her teach the early classes.

> Then normally we have a routine. After they teach the class--I usually try to have them teach one before we have a free hour--we would sit down and talk about what they felt went well, what they thought didn't go well. Then what did I see that I didn't think went well and what did I see that did go well and so on. And then we would assess it and figure out what we need to do for the next time . . . and talk about what they saw when I taught. Then they would gradually pick up classes.

Nancy believes that it is critical for novices to have some classroom experience as early as possible. "If they have the experience under their belt the first week," she argues, "everything we talk about they can relate to that experience. Until they are in the classroom and get their feet wet, I can talk until I am blue in the face, they are going to have nothing to relate it to." The importance that Nancy accords classroom experience in learning to teach stems also from taking her novices to observe other teachers' classroom. She noticed that at the beginning of their practica, the novices would not see what she saw. Taken to the same teachers' classroom later, they would see what they could not see before. She attributed the novices' inability to see at the beginning to the fact that they had no experience to which they could relate what they were observing.

Central to Nancy's thinking about mentoring, however, is the idea of *guided*--as opposed to *just having*--experience. Classrooms are complex places. There are so many things going on simultaneously that, if novices do not have a focus to work on, they cannot grasp anything. This has led her to use *focused observation* as a strategy for guiding novices' classroom experience. Quite often, she would give them a question to watch for.

For example, she might ask them to notice things like her "passive discipline--where I am not yelling at the kids but approaching them and using eye contact." Or she might ask them to notice her "pattern of questioning--how I am getting from scaffolding the questions to get to the main ideas, aligning the things in their [students'] brain and putting them in the right order so they can draw conclusions." For Nancy, these are things that novices need to look at. She believes that by having them do so, "they learn my style. And then I ask them, 'how would you handle these things and so on?'"

As is true for most other mentors, modeling is a key feature of Nancy's mentoring practice. Most mentors, however, tend to model only the performative aspect of teaching. Nancy believes that it is important that they also model their ways of thinking for novices. In particular, they need to model how to plan. Novices "haven't a clue what goes on behind closed doors for teachers. They have seen teachers teach but they haven't seen teachers plan." Accordingly, planning figures prominently in Nancy's work with novice teachers. Through helping novices learn to plan she helps them learn to ask good questions in the right sequence and to assess students' prior knowledge. Her planning sessions with novices are also occasions for dealing with content-related issues.

Mentoring Betsy: A close up look at Nancy at Work

Establishing the relationship. To understand Nancy and Betsy's relationship and joint work, it is important to note at the outset that Nancy had Betsy as a student in high school. They did not have a special relationship then, but Betsy was impressed by Nancy's way of teaching. In particular, she liked the way Nancy treated her students and the way she challenged them and made them think about the content. Betsy remembered that Nancy always asked good questions; that she did not tell students the answers all the time. "She just takes one idea that they have or a misconception that they might have and she can just ask these questions and somehow get them to see how they were wrong and say 'oh no, it's not that, it's this.' And then they understand a little bit better."

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Betsy described Nancy as one of the most influential people in her decision to become a teacher. During her junior year in college (her first in the teacher certification program), she approached Nancy about going back to Hodges High School to observe her teaching. Nancy reluctantly agreed because she remembered Betsy as a very shy and quiet student; as "one of those kids I had to work on, just getting by. She didn't like to speak in front of other students. So I was very reserved about whether or not she would make a good teacher."

Nancy later revised her opinion and went on to accept Betsy as her student teacher. This came about as a result of how Betsy interacted with the students when she observed Nancy twice a week for two hours throughout her junior year. "What impacted me most," Nancy recalls, "is what [Betsy] did as a volunteer and the way she worked with the kids." Nancy especially appreciated Betsy's dedication and curiosity. "She was here doing things that were not required, asking questions constantly, e.g., 'why did you do that? How do you do that?'--just like a sponge, wanting to take it all in. I really wanted to work with her." Betsy herself reported that she began by mostly taking down content notes about what Nancy was teaching because she could not remember it and was not sure how in depth Nancy would go with some topics or concepts. "It was like taking a class actually, listening to her and learning from her. Then near the end, I started to take more notes on the questions she asked."

As she observed Nancy, Betsy was struck by the high degree of student-student, student-teacher, and teacher-student interactions. One of the things that really caught her attention was groupwork. She saw Nancy give students a problem, have them work on it in small lab groups, write up their answers and present them to the whole class for discussion. She found the periodic journal assignments a useful approach to assessing not only students' learning, but also how well they were working together in small groups. She learned also that it is important to communicate well one's expectations to students.

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Just as she approached observing Nancy during her junior year as an opportunity to learn, Betsy approached student teaching as a learner. She entrusted herself into her mentor's hands. She did not frame student teaching primarily as an opportunity to practice what she learned at the university. She came to it with a strong desire to learn to ask good questions--"thinking questions" or "curiosity questions" as she calls them--in the right sequence like Nancy. She also wanted to learn to communicate well with students about her expectations and to create a learning community. Very early in her student teaching, she realized that she also needed to work on "transitions from one point to the next. Because to me it just doesn't seem to flow as nice as [Nancy's] does. I don't think the students follow me as well as they do with her."

I devote the rest of this case to examining how Nancy and Betsy worked together during Betsy's student teaching. I begin with a broad, temporal look at their work together. Following that, I analyze several aspects of the work in greater detail. Throughout the analysis I provide evidence of, or speculate on Betsy's learning.

Overview of the work.

> Film our planning time. How we interact back here 4th hour. This is when we work everyday. It has gotten to be a routine. After lunch we come down here and we plan. I think if you wanted to watch me helping [Betsy] you would have to film her teaching and then probably film me talking to her about it. Our little conversations between classes I think are really significant. . . . After school I think we have some of our best talks because they are more informal. That would be a good thing to hear. But I think you would have to see what she does and then how we interact.

Nancy made this statement when asked what would be most important to film if one wanted to make a videotape of her work with Betsy. The statement provides a temporal and topical sketch of their work together as well as a sense of structure in the work. Betsy's answer to this question was strikingly similar to Nancy's. This not only supports the fact that the work is structured, but also that it is explicit. Overall, just as in her own teaching, Nancy used a cycle of modeling, coaching and fading to support Betsy's

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learning. They went through this cycle for each of the following central tasks of teaching: planning for instruction, managing instruction, writing tests and grading them. Undergirding their work on each of these tasks was a concern to pose good questions in the right sequence. This core skill was both the background and main goal of their joint work.

Nancy deliberately approached these tasks in a particular sequence--starting with managing instruction, moving onto grading tests, then planning for instruction, and finally writing tests. This sequence indicates that Nancy holds a view of both the relative complexity of each task and when the novice is ready to tackle it independently. It suggests for instance that in her view planning for instruction and writing tests are respectively relatively more complex than managing instruction and grading tests, and therefore require a longer period of assisted performance.

Besides what Betsy brought to student teaching in the way of knowledge for/about teaching and dispositional qualities, the structure of their work day was an important factor in making their relationship a productive one, i.e., a context for Betsy's learning. They started the day with two biology classes for sophomores (first and second hours), followed by a genetics class for juniors and seniors (third hour) and a preparation period (fourth hour) after a half-hour lunch break. During fifth hour they team-taught a new Integrated Science Course for sophomores with two university faculty members.[27] Sixth hour was Nancy's PDS release time to discuss and plan this course with the team members.

Betsy's participation in teaching the biology and genetics classes evolved from peripheral to full. From the very first day of school, she took full responsibility for managing instruction during second hour--basically doing with that class what she had observed Nancy do first hour. This was in keeping with Nancy's belief that novices need to get their feet wet from the very beginning so that they can have meaningful conversations

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27 This course was in its pilot year then. It was aimed at integrating biology, chemistry and physics.

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with their mentor. It also served the purpose of bringing Betsy to embrace Nancy's bottom line, i.e., responsibility for students' learning.

As she observed Nancy, Betsy watched for students' reactions and answers to Nancy's questions. She was aware that the classes were different, but noted that observing Nancy teach the same content gave her an idea of what to expect when she taught second hour. She would write down some of the key questions that Nancy asked and would try to ask the same questions in her class. In Betsy's own words,

> It was important to me [to observe Nancy] because I think she is a good teacher and I wanted to teach like her. I wanted to use the same format that she uses. And also, having never taught the material, I wasn't sure how in depth to go with some of the things. And I didn't know what problems the students might have with certain areas.

Besides the questions, observing Nancy helped Betsy begin to develop a repertoire of analogies to use in her own teaching. For example, she once watched Nancy give the following analogy in the integrated science class. As Betsy explains, "It went something like this: If you have a tree that's along the riverside and the leaves from the tree fall off into the river, are the leaves alive? Are they moving by themselves? Or is the river making them move?" Nancy used this analogy when some students designed an experiment to test whether or not yeast was alive and came to the conclusion that it was alive because it was moving, when in fact "the problem was that the water on the slide was moving"--which made the yeast move. Betsy later encountered the same situation in her second hour biology class and she used the same analogy, substituting the leaves with a stick.

Betsy progressively added third and then first hours to her teaching load. For all three classes, she first played a minor role in planning and progressively assumed primary responsibility. Although she sometimes took a central role in managing instruction during fifth hour, her participation in teaching this course remained peripheral in general--limited to observing Nancy and the two professors teach (sometimes taking care of technical things

Table 1: Summary of Nancy and Betsy's work together

Month Hour	September Wk 1	Wk 2	Wk 3	Wk 4	October Wk 1	Wk 2	Wk 3	Wk 4	November Wk 1	Wk 2	Wk 3	Wk 4	December Wk 1	Wk 2	Wk 3
1st (biology)	Co-planned; Nancy taught; and Betsy observed regularly				Betsy planned with Nancy's notes & assistance and taught; Nancy observed regularly				Betsy planned with Nancy's notes & assistance and taught; Nancy observed occasionally						
2nd (biology)	Co-planned; Betsy taught; and Nancy observed regularly				Betsy planned with Nancy's notes & assistance and taught; Nancy observed regularly	Betsy planned with Nancy's notes & assistance and taught; Nancy observed occasionally									
3rd (genetics)	Nancy planned & taught; Betsy observed regularly				Betsy planned with Nancy's notes & assistance and taught; Nancy observed regularly				Betsy planned with Nancy's notes & assistance and taught; Nancy observed occasionally				Nancy took over both planning & instruction		
4th (preparation on time)	Nancy and Betsy discussed 1st-3rd hours and planned for next day*														
5th (ICS)	Nancy team-taught with two university professors; Betsy observed regularly**												Nancy advised Betsy to drop this class off her schedule; she continued to team-teach with the two professors		
6th (release time)	Nancy & the two professors discussed 5th hour and planned for next the day; Betsy observed regularly, provided observation data and contributed ideas												Nancy & the two professors continued to meet and discuss 5th hour and plan for the next day		

* On Fridays, they planned for the following week (or unit when necessary).

** Betsy managed instruction from time to time.

such as running the video equipment) and then providing observation data and contributing ideas during team debriefing/planning. In a sense, Nancy's hope that Betsy would eventually assume her role on the team was not fully realized. Nevertheless, this experience was an opportunity for Betsy to witness and participate in curriculum development.

Table 1 captures in broad brushstrokes how Nancy and Betsy worked together. They planned the biology courses together from the beginning of the school year (with Nancy doing most of the planning at first). With respect to managing instruction, they had a routine whereby Betsy 1) observed Nancy teach first hour and took notes; 2) in turn taught the same content to a different group of students during second hour (with Nancy observing her and taking notes); and 3) then observed (while taking notes) Nancy teach genetics during third hour. By the fifth and sixth weeks of the semester, Betsy added the genetics class and then first hour to her workload.[28] She became responsible for planning for and managing instruction in both of these classes, in addition to second hour. She would plan for all three classes drawing on Nancy's notes from the previous year(s).

Shortly after Betsy took over third and first hours, Nancy stopped observing second hour (except once in a while). She continued to observe Betsy teach the added classes for several weeks, and then faded out completely for the rest of the semester (with occasional observations). Nancy justified fading out as follows: "I think it's real important for me to get out of there, because the students' behavior does change when there aren't eyes in the back of the room."

It is important to note that Nancy rarely stepped in while observing Betsy, except sometimes moving around when there was groupwork. She reported moving around mostly out of curiosity to know what students were doing and to see if things were going well. Besides listening in on students' conversations, she engaged in trouble-shooting as

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[28] Note that the addition of each new class coincided more or less with the beginning of a new unit.

she moved around. Nancy's reluctance to step in while observing Betsy was motivated by her concern about undermining the novice's authority in the classroom. To prevent finding herself in a position to do so, she provided Betsy with much assistance in planning for and analyzing instruction.

Throughout the semester, regardless of who was in charge of planning for and managing instruction, Nancy and Betsy devoted their daily preparation time to systematically analyzing what happened in the morning and planning for the next day, drawing on their observation notes (or recollections). On Thursdays or Fridays, their preparation time was devoted to planning for the following week or to mapping out an upcoming unit.

Helping Betsy learn to plan for and analyze instruction. Nancy's work with Betsy on planning evolved from directing to assisting. She first modeled for Betsy how to plan. Next they planned together--which allowed her to coach Betsy. Finally she faded out, providing assistance when Betsy had new questions or problems to deal with.

> The first unit I would do all of the planning with [Betsy] and get her input. Then the next unit we would kind of do it 50/50. I would get it started and then I would get her input more and more and get her ideas. The last unit we did, we had reversed roles. She was in on the planning from the start. It was her initiation of the meeting. It was her plan, and she would ask me what I thought. So I modeled how to do it, then I coached her how to do it and then I faded out and she is now totally in control. And I think we need to do that with everything that we do with them. Not only up front in the class but in planning, in everything. They need to see how it is done. Betsy noticed it too. She is so perceptive. I think she is now not studying to be a teacher but studying to be a mentor. Because she said to me, "I noticed that you are hesitating more in our planning sessions. Is this the fading part? Is this where you are fading out and letting me take total control?" And I said "that's right!" She said, "I've noticed you have been kind of stepping back a little and disappearing more." So she is really doing well.

However, recognizing the complexity and importance of planning, Nancy never left Betsy totally on her own in planning for instruction. She provided assistance as needed or required from unit to daily planning. Her assistance took various forms. One was to make

available to Betsy her course notes. As Nancy describes them, these notes are rather sketchy and they evolve from year to year as she incorporates new ideas into them and discards old ones in light of what happens in the classes. Nancy develops her units around sets of objectives to reach. After figuring out where the students are in their learning, she makes decisions about the sequence in which the new concepts must be introduced and about appropriate activities or tasks to use. The notes reflect changes in Nancy's thinking about the content and the sequence of presenting it over the years. "The problem with my notes," she argued, "is that they evolve. They are very hard for anyone to read but me because I'll have this sequence and then the next year I'll draw arrows and add stuff and cross out stuff." In doing so, she always changes colors of pen "so you can see [by the number of colors] how many years I've used a set. Then I'll start again and change. I've never used the same set twice." In other words, Nancy's notes are not complete unit plans as one might think. In planning her own units, Betsy would study these notes and consult students' textbooks and other resource materials related to the topic of the unit. She would then break the week or unit down into daily lesson plans and run them by Nancy during their daily preparation period.

At the stage where Nancy had faded out, the pair's daily and end-of-week planning/analysis sessions were occasions for her to respond to Betsy's questions or concerns regarding substance, pedagogy, length of various activities, tasks or labs, or regarding materials that she needed to prepare for the next day or week. As Nancy put it,

> Right now, if you were to look at us during preparation time, she would be taking most of the initiative. . . . If she has a problem in a class, she will ask me, "what should I do? What would you do?" Then I will take more of a role. What we will do sometimes is go back and assess how she has handled it before. Or how she has seen someone else handle it before. . . . So a lot of times we go back to previous units and see what bits and pieces we can use as tools to understand the current concepts. She is really good about that. So sometimes you would see us looking back for that stuff.

Besides learning from observing Nancy, these daily extended interactions were the context in which Betsy learned a lot about asking good questions in the right sequence, about students, and about making transitions. The extended interactions were also occasions for Betsy to engage in analyzing her teaching performance. Indeed, whenever she observed Betsy, Nancy would take notes of anything she wanted to discuss with her, e.g., classroom management and issues of substance or pedagogy. She described these notes as "a general log of what [Betsy] does." She used the log to discuss the lesson during their preparation time, and then gave it to Betsy "so that she can look back on it and use it to help her plan whatever she has coming up."

Very early in the semester, the pair worked out a routine whereby they first talked about Betsy's second hour. They started by reviewing what she thought worked well and what did not.

> I always start by "what do you think worked well? What do you think didn't work well?" And we get her impressions first. Then she usually asks me what I thought. If she doesn't, then I tell her "I thought this happened; this is what I saw." And I give her my impression. Then we work through the problem areas and things she can try to do. And then we take out our plan--our big picture--and we take a look at where we are and what we need to do for tomorrow.

Later in the semester, when Nancy was observing only occasionally, they were still able to analyze Betsy's teaching based on the issues that she brought to the preparation periods. This was also facilitated by the fact that Nancy had a good sense of what was going on in the classes because she met daily with Betsy to assist her planning. Below, I look closely at one extended interaction to provide a richer portrait of what happened during the pair's daily preparation periods and to illustrate how these extended interactions were occasions for mentored learning to plan for instruction.

Looking closely at an episode of assisted planning. The interaction that I chose to examine took place at the very end of the last week of October. Betsy had taken over third

and first hours for about a month by then. That day, her first and second hours students took the first biology test that she wrote herself. This test came at the end of the second unit, which was on cells and cell structures. Her third hour genetics lesson was part of an ongoing series of lessons on pedigrees.

> I wanted [Betsy] to take over more of the planning for biology. And I wanted to kind of look at her overview (Nancy).

> Basically what I wanted to do is at least get down the first week to know what time schedule, how long things would take, and get an idea of what [Nancy] has done in the past and how she's made transitions (Betsy).

These were Nancy's and Betsy's expectations going to their daily preparation period on October 30. Nancy started off by asking Betsy how the genetics lesson went. Betsy reported that at first the students were confused about what to do exactly after they had finished withdrawing the second generation from their labs. Nancy followed up with several questions that led Betsy to give more details on how the lesson unfolded. She then shifted the conversation to the biology test. Betsy responded that it went well and proceeded to tell Nancy how long it took the students in each class to complete it.

Nancy probably expected a different answer for she went on to ask: "Were there any questions they had about the questions or any problems?" Betsy reported that "first hour had a hard time with the question dealing with whether a plant or animal cell has more visible structures. They weren't sure what they were supposed to write." She had to provide additional explanation before students could answer the questions. Anticipating the same problems in second hour, she gave and slightly modified her instructions before the students began taking the test.

The pair went on to talk about a particular student who "just copied the questions down and didn't do anything else" and made excuses about being absent. Nancy reminded Betsy that they had wondered earlier in the semester whether or not he could read. She then wondered if they should test him orally: "What if on Monday I put him in the back of

the room and read it to him and ask him to answer orally?" Betsy concurred and then told Nancy that she had asked everyone to take notes when they were reviewing for the test. Apparently this boy did not. At this point, Nancy shifted the conversation to the upcoming third biology unit (on the composition of cell structures) by asking: "So now what?"

Betsy began by asking some clarification questions about Nancy's notes--which she had looked at. For example she wondered how well students were able to answer Nancy's first question ("What are cells made out of?") the previous year. She suggested she could give them another journal assignment as a follow up to the previous one in order to "tie it in." Nancy checked if she was referring to "the journal where students organize the levels of complexity." Betsy confirmed and then laid out how she was thinking about proceeding from there. Nancy agreed with her plans. Betsy then asked her whether she went from big (human) to little (atom) when she did the next part the previous year, prefacing her question with "I think I asked you this question before." She wondered if there was "some type of lead in, like certain questions that would be good ones to use to have the kids start thinking." Specifically, she wondered how she could go about making the link between two parts of the unit so that students begin to raise questions such as: "What is exactly inside those organelles?" This led to the following exchange:

N: A good transition, since they just learned about the structures,
       would be to talk about the cell membrane. And they know the
       function of that.

B: And they also should know, at least second hour should pretty
       know, what the structure appears like.

N: But then we might point out the fact that it's very difficult to
       understand how the cell membrane does what it does. Because we
       really don't understand those parts that it's made of. So maybe we
       need to have a better understanding of those together.

B: So should I just essentially say that? I could use an example,
       especially when C. did the presenting up front. It was labeled. I told
       her that they probably wouldn't know what that meant, and they
       didn't. So I'll say, "remember back to this presentation and you

didn't understand what that meant? Maybe now we should get into that so we can understand exactly how things are getting in place."

N: It's very hard to understand how any structure works unless you understand the parts. Also that diagram she used is just a cartoon. Those molecules truly don't look like that. Point that out to them--that maybe we need to take a look at the structure to understand.

B: Okay. [Long pause] So then we'd start immediately getting into basically this part.

What is important to note in the above exchange are the kinds of suggestions Nancy made. She began with a suggestion about transition in response to Betsy's question about good questions to use to get the students thinking. She went on to tell Betsy about what makes understanding the functioning of the cell membrane difficult--something she may want to point out to students. This helped Betsy make a connection to a student's presentation--something she could build on to help students "understand exactly how things are getting in place." In response, Nancy reiterated the fact that "it's very hard to understand how any structure works unless you understand the parts." This helped Betsy see the transition to the next part of the unit. In sum, what Nancy was doing here was to share with Betsy her knowledge of what is difficult about a particular piece of curriculum and use that to justify a pedagogical decision/suggestion, that of looking at the parts of a structure to understand the functioning of the whole.

Betsy shifted the conversation to the part in Nancy's notes dealing with the second question of the unit: "How could you find out what cells are made of?" Betsy said she liked this part but was thinking of doing it later in the unit. However, she wondered whether or not students would be patient enough. Nancy explained to her that students want direct evidence, whereas "when we're working with things as small as molecules and atoms, we can't use direct evidence; we have to use indirect evidence." She suggested that instead of telling students that they are not going to be able to see the molecules, it is better to let them try and see. After this procedural exchange, Betsy moved the conversation to

the next part of the unit where she intended to brainstorm with the students about food groups. "How are you going to transition from cells to that?" Nancy asked. Betsy answered as follows:

> Probably what I'd do is use the cell membrane and say, "you know, you told me it was consisted of these two things, and now I'm wondering if all little things are made of...that." Then "what do you think your food is made of?" And then see what they mention. And then say, "what I'd like to do is kind of categorize the food that you eat into different categories dealing with these three areas." See if we could do that. So I'd just put up some items that they eat. "What do you think is the special thing about this? What category can you put it in and why?"

This answer was probably not satisfactory for Nancy, for she went on to say that this transition would be the toughest for students--"getting them to see the connection between the food and cells." She suggested that onions might be a good transition into foods since Betsy had already dealt with onions during an earlier discussion of cells. Betsy's explanation of how she could use this suggestion triggered another question from Nancy, this one about the sources of students' ideas. Nancy's response--"Just books, right?"--to her own question suggests that she had doubts about students' understanding of the composition of cells. This made Betsy acknowledge her own limitation in this particular topic. She could not remember (or did not know) which tests tested for which foods. Nancy promised to get that information for her and went on to bring to her attention the fact that the students come in with some prior knowledge about the tests. She suggested a question that Betsy could ask to elicit students' prior knowledge about the tests: "Do you guys from your past experience know any way we can tell if starch is present in something, or sugar or fat or protein? You'll find that they have done some of those." According to Nancy it was very likely that most of the students would know for instance about the iodine test because she had sent it to the junior high school. She suggested that these are tools that students have and which, as teachers, they can use to help students add more tools. Betsy commented that it was *important* for her to know what

students had done before. Nancy added that it was *useful*. She proceeded to tell Betsy

about which tests students would be familiar with and which ones they would have no clue

of. "So we want to think of these as tools that they can use, but they don't know what

they're tools for." Betsy concurred.

This segment of the formal interaction is a good illustration of the kind of assistance

that Betsy needed and which Nancy offered her. Nancy posed questions of substance and

procedure; provided useful information about what students might (not) know; and offered

concrete suggestions for finding that out and for planning accordingly. In the segment, we

also learn about Betsy's substantive limitation regarding which tests test for what foods.29

We learn as well about the importance of transitions for Nancy--something Betsy identified

earlier as an area on which she needed to work and expected to focus on during this

interaction.

The next segment of the interaction followed this pattern, with Betsy asking

clarification questions about Nancy's notes as she laid out her overview of the unit, and

with Nancy also posing questions, praising Betsy's ideas, and offering suggestions.

When Nancy estimated that Betsy had got "the big picture in mind," she suggested they

shift to planning the next week and come back to the overview "after school when we have

more time." She began by asking Betsy what she was thinking about doing. Betsy

intended to go over the biology test on Monday. "How long do you think that will take?"

asked Nancy.

> B: Well, what I was thinking of--and I don't know exactly, this might
>   end up taking the whole time if I do this right--was assigning each
>   group a problem and then those that finish with that problem, I'll
>   give them another one to do because there's nine questions on there.
>   And then have them explain to the class what it was. Would that be
>   okay? Or would it be better just for me to explain?

---

29 Betsy reported in an interview four days later that Nancy suggested that she actually do
the test in order to know what difficulties students might have. She did and was able to
"see where some questions might occur."

N: Well, which do you think would keep them most interested? [pause] Having you up front doing it, or having their peers up front doing it?

B: Well, regardless, I'd want them to take notes anyway. And if they did present the problem and I thought they were a little weak in spots, I would point it out. I think that, in general at least, that group would understand their problem much better than what they did before.

N: I think it's a good idea. I really do. It has more variety. When they get up there, do you want to have someone who did the problem well presenting it?

B: Yeah.

N: Could you identify those people as you grade the test?

B: Yeah, I could write down the names.

What is most striking in this final segment of the conversation are the suggestive questions that Nancy asked in response to Betsy's ideas or questions. The questions are suggestive to the extent that they are formulated in ways that call for a certain response. For example, the preferred answer to the question of having the teacher or peers up front explaining the problems is obvious, given Nancy's stance toward information delivery.

Nancy and Betsy had such extended, formal interactions during their daily preparation period throughout the semester--which gives a general idea of how much talk was involved in their work together. As reported earlier by Nancy, in addition to these extended conversations, she and Betsy very often had many productive informal conversations after school. They also had many significant "little conversations" between classes, especially between first and second hours. "[Betsy] would teach something first hour, have the same class second, want to make adjustments from first to second. 'What didn't go well? How can I fix it?' We do that in five minutes between classes." As it appears in the following excerpt from an interview conducted during the fourth week of

school, these brief consultations took place earlier also when Betsy observed Nancy teach

first hour, particularly if Nancy did something she did not tell Betsy she would do.

> For example, today, my students clearly were stuck on something I hadn't anticipated, dealing with density. They weren't getting density and how it applied to whether or not the dough rose. So I did an example on the board, showing them two experiments and what happened over time, and how the density was altered and they were able to take me through it and then from that, draw correct conclusions from the lab. And I hadn't shown [Betsy] that kind of technique. So she took notes on it (I watched her), and before second hour, we talked about that. By the time my class was over, I had thought of a better way to do it. So we talked about the way I did it and I asked her, "Did you notice anything that didn't work well? How could we improve on it?" She wasn't real sure, so I said, "well, if I were doing it again, if I were teaching this second hour, here's what I would do." She clearly saw it then. And she did a very good job in presenting it--the change.

Such moments highlight the unpredictability, messiness and elusiveness of both

teaching and mentoring practices. Besides the evidence of Betsy's learning provided by

Nancy, the instance described above can be thought of as an example of modeling reflective

practice. Indeed, we see Nancy reflect in and on the action of teaching, make her

reflections visible to Betsy, elicit Betsy's response to her reflection in and on action, and

finally provide her with an alternative course of action to try.

Besides planning for, analyzing and adjusting instruction, grading and writing tests

figured in Nancy and Betsy's interactions throughout the semester. In the next two

sections, I examine how Nancy helped Betsy learn to accomplish these two tasks.

Helping Betsy learn to grade essay type tests. Just as with the tasks of managing

and planning for instruction, Nancy helped Betsy learn to grade and write tests through

modeling, coaching and fading. She found out, since the beginning of her mentoring

career, that it is important for her to be there the first time a novice grades an essay type

test. "Otherwise, if they take them home and try to do them on their own, they have so

many questions, they get so frustrated and confused, they can't do it, they waste their time." Reflecting on how she came to this realization, Nancy argued:

> I think it's like any kind of learning. You have to be guided in the beginning and given help. They're learning just like our students in the class are learning, just like the mentors are learning. I wouldn't have done that with my first student teacher perhaps, but I learned. Because that student teacher was so frustrated, I learned I have to sit down. So we're all learning.

Earlier in the semester, a quiz on the scientific method gave Nancy the opportunity to model for Betsy how to grade an essay type test and to coach her.

> We both had a batch of papers. I had my first hour, she had her second. We sat down, side by side. She was concerned and I was concerned. This is the first time she had graded anything like this and it was a difficult thing to grade. It wasn't right, wrong. A lot was subjective and you had to make decisions. And it's hard sometimes whether to tease out the pieces. So we sat down there and I started grading mine and she was sitting around the corner grading hers. It was a funny assignment and we could laugh and share the funny things the kids did. Then when she got to parts where she was stuck, she could lean over and say, "what do you think of this?" And she would read it to me and I'd say, "well, what do you see there? What do you see that's wrong? If it's worth this many points, how much do you think should come off of this?" We would talk it through, and if I disagreed, I would tell her my rationale and she would give me her rationale and we would come to a solution. We'd just share.

There is no doubt that Nancy set up this event because she wanted to help Betsy learn about an important aspect of teachers' work. However, what is most significant in this instance is that the pair did not get together just for the purpose of one party mentoring the other. Instead, the significance of the instance lies in the fact that they came together to work on an authentic task of teaching. As Nancy put it, *they were both concerned* with the task at hand--the difference being that this was the first time for Betsy to tackle it. Their joint participation in an authentic task not only allowed on-the-spot consultation, but it also made both Nancy and Betsy make their thinking visible to each other. For a novice, having access to his or her mentor's thinking in context is critical for learning to think like a

teacher. For the mentor, having access to the novice's thinking helps to assess where he or she is in his or her learning and to adjust assistance accordingly.

Later in the semester, Nancy modeled writing the first biology test and she and Betsy administered it in their respective classes. They then wrote a genetics test together (with Nancy coaching Betsy) and Nancy administered it. Parallel to the writing of the genetics test, Betsy wrote a biology test herself (with Nancy's assistance) and administered it in both biology classes. Before Betsy administered this test, she and Nancy discussed the important points they would be looking for in each question. They then graded the test together--just as they did for the above-mentioned quiz--while their third hour students were taking the genetics test. According to Nancy, they did it that way "so that if Betsy ran into a problem, I would have experienced it as well and we could share ideas on how we should judge an answer."

Nancy made these moves because she knew that novice teachers have problems making judgments about how much credit to give to a particular test item. She knew also that most of the time, novices want to rationalize for the students because they have trouble marking questions wrong.

> Lots of time they want to guess what the students were thinking, or rationalize for the students, because they really have trouble marking questions wrong. They don't want to do anything to hurt the students. I hear things like "don't you think they really meant this? Or, don't you think if they had done this it would have been right? I think they meant to do this but they just forgot." I think they make excuses for the students. She would say things like "should I take all the points off for this because they didn't do it this way or should I give them partial credit?" . . . They would clearly have an incorrect answer for something and if she would say something like, "well, they were probably thinking of this, so I really don't know if I should mark it wrong." And I would say to her, "which would they learn more from? Your marking it wrong, or giving them credit? Do you want to give them credit for something that is incorrect? What kind of message is that sending to the student?" She caught on very quickly, that an assessment is not only giving us a grade for the report card, but it's letting the student know what they understand and what type of quality we want in the

classroom. The students will adjust to whatever you do. They're very resilient.

Although this instance is about grading a test, it is a good example of how Nancy helped Betsy deal with the emotional dilemma of wanting to be friends with students versus teaching them. Because they worked jointly, Nancy was also able to bring Betsy to understand the meaning she attaches to an assessment. Telling her this out of context may not be as effective.

Helping Betsy learn to write essay type tests. As already suggested, Nancy first modeled for Betsy how to write an essay type test, then coached her, and finally faded out so that she could do it independently. The first test came at the end of the first biology unit. It was in the context of devising this test that Nancy first modeled test writing for Betsy. As Nancy reported,

> The students had covered quite a bit of material. This was the first major exam we gave. It's the type of assessment that is not objective. It's essay--which makes it a little more difficult for the student teachers. Betsy had not had an opportunity to actually write one. So I thought it would be better if I modeled how to do that on the first one. So I showed her my questions and we discussed them. Mainly what we would do is we would go through each one and I would ask her what she thought of the question, what she thought it was assessing, things like that. Why it was written the way it was. Any problems she thought she could see. These are the things I would hope she would do when writing her own tests.

Through this kind of questioning, Nancy realized that, as other novice teachers, Betsy remembered the kinds of questions she had when she herself was a high school student. "She wasn't thinking of the kinds of questions she should ask. She was thinking more of what they were like when she was a student. She hadn't made the switch yet." For Nancy, comments made by Betsy during this conversation such as "Wow, I wouldn't have thought of that" or "You have to be very clear" were indications of the fact that she had not made that switch yet. At the same time, she saw these comments as evidence of learning.

During the same conversation, Nancy covered up part of one question and asked

Betsy: "What if I had just asked them [students] this? What kind of answers do you think I

would have gotten?" By asking the most fundamental experimental question, i.e., "What

if?", Nancy did what Schön (1983) calls "on-the-spot experimenting characteristic of

reflection-in-action" (p. 147). Her experiment in practice had a two-fold purpose: to assess

Betsy's ability to ask good essay questions and to help her learn to ask such questions as

well as realize the need for giving students clear instructions and scaffolding the questions

for them. The experiment worked, in Nancy's estimation, for Betsy

> could see where the answers that the students would have given would have
> answered the question, but they wouldn't have been what we were after. So
> she realized that you have to give very clear instructions and really guide
> them so that they are getting out what you want to assess.

Given Nancy's view of teaching science as helping students construct accurate

scientific knowledge, it is safe to argue that she knew what kind of answers students would

give her if she asked them only the uncovered part of the question. This raises a question:

What if Betsy's answers had been different from what she expected? Would she have

realized the dual purpose of her on-the-spot experiment? An affirmative answer to this

question is warranted insofar as incorrect answers from Betsy would have helped Nancy

pinpoint the state of her learning and subject matter knowledge. She could then take

appropriate actions to achieve her dual purpose.

However, the real test of the extent to which this kind of

conversation/experimenting was educative for Betsy came when she wrote her own

test--the second biology test. As Nancy reported, Betsy drafted the test and they went over

it together.

> But even last night when she was typing it, she was still scaffolding the
> questions a little bit more, and I would ask her, "why did you add this?
> Why did you add that?" And she said, "Well, I was trying to think what
> kind of answers they would give me. I was afraid they wouldn't give me

what I was really trying to assess, so I added another clarifying question."
So she really did a good job in that respect.

Nancy was pleased with Betsy's progress with respect to clarity of test questions,
especially because, in her view, "that's something a lot of student teachers don't realize
until after the kids take the test. They'll read an answer and they might think, 'where did
they get that idea?' They need to always read those questions as if they were students in
the classroom. If they know their students well, they can do that."

Nancy was pleased also that after she had modeled thinking about particular
students when they went over the questions for the first biology test, Betsy did the same as
they wrote the genetics test together.

> On the genetics test that we wrote together, she did mention [one girl]. She
> was worried about her understanding the genotype, phenotype stuff for one
> problem. She was worried about another student--who has been absent a
> lot--not being able to comprehend the test at all. There was another girl who
> was having problems with the Hardy-Weinberg principle and she was
> concerned that she wouldn't understand the way the question was phrased.
> So she was very, very careful with those questions. She wrote some of
> those questions purposely for those two, because she knew the other
> students in the class understood the concept. She really wanted to not only
> assess the class, but assess these students.

Knowing that difficult words can turn off students, Betsy made sure her
instructions contained only common words that students would know. She looked at an
old test of Nancy's and adapted a couple of her questions because she thought they were
good questions. She then ran the test by Nancy because she wanted to make sure that
Nancy understood the questions. For her, "if [Nancy] could answer them, she would
know if a sophomore could handle those kinds of questions."

From the foregoing, it is clear that writing tests in the context of Nancy's classes is
not a mechanical activity. For Betsy, it held out the opportunity to learn to ask good
questions and scaffold them. It also held out the opportunity to learn to focus on individual

students and their understanding. These are two central features of Nancy's teaching practice; and they occupied center stage in her work with Betsy.

Problematizing the relationship between teaching and learning, and individualizing instruction.

> This week I believe that [Betsy] discovered something that she knew as a logical human being but hadn't learned as all teachers must. That is, teaching something to your students doesn't necessarily mean they will learn it (Nancy).

> For this week's reflection I began thinking about my students and their understanding of the Scientific Method (Betsy).

> Learning was easy for [Betsy] when she was my student in high school. She now knows that it is not that easy for some of her students and that she will have to constantly assess their understanding as she is teaching (Nancy).

> This whole experience was truly a learning experience! (Betsy)

These are Nancy's and Betsy's introductory and concluding statements to their first end-of-log week written reflections. As they both explained, Betsy spent several days modeling the scientific method for her second hour students and talking about the steps are related. She then coached the students by having them work in small groups on different problems and present their solutions to the class so that "as a whole class we could help each other out." In preparation for a quiz, she gave students a homework to work on individually. This was, as she put it, "my way of fading so that I could see how each student was understanding" the Scientific Method. Before assigning the homework, Betsy was under the impression that students knew the stuff inside out.

> **In the class discussions and presentations many of the groups got the connections so when I assigned the homework I was not expecting a lot of problems. Well being a novice means that sometimes you learn the hard**

way and my mentor told me this was normal. What happened was exactly what my mentor forewarned me about.

What happened was that upon grading the assignment Betsy realized that many of her students did not have the level of understanding she thought they had based on group presentations. Nancy had told her that every year every sophomore class has difficulty with certain steps of the Scientific Method' that the connections have not been made for them before; and that they only knew the order of the steps. "Now at the time [Nancy] told me that I did not/could not understand fully what she meant because I had not taught this material before. I did not have any prior experience so I did not plan on any real problems."

Nancy and Betsy had some discussion about how to address students' misunderstandings. Nancy told her to modify her lesson plan to incorporate another example problem before the quiz. Betsy did and during the lesson she decided to "consciously choose the students who were having difficulties, which can be awkward for them." She was surprised by the results. "I had students going from 50% to 80%! Even if one of the students who had not understood had improved I would have been thrilled," she wrote. "But almost every student did better."

This episode confirms what Nancy said earlier, i.e., that novice teachers give their first test and get very depressed when some students fail. According to her, what Betsy learned from the episode was that

> her class appeared to understand the process because the students that responded represented the fraction of the class that understood, not the entire class as she had thought. She also realized that the group work represented the understanding of the group, not the individuals. I believe she also learned that even though you present a concept well, students vary and many will require multiple opportunities of working with a concept before they will grasp it.

The issue of attending to individual students became a central focus of Nancy and Betsy's work together. On Nancy's initiative, she and Betsy worked at helping each other include all students in their lessons--something she said she is always trying to work on. Nancy framed the practice issue as follows:

> You've got twenty-four bodies out there; you more or less are running the show in a class discussion, trying to pull in those kids that are generally left out. Trying to include them all of the time. . . . When you are running a discussion you want it to go well so teachers quite often slip back and will call on the kids they know will give the correct response. So then it appears that everything is going well. And in reality you know darn well, when you sit back, that is not the truth; it is maybe 10% that are getting it. On the surface it looks good but down deep the other kids aren't learning. So that is something I am always trying to do.

To address this issue, Nancy and Betsy engaged in joint problem solving or what could be called practical collaborative inquiry into teaching, observing each other and identifying the students that are being excluded from participating in the lessons. What is particularly important to note here is that Nancy and Betsy did not co-labor for the sake of doing something together. They co-labored around an authentic task of teaching, that of striving to serve all students in their charge.

A critical reflection on labeling students and inclusion.

> For this week's reflection I would like to focus on inclusion, the allowance of previously segregated special education students to be included in the regular classroom setting. I would like to discuss the pros and cons of inclusion to begin with. Then explain what interaction with inclusion I have had so far and what I have learned from it (Betsy).

> In essence I learned that counselors need to communicate better with the teachers and vice-versa, so as to achieve the best for the students (Betsy).

This is how Betsy introduced and concluded her second end-of-log week reflection. Including special education students in regular classes became an issue for her because in some of the classes she was teaching she had a few inclusion students "which I have been

told are classified as being Learning Disabled (LD)." She reflected critically on the case of two female LD students in her genetics class and argued that the only thing that made them LD to her was that they did not catch on to some of the new concepts she introduced.

> I can understand why: Because these two students had been separated from normal classrooms and placed in easy classes where the concepts that they were being taught were the modified (watered-down) versions. The thing that bothers me is when I hear one of the girls using the excuse that she has learning disability and that she cannot get this concept. To me that label has become a crutch for the student to use when she does not understand a concept.

Betsy gave the example of another LD student in her genetics class. This students would not verbalize her lack of understanding, but as Betsy wrote,

> I am beginning to see the physical signs that she does not comprehend. This student has also shared with me that she was an LD student and that she just takes a little more time to understand certain things. She was also the source for many of my pros and cons. This student told me some of her frustrations were that she did not get good grades as much, but she understands why. She told me about being bored with the easy classes and that she enjoys being in the regular classroom because it is a challenge even if she is getting lower grades.

The apparent tension or contradiction between the first *pro* and the second *con* in table 2 points to an educational dilemma for which there is no clear-cut solution. Instead, it is one that must be managed. The fact Betsy recognized it can be construed as evidence of learning. Worthy of note also is that she was bothered by the fact that one of her special education students seemed to use her LD label as a crutch--somehow fulfilling a prophecy.

Table 2: The pros and cons of inclusion according to Betsy

Pros	Cons
1. Mainstreamed special education students "do not feel inadequate (unequal) against their peers (not labeled)." 2. "They feel they are challenged." 3. "They become more engaged/interested." 4. "They learn more not only from the class but from peers as well."	1. Mainstreamed special education students "find it frustrating if they have not been included before they reach high school." 2. "They feel that their peers know that they are 'special'." 3. "The classes they had taken before the inclusion were often easy and they got bored." 4. "Because the classes were easy they often received many high grades, but after inclusion they were receiving low grades."

What prompted Betsy to reflect and write on the issue of special education students **and their mainstreaming** that week was an incident regarding the possible transfer of an **Emotionally Impaired** student to one of her classes. As Betsy explained, "the student's **original teacher** had been to meeting after meeting about how to handle him and any **situations that** might happen, not to mention that this teacher was assigned a special **education teacher** to help him out whenever he needed it." The contemplation of **transferring the** student to Nancy and Betsy involved several meetings with the student's **original teacher** and the school counselor. Betsy wrote that she was pretty much a by-**stander when it** came down to the decision of what to do. But what she noticed is that **Nancy**

> kept asking two very important questions to the counselor which were, 'What message are we sending this student by switching his science teacher? What is he going to do when he has to face problems out of high school?' One of the counselors asked me if I would be able to handle this student. I did not know what to say, I had never met the student and I do not believe in prejudging anyone.

Betsy's closing statement is reminiscent of an earlier statement made by Nancy: "I've often thought about how we shouldn't prejudge kids. Wait and see what their potentials are." Before this incident, Nancy and Betsy discussed how to handle mainstreamed special education students. During those discussions, Nancy shared with Betsy her knowledge of the individual students and ways of addressing their needs. For example, for one of the female LD students in the genetics class, she told Betsy that "when this particular student gets confused she begins to tune-out and that you need to try to go back to the beginning of where the confusion began."

Betsy followed up on this suggestion in her own teaching by making sure that all the students who are not as quick answer questions during class discussions. "If I find that they are unable to answer then I go to the students who do have a better understanding and have them tell the answer only. Then I return to the student who did not understand and

ask them how their peer got that answer." This strategy seemed to work because "once the answer has been said many times the student can then explain how their peer got it. This is a good way to 'save-face' as well." What this suggests is that Betsy attended to both the academic and emotional needs of her special education students through enlisting the help of her regular students. This can be connected to the fourth pro and the second con on her list of the pros and cons of mainstreaming special education students.

Learning from the Integrated Science team's work. As I pointed out earlier, Betsy's participation in the Integrated Science team's work, albeit peripheral for the most part, was an experience in curriculum development. In her own words:

> It's something that is brand new. It's a pilot this year. And what they are doing is basically they are going week by week, and kind of going with the flow of what the students come up with. They have a big picture in mind, but how to get to the big picture, each team of teachers is doing it a little differently. So what we do is especially on Wednesday mornings, we kind of have the integrated science talk time. And the teachers all share about where they are at the present time. And then we talk about, again, where the big picture is, where exactly are we headed, what are some of the main things that we want to get to. . . . Instead of having biology your sophomore year; chemistry, junior; physics, senior year. In biology I can see it myself, you get into the chemistry, instead of having to tell the kids, "Well, we are only going to just scratch the surface on this, so I can't answer a lot of your questions now, you will get it your junior year." And the same idea with the physics. So what they are going to do is integrate the sciences and when the kids have questions, they can say, "Okay, we can answer these now, and deal with those topics right now."

The team's preparation period was also another context where Betsy had access to Nancy's knowledge of students. According to her, what would typically happen during the team's daily meetings is that they would "talk about how things went that day, and what we are going to do tomorrow. And they all talk about ideas. They kind of lay out their ideas. And then they ask for suggestions on how to do things differently." What Betsy noticed is that a lot of times one of the professors would suggest something; Nancy would think about it, "and what she offers is her knowledge of where these students are at." She went

on to comment that by being professors, the two team members from the university tend to deal with twenty year olds versus sixteen year olds, and might not understand how the students might not understand what they are getting at. "So [Nancy] gives them kind of the perspective of a sixteen year old. And these two professors are beginning now to see how these students work. Because this is the first time in quite awhile that they've been with this age group."

From the experience of the team's work, Betsy also learned about the need for being flexible with students--knowing that you cannot do the same thing "from class to class or year to year. It always varies a little bit depending on the kids that you are dealing with." Related to that, she learned that "you need to have a broader span" in order to be responsive to students' needs and interests. She illustrated the need for flexibility by relating the differences between her biology classes in terms of understanding atoms. "For example my first hour understand atoms, whereas my second hour--they are supposed to be a little bit brighter than the first hour--have no clue about these things. So I have to do a little more work with second hour than I do with first hour."

Summary and discussion

There is ample evidence in this case that Betsy's student teaching was a mentored learning to teach experience. Nancy's contribution is salient in her learning. From the perspective of learning to teach, the case supports my earlier contention that just being in the context of practice does not ensure learning. Novices need guidance and assisted performance in making sense of classroom experience and accomplishing what they could not accomplish without assistance.

From the perspective of mentoring the case illustrates the connection between teaching and mentoring and reveals what it takes for good teaching to lead to thoughtful mentoring. How Nancy acts as a mentor paralleled how she acts as a teacher; and it reflects what she thinks novices need to learn and what is hard about the learning. Just as in her teaching, she modeled for Betsy every task of teaching that she wanted her to learn to

accomplish; she then coached Betsy as she tried her hands at it; finally, she faded out to give her the opportunity to practice independently. In other words, Nancy has deconstructed her teaching practice and helped Betsy begin to (re)construct it for herself.

This case points also to the need for authenticity and jointness in mentored learning to teach. Nancy was able to fold Betsy into the work of teaching. Thus she was able to attend to her dual responsibility for her high school students' learning and for Betsy's learning. Nancy did not mentor Betsy for the sake of mentoring. She mentored her in the process of being responsive to her bottom line: responsibility for students' learning.

In sum, this is a case of a mentor who learned a new kind of teaching and is articulate and competent in guiding her novice, and of a novice who is ready to learn from her mentor and do what is expected of her. Betsy's personal dispositional qualities--her curiosity and willingness to entrust herself into Nancy's hands--were important in this case. As I pointed out earlier, she came to student teaching with a learning perspective. She did not approach it primarily as an opportunity for her to practice what she learned at the university; nor did Nancy frame it that way. As Betsy said in an interview during the first month of her student teaching, "[Nancy] is not really evaluating me. She's helping me." She went as far as asking Nancy to feel free to step into her lessons if she felt that she had a question. Well, she never did."

Nancy did not step in because for her this can potentially undermine the novice's authority in the classroom and compromise the need for her to practice managing instruction independently. As a result, she primarily coached Betsy during their daily preparation periods, after school and between classes. This is how Nancy chose to manage one of the dilemmas that permeates mentoring practice, i.e., responsibility toward students' learning versus responsibility toward novices' learning.

Mentors at the pre-service are first and foremost classroom teachers. Their primary responsibility is, therefore, to foster their students' learning. In the context of sharing their classroom and students with a novice, they must also act to foster the latter's learning.

How to balance this dual responsibility is not a straightforward thing, especially in the action of teaching with the novice in the lead. What to do when things seem to be falling apart in terms of management; when the novice makes mistakes, says or does things that have problematic consequences for students' learning; or when one has something to contribute to the lesson? Should the mentor step in, unsolicited, to rescue the chaotic situation; to correct a mistake, statement or act made by the novice; to make a point that can contribute to the lesson and to students' learning?

These are not easy questions to answer. Every answer carries with it the potential for relational bruises between the mentor and the novice, the risk of undermining the novice's authority and credibility with the students, and/or the risk that both the students and the novice may lose out in terms of learning. The fact that the answer must, more often than not, be given in public further complicates matters. In many instances it is a no-win situation. Suppose a novice makes a serious content related mistake. The mentor may step in for the sake of ensuring that students are not misinformed and to protect the novice from worse embarrassment should students themselves find out later that they were mislead by the novice. Regardless of the reason for stepping in, the fact of the matter is that the novice's status is at stake.

This dilemma is a pervasive one in mentoring at the pre-service level. It can neither be ignored nor be solved once for all. Instead, it must be managed. I contend that how a mentor manages this and other dilemmas/tensions in mentoring can constrain or facilitate the enactment of his or her intentions to support a novice's learning. In other words, how a mentor decides to manage the dilemmas/tensions of the work can limit or expand the extent to which he/she or the novice can take advantage of the learning opportunities that are available in context. This, in turn, has consequences for the novice's learning.

Nancy chose to model key aspects of her teaching and then coach her novice out of the action of teaching. Even when solicited by the novice to step in, Nancy would be very

brief, typically answering the novice's questions from her observation corner in the back of the room. Doing otherwise would entail constructing a new frame for action.

The only time I saw her take center stage was when Bill--her 1994-95 intern invited her as a guest speaker in one of his biology classes. He came up with this idea because he was not comfortable with the content at hand. Nancy agreed to doing this because of the guest speaker status she was given.

At the beginning of the lesson, Bill announced to the class that a specialist would come at some point to answer their questions. About half way through the class period, he called upon the "guest speaker", i.e., Nancy. He retreated to the side of the room and Nancy took center stage. The students looked a little amused, but they immediately began asking questions. As she answered their questions, Nancy naturally became the teacher, asking probing questions to help students understand the concepts in the lesson, making comments that reveal that she played an important role in planning the lesson, and encouraging students to ask more questions. She then retreated back to her usual observation spot and Bill continued the lesson.

Choosing not to step in--especially unsolicited--is one way of dealing with the dilemma described above; however it means not being able to take advantage of situational mentored learning to teach opportunities. Thus the novice may miss out on the opportunity to receive in-the-action guidance or feedback. The students, as well as the novice, may miss out on the opportunity to profit from the contribution of a more knowledgeable adult person--which could help them make certain connections. Although Nancy post-actively helped Betsy make needed corrections or readjustments to foster students' learning, it is virtually impossible to re-create the situations where there was confusion or misunderstanding to be cleared, or understanding to be reinforced. Nevertheless, this case provides an image of the desirable in mentored learning to teach.

CHAPTER V

MODELING, JOINTNESS AND INTENTIONALITY IN MENTORING: WHAT KEN AND NANCY HAVE TAUGHT ME

A good mentor is a person who is very good at and has demonstrated proficiency in classroom teaching. Now how you want to measure that I am not real sure. A person who is willing to collaborate with others. A person who is willing to make changes. A person who is willing to get the views of others and work in a collaborative way. A person who is really interested in improving the profession. Improving the profession is an extension of improving what goes on in the classroom. So if I can help [Mickey] become better than I am then I have done what I need to do with respect to her. Or if she starts out where I am at, hopefully I progress as well because of our participation, because I am learning from her too. She has a lot of ideas and insights and things that I may or may not have simply because of the age differential. And generationally I think it helps. She is a little closer to that age group (Ken).

To be a good mentor takes patience, good communication with your student teacher, good communication with the other people involved in the program, open-mindedness and willingness to learn--knowing that your way isn't the only way, your way isn't necessarily the best way for everyone else. So when you present things to your student teacher you have to kind of present them in that mode. They are not to be a copy of you, they are to be their own person. Because they aren't you. They have their own strengths and weaknesses. They may be the same as yours; they may be different. And to be the best that they can be they need to develop their own strengths and weaknesses. That is why I would like to see them paired up with more than one mentor. I've seen too many student teachers that become copies of their mentors rather than letting their own strengths shine through. I think sometimes that holds them back (Nancy).

Experienced classroom teachers are usually selected to be mentors to novice teachers primarily on the basis of their accomplishments with children and adolescents. The presumption is that good classroom teaching leads to good mentoring--however defined. Ken's opening statement fit this presumption. Yet, looking closely and comparatively at his and Nancy's teaching and mentoring practices has reinforced my conviction that *being a good classroom teacher is a necessary but not sufficient condition for being a good mentor* (see Berliner, 1988; Stoddart, 1990; and Yinger, 1987 for similar arguments). Classroom teaching and mentoring are both professional practices. They have

different sets of responsibilities and demands. The cases of Ken and Nancy show us that being good at teaching does not automatically qualify one for mentoring.

Both Ken and Nancy are good classroom teachers in my estimation. Both have made significant and noticeable changes in their teaching practices. It is interesting to note that the changes they each made came as a result of collaborating with some university-based educators in different configurations. After more than twenty years of information packaging and delivery to students, Ken embraced what he calls "concept-driven teaching." His teaching practice is no longer textbook-driven. It aligns in general with what reformers are currently advocating--a kind of teaching that is student-centered, oriented toward supporting students' conceptual understanding and helping them make connections between and among ideas.

The stated purpose of Ken's courses is to engage students in *doing* history as opposed to *hearing about/listening to* history as told by teachers and textbooks. He wants his students to develop a personal sense of what they study in class. The central features of his teaching practice include: 1) helping students make connections to see the "big picture"; 2) helping students critical thinking, reading, writing and oral skills; 3) thematic instructional unit planning; 4) organizing students in cooperative learning groups; 5) using reflective journals as a principal means of assessing students' learning and monitoring instruction; and 6) improvising. In addition to these key features, it must be noted that Ken is a strong advocate of teacher collaboration.

From a deliverer of information for about a decade, Nancy became a facilitator of students' construction of "conventional science ideas" (Driver, Asoko, Leach, Mortimer and Scott, 1994). Like Ken, she no longer follows textbooks step by step. Her students no longer work on textbook labs whose results are pre-determined. Most central to Nancy's current teaching practice is a *modeling, coaching and fading* cycle--a conceptual teaching/learning cycle which consists in first showing students how to carry out an experiment, for example, providing them with opportunities to practice while the teacher

coaches them, and then fading out to let them design and carry out their own experiments in small groups and present the results to the whole class.

The central features of Nancy's teaching practice include: 1) systematic use of a questioning sequence either to assess students' prior knowledge before introducing a new unit or concept, or to help them attain the understandings that she hopes they would attain; 2) small groupwork and peer teaching; 3) regular journal assignments (in the form of questions) as homework or in-class fast writes; and 4) teacher-written essay type--not standardized/objective--tests. In addition, it is not uncommon in Nancy's classes to see students read and discuss articles from scientific or popular magazines; watch and discuss science-related films; and listen to and/or interact with guest specialists in hands-on activities.

Based on the presumption that good classroom teaching leads to good mentoring, we might assume that both Ken and Nancy are good mentors; however, the realities of their mentoring practices do not support such presumption. Their ideas about learning to teach and their conceptualization and enactment of their roles are qualitatively very different.

I was struck by Ken's lack of structure as a mentor and, related to that, the essentially improvisatory nature of his mentoring practice. "It's all over the place," he said. "There is no formalized [way]." Ken gets his novices to do a lot of things but his mentoring actions are made on the move for the most part. Several of the most essential features of his teaching do not figure prominently as the focus of his work with novices. If they do, they are dealt with in ways that I found problematic. Overall, it is through "rear-loading" that he tries to help his novices learn to teach. The way Ken thinks about mentoring and acts as a mentor is shaped by a strong belief in the primacy of experience in learning to teach and a view of novices as colleagues who just need to be with children and practice as much as possible.

Nancy, in contrast, thinks carefully about and plans for mentoring, and has figured out ways of enacting her intentions in support of her novices' learning. She tries

systematically to induct her novices into the kind of teaching that she practices. The essential features of her kind of teaching are the foci of her work with novices. In other words, she tries to teach them what it takes to practice the way she does. Just as in her own teaching, she uses a cycle of modeling, coaching and fading to support her novices' learning. The way she thinks about mentoring and acts as a mentor is rooted in a view of novices as learning teachers and in the belief that experience must be guided for it to be educative.

In this chapter, I explore these qualitative differences around a set of ideas about educative mentoring that emerged in the process of writing the cases and looking across them. They include: modeling, joint participation in authentic tasks and intentionally. These ideas represent what Ken and Nancy have taught me about mentoring and learning to teach.

How Did I Arrive at These Ideas?

I was aware of and considered *modeling* as important aspect of mentoring from the outset of this study. In fact, the presumed relationship between good teaching and good mentoring is based on the widely held view that good teachers will serve as good models of teaching. So if placed in the company of such teachers, novices will learn their kinds of teaching. While both Ken and Nancy used the word modeling to describe part of their mentoring practices, I saw vast differences between the ways in which they talked about and used this form of mentoring. These differences led me to the propositions that modeling *is* indeed an important aspect of mentoring; that it includes providing images of both the performative and intellectual aspects of teaching; and that it involves more than showing. One cannot assume that everything one models or demonstrates is recognized and learned by the novice. Novices need guidance in recognizing that which is modeled in order to learn from the model.

Novices also need assistance in performing the tasks of teaching that they could not accomplish by themselves. Assisted performance involves jointness, i.e., working together

to accomplish what needs to be done in the best interest of students. I was struck by the prominence of jointness in Nancy's work with her novices and its relative absence in Ken's mentoring practice. This helped me clarify the idea of mentored learning to teach as *joint participation in authentic teaching tasks*.

In trying to understand and account for why Nancy and Ken differed so strikingly with respect to jointness, it became clear to me that they operated from qualitatively different sets of ideas about learning to teach; preconceptions about novice teachers and what they need to learn; and different mentor role conceptualizations. I found the notion of *intentionally* helpful for capturing these qualitative differences.

In this chapter I explicate these ideas with illustrations from the cases. I first discuss the ideas of modeling and joint participation--which are primarily about action. I then do a more detailed comparative analysis of Ken's and Nancy's mentoring practices. This sets the stage for discussing the broader idea of intentionally. In the process, I lay out a normative view of mentoring with which I came out of this study. I hope that this view can provoke practitioners, researchers and policymakers to imagine new possibilities for mentoring novice teachers--possibilities that go beyond emotional and moral support, personal friendships, cheerleading, local guidance, sharing of one's bag of tricks or stories, non-interference, provision of help, assistance or advice only when asked, and provision of opportunities for "independent trial and error . . . as the principal route to competence" (Little, 1990, p. 513).

Modeling: Its Role in Mentoring and the Forms it Takes

Modeling can be thought of as a basic modality or a modal form of mentoring, especially at the pre-service level. In fact, one could argue that there is modeling whenever a novice observes a mentor accomplish a teaching task. This is part of what Lortie (1975) calls the apprenticeship of observation. However, as I pointed out earlier, modeling in and of itself does not ensure learning. Learning from a model requires both preparation for

seeing the object of modeling and coaching for practicing it, or as Schön (1987) says, a dialogue of talk and action--a combination of telling/listening and demonstrating/imitating.

The aspect of teaching that comes to mind readily when thinking about modeling is the task of managing instruction or teaching performance. Both Ken and Nancy modeled this aspect of teaching for their novices. Ken did so especially at the beginning of the mentoring relationship when he taught the honors classes--while Mickey observed him and taught the regular classes--or toward the end when he took back the classes progressively after having stepped out to let her practice independently, or when he stepped in while she was teaching. Nancy also modeled teaching performance when she taught first hour--while Betsy observed her and then taught the same content to a different group of students during second hour--and when she taught third hour for several weeks and then turned this class over to Betsy who had been observing.

Modeling teaching performance for novices is important. It allows them to see in context examples of what they aspire to be able to do: weaving together and interactively, i.e., in the action, different kinds of knowledge in the service of students' learning. In particular, modeling teaching performance can help novices construct images of practice and develop a repertoire of interactive teaching moves. Novices can also develop defensible principles of practice provided mentors help them understand the ideas and reasoning behind those moves.

However, Nancy's case tells us that there is more to be modeled in mentored learning to teach than managing instruction. As she argued, mentors must model every aspect of teaching. Besides "how to teach in front of the class," they must model how to plan for instruction, how to write and grade tests, and how to analyze practice. There is ample evidence in Nancy's case that she modeled all these teaching tasks for her novice. The same statement cannot be made about Ken who simply modeled the management of instruction.

The case of Nancy also calls for thinking about modeling in ways other than simply showing. Modeling requires that the observer and the observed have a shared understanding of the focus of the modeling/observation. In other words, modeling does not start with showing. Shared understanding is particularly important to the extent that it helps the observer recognize that which is modeled.

Recognizing the object of modeling is obviously important insofar as it shapes what is learned from the model--especially in cases where neither the intention to model nor the object of modeling are (or can be) disclosed ahead of time. In such cases, the observer must reconstruct the event(s) in order to recognize the object of modeling. However, what a novice can see in a given practice situation is dependent not only upon the frames that he or she brings to bear on it, but also on where he or she is in his or her learning to become a practitioner. In other words, the quality of the reconstruction is a function of what the observer was able to attend to. This, in turn, influences what he or she is able to learn from reflecting on the reconstructed event(s). For mentors, this calls for being more explicit through guiding the novice's observation as much as possible.

Such guidance is apparent when Nancy asks her novice to watch for her pattern of questioning or her passive discipline when observing her; or when--at the beginning of her mentoring career--she would take the novice to someone else's class and ask the novice to watch for specific things that colleague did. This is what helped her understand the need for guiding novices' observations. She initially would simply sit in a class with the novice and during or after class she would ask the novice if he or she saw what she saw. Nancy soon realized that they did not see what she saw. She realized also that her novices were able to see more things after they had had some classroom experience. This led her to decide to give them the opportunity to manage instruction very early in the practicum.

The foregoing suggests that Nancy is clear about what she needs to teach her novices. I did not perceive this kind of clarity or guidance in Ken's practice. He seemed to assume that just watching him teach is sufficient for novices to learn to do the same; that

they would recognize and understand the elements of the artistry of his performance. In fact, one might conjecture that Ken has not conceptualized the elements of his teaching practice; or that he has but the conceptualization remains tacit/private.

To take the idea of modeling one step further, one could argue that modeling is incomplete if there is no follow up discussion of the acts of modeling and observing or if there is no coaching subsequently. Put differently, modeling does not end with showing. The way Nancy worked with Betsy exemplifies this well. Early in the practicum when Betsy observed her teach, their formal interactions during preparation time were devoted to analyzing not only the novice's lessons, but hers as well. Their brief conversations between first and second hours were also occasions for Nancy to coach Betsy. The absence of such formal interactions in Ken's mentoring practice limited opportunities for follow up or coaching. Even if such opportunities were present, the fact that he did not guide novices' observations would limit what they could learn from the model.

Mentoring as Joint Participation in Authentic Tasks

The cases of Ken and Nancy also offer a powerful contrast with respect to mentoring as joint participation in authentic tasks. Although Ken believes strongly in teacher collaboration, there was no real sense of jointness in his work with novices. He did provide opportunities for Mickey to collaborate with another student teacher and for Sheila to collaborate with Heather in planning for instruction, managing instruction and assessing students' learning. But he did not collaborate with them in the same way. While the novices did engage in some authentic teaching tasks, they did so on their own or with other novices, not with him. This is congruent with Ken's belief in the centrality of learning from mistakes. For him, novices learn best through trial and error in context. As a mentor, his role is to provide them with opportunities to have experience, to make mistakes. Then he can give them feedback and mainly critique their performance.

Nancy, on the other hand, scaffolds her novices' learning of specific teaching tasks. She folds the novices into whatever she must accomplish to get the of work of

teaching done. Her novices' participation evolves from peripheral to full with respect to every central task of teaching--preparing for instruction, managing instruction, writing tests and grading them--with asking good questions in the right sequence as both the background and main goal. Thus, for instance, in her work with Betsy, she modeled how to plan by doing all the planning for the first unit while getting the novice's input; she got the next unit started and solicited more input and ideas from Betsy to finish it; finally, for the third unit, Betsy "was in on the planning from the start." As Nancy explains, it was Betsy who initiated the planning meeting.

Another example of the enactment of jointness in Nancy's work with novices was when, on her initiative, she and Betsy worked at helping each other include all students in their lessons. They observed each other and provided data on students that were not included in their lessons. As this was an issue about which Nancy herself had some concern, they worked not only jointly, but they did it around an authentic task of teaching.

The idea of joint participation in authentic tasks has become central to my view of mentoring as a result of this study. It is in keeping with my definition of mentoring as sustained, collaborative, close-to-the-classroom work on teaching involving more experienced/competent practitioners and newcomers to the profession or less competent colleagues (see chapter 1).

The importance of task authenticity lies in the fact that it is in the process of accomplishing genuine tasks of teaching that novices can develop situated knowledge of and for teaching. But novices will learn more effectively if they accomplish those tasks in the company of their mentors.

Jointness in task accomplishment allows mentors to assist novices' performance, model for them their ways of thinking and acting, coach them, provide them with immediate feedback, as well as engage with them in on-the-spot experimentation or practical inquiry. Through joint participation in authentic teaching tasks, mentors can also assess novices in order to modify scaffolding over time. This leads me to propose that

mentoring is about opening and traversing the novice's zone of proximal development *with* him or her. In practical terms, it means working *with* the novice to pinpoint what he or she cannot do successfully without assistance and assisting him or her to do it. As Gallimore, Tharp and John-Steiner (n.d.) pointed out:

> [A] mentor's ideas and behaviors are unlikely to have much impact unless they are reliably implemented into the daily routines and experiences of the learners/mentees. . . . [M]entors must compete with the purposes of everyday activities that were created by the surrounding ecocultural niche. In simplest terms, there can be no significant development from interactions in which the only joint activity is the process [i.e., mentoring] through which this development is to take place. This idea is as old as psychoanalysis: One cannot be told how to become free of a neurosis, one must "work" through the conflict (p. 16).

Likewise one cannot be thrown into a classroom and told to become a teacher. One must be assisted to become one.

As I have already suggested, assistance can best be provided in the context of joint activity. But if the mentor always participates in what needs to be accomplished to get the work done, will the novice ever be able to practice independently? For me, this question reflects a view of independent practice as a goal in and of itself--a goal to be attained as quickly as possible. Ken clearly holds such view. In fact, the way he thinks and acts as a mentor rests upon this view. He wants his novices to experience the full load of teaching as quickly as possible. For him, what a novice needs to learn from him depends on who the novice is and what he or she is capable of. This may be construed as being responsive to the novices' learning needs. However, I believe that it is reflective of the fact that Ken does not seem to have deconstructed his teaching practice into elements that can be practiced and performed individually and then put together. If he has, he obviously places primary emphasis on managing instruction.

Like Ken, Nancy also keeps an eye on independent practice, but she does not think about it in a global, undifferentiated way. It does not mean total withdrawal of assistance by the mentor. A novice could practice managing instruction independently while receiving assistance in other aspects of teaching, e.g., planning for instruction and analyzing teaching

performance. Nancy's novices do have the opportunity to practice managing instruction independently from day one, but she is there to observe them in order to give appropriate feedback during their daily debriefing/planning time. After she fades out, she still assists their planning in one way or another. In sum, Nancy seems to use independent practice as a criterion for assessing her novices' progress and a means for opening their zones of proximal development--which allows her to adjust assistance over time.

The concept of the zone of proximal development challenges over-emphasis on independent practice in mentoring relationships. As Vygotsky (1978) demonstrated, "what is in the zone of proximal development today will be the actual developmental level tomorrow--that is, what a child can do with assistance today she will be able to do by herself tomorrow" (p. 87). Vygotsky called for orienting learning, not "toward yesterday's development, toward stages already completed" (p. 89), but toward new developmental stages; he called for thinking about development, not retrospectively, but prospectively. The interaction between learning and development is that the latter lags behind the former. In other words, "the only "good learning" is that which is in advance of development (p. 89).

Reexamining the Mentors' Frames

Nancy

Frames for action and ways of acting. In Ken's own words, Nancy is "a lady who's excellent at mentoring. She's very systematic. But her subject matter [i.e., science] I think lends itself to that. Our subject matter--social science or history--is kind of, to me anyway, not quite as systematic." Ken went on to argue that science teachers can say "we do this, we do this, we do this. Then next week we're here and in this period of time we will cover these concepts," whereas in social studies "we make it up! . . . So Nancy's got that luxury. She's also very good at it. So part of it has to do with the subject matter and part of it with [who the mentor is]."

As Ken pointed out, Nancy is a very systematic mentor. Her subject matter probably plays a role in making this possible to the extent that there is relatively good agreement among science educators on what expert knowledge means, on sequentiality and scope. Such agreement is less apparent among social studies educators. The main reasons to account for this state of affairs are that, as a school subject, social studies "would seem to possess less sequential dependency with regard to content" and "relatively less coherence than subjects such as math or chemistry" (Grossman & Stodolsky, 1995, p. 6). It draws on various disciplinary areas, e.g., history, anthropology, geography, political science, economics, psychology and sociology. This results "in a broad curricular scope" and "a greater sense of curricular autonomy" among its practitioners than among their counterparts of "more defined and more sequential school subjects" (Grossman et al, 1995, p. 6).

However, there are other equally important--and arguably more important--factors that contribute to making Nancy's mentoring practice desirable. The most important factor, in my view, is that Nancy has a well-developed conception of learning science (conceptual understanding) linked to a constructivist view of science and a view of good science teaching and what it entails, i.e., questioning students in the right sequence to tap their prior knowledge and lead them to the answers. In order to help her students attain conceptual understanding, Nancy consistently and successfully uses a modeling-coaching-fading teaching model. Her clear conception of what it takes to practice the kind of teaching that she has embraced and of what makes it hard for novices has allowed her to conceptualize the learning to teach tasks accordingly as well as the ways in which she can foster novices' learning. In other words, how she thinks and acts as a mentor is closely linked to her teaching practice.

As shown in the case, Nancy tries to induct her novices into the kind of teaching she practices. By making the novices responsible for one class from the very beginning of their work together she leads them to embrace her bottom line, which is students' learning. Once that is established, her role is to help the novices carry out *their* responsibility for

students' learning. The enactment of this role consists centrally in helping novices learn to 1) ask good questions in the right sequence; 2) know students and what they might know; 3) break the mold of delivering information--as she herself had to in the process of making changes in her teaching practice; and 4) look at the big picture for individual lessons, as well as for units and the whole curriculum of a given grade level.

The remaining three tasks on Nancy's list of important things for novices to learn or develop--managing one's time efficiently, resolving the emotional (and logical) dilemma of wanting to be friends with students versus teaching them, and developing a bag of stories--are no less important items on her mentoring agenda. She warns the novices about the first two and helps them address them. She believes the stories will come with time, but this does not prevent her from sharing hers with the novices whenever the occasion arises.

Nancy argued that she does with her novices exactly what she does with her high school students, i.e., modeling, coaching and fading. The only difference is that for novices the subject matter is teaching. Learning teaching entails both *learning the practice of teaching* and *learning to be a teacher* (or learning the role of a teacher). In other words, learning teaching involves constructing a practice and developing a professional identity as a member of a community of practice. Each of these tasks is complex in and of itself. They are intricately intertwined and their accomplishment must occur simultaneously--which adds to the complexity of learning teaching. As Lave (1991) points out, "developing an identity as a member of a community and becoming knowledgeably skillful are part of the same process, with the former motivating, shaping, and giving meaning to the latter, which it subsumes" (p. 65).

Constructing a practice involves developing contextualized knowledge of students and curriculum, learning to transform subject matter knowledge into appropriate learning experiences/tasks for particular students, and learning to reason for and about one's actions. Developing a professional identity has to do with learning the community's norms,

ways of thinking and of acting and interacting. It has to do also with facing and coming to know and see oneself in the role of a teacher (Kagan, 1992; Featherstone, 1993). That entails becoming aware of one's strengths, limitations, weaknesses, interests, prejudices, values and beliefs, innermost fears and commitments; acknowledging and honoring the deep purposes of the practice (while managing conflicting demands of administrators, policy-makers and the community that hosts the school); interacting with colleagues and students' families; assuming responsibility for one's personal and professional development; and situating one's work in a larger context.

If learning to teach is in part about constructing a practice, then practice must be deconstructed for novices and they must then be provided with appropriate assistance in re-constructing it for themselves. Of course the re-constructed practice might look different, but at least the novice will have developed principles to justify such a practice. To deconstruct practice means to conceptualize it. If one has not deconstructed practice, it is hard (or even impossible) to scaffold novices' learning--which requires figuring out their ZPD and deciding what kind and amount of assistance and guidance is appropriate.

Like Ken, Nancy thinks experience is important in learning to teach. However, what sets her apart from him is the word *guided* in having guided experience. She believes that novices need guidance in making sense of and learning from classroom experience. They do not learn from just having experience. Accordingly, she sees herself as guide of novices' classroom experiences and assistor/assessor of their performances. I use experience in the plural to signal the fact that for Nancy, classroom experience is not a global phenomenon. Novices need experiences in various aspects of teaching. Of course that presupposes clarity about what those aspects are. Specifically, it presupposes that she recognizes and articulates the subject matter of teaching.

Mentoring as school-based teacher education. In addition to having thought seriously about her teaching practice and mentored learning to teach, Nancy's success as a mentor has to do with the fact that she takes the role very seriously and invests the time and

effort that it takes to enact it thoughtfully. She finds it hard to believe that "some mentors saw [novice teachers] as a relief to their own busy day. When I, for the life of me, couldn't see how they ever got it that way. Right now every minute I have free I'm working with her [the novice]." According to her, the same thoughtfulness that one shows in one's teaching, one must show in teaching teachers. For her, staying after school to work with a novice, for example, is not an exceptional thing to do. She does not see it as a burden. Nor does she see it as a favor to the novice. Instead, she sees it as an investment. Recalling an instance where her 1995-1996 intern expressed appreciation as Nancy stayed long after school to work with her on something she was having trouble with, Nancy commented: "I told her, `You don't have to thank me.' I look at it now as an investment. Second semester she's going to be so independent. Then I'll have time. I'm thinking of it that way. It's like an investment for what's coming down."

Nancy also finds it hard to separate her mentoring practice from her teaching practice. "There really is no difference between working with an intern and working with your students in your class. It's just the content and what you want from them that are different. But the approach is the same, I think. It's hard for me to separate what I do with [my novice] from what I do with my genetics students." The last sentence highlights the prominence of joint participation in authentic tasks in Nancy's work with novices.

Typically, novices have trouble with either the content, how to represent it or how to present it to students. Nancy is aware of their lack of content knowledge and she sees addressing it as one of her responsibilities. This is evidenced by the fact that there is a lot of teaching of content that goes on during preparation periods. This is in sharp contrast with how Ken deals with novices' lack of subject matter knowledge. The way he dealt (or did not deal) with Mickey's lack of content knowledge for teaching a unit on the Vietnam War is paradigmatic in this respect.

Ken

According to Ken, what novices need to learn or develop includes: 1) making a mental shift from thinking about and focusing on self to thinking about and focusing on students; 2) learning to be a professional person--which entails first and foremost developing a good work ethic (if one does not have it already) and a business-like demeanor; 3) learning to collaborate with colleagues; 4) learning to plan lessons that challenge yet do not overwhelm students; 5) learning "how to evaluate [student] materials on a subjective basis"; and 6) learning to deal with "issues of equity in terms of opportunity and treatment of students."

As shown in chapter 3, the first two items on Ken's list--and to a lesser extent the third--are of utmost importance for him. They constitute the primary focus of his work with novices. In fact, having a strong work ethic is a sine qua non in his view. "If they [novice teachers] are a hard working person, then I figure we can teach them some things" (Ken). What is conspicuously missing from Ken's list is the task of learning to develop what he calls "the big picture." Having framed this task in developmental terms and in terms of learning from experience, he does not work on it explicitly with his novices.

To develop the big picture of instructional units is a critically important task when there is no textbook and one must build one's own curriculum packets as Ken does. As Ken describes the big picture, it requires a depth and breadth of knowledge that he knows novice teachers do not possess. Either because he does not see helping novices develop such knowledge as part of his mentoring responsibilities, or because the task seems overwhelming, he chooses not to address it. Addressing it would entail not only engaging in substantive discussions with the novices--trying to figure out together what to teach and why--but also teaching them the subject matter. In a way Ken *is* a curriculum developer, but because he defines himself as "sort of the idea man" and leaves the novices "on [their] own with respect to individual lessons and instructional forms," they get little opportunity

to engage in the whole process of curriculum development with his assistance. They are curriculum implementors and must "figure out the details."

Another important feature of Ken's teaching practice that is missing from his list of things novices need to learn or develop in order to perform as he does is improvisation. Like the "big picture" it requires a breadth and depth of knowledge that novices do not possess. It also requires what Ken calls "charisma" and performing skills. The question that this raises is: How do you teach or share with others what comes so naturally to you? Ken does not seem to have answered that question for himself. In fact, he thinks of mentoring as helping novices share one's artistry. "But they really can't because we are an artist and it is sort of a genetic thing."

The foundational item on Ken's list is at best tangentially linked to the central tasks of the kind of teaching he practices. Having or developing a good work ethic and a sense of professionalism does not strike me as a central task of teachers' work, although it may be considered an important piece of developing a professional identity.

On the other hand, to argue that newcomers to the teaching profession need to learn that what the teacher does is dependent upon what is going on with students--which requires focusing less on self in order to read students--certainly shows insight into teaching and learning to teach. Making that mental shift is obviously critical in the context of a student-centered teaching practice like Ken's. This seems to be the learning to teach task that Ken has conceptualized the most. He is most articulate about it. In his view, maturity is a critical factor in accomplishing this task; so is being in classrooms as an adult person and thus getting to know students from that standpoint.

Framing the accomplishment of this task primarily in developmental terms and in terms of just being in classrooms is problematic. Focusing less on self can certainly help one read students, but it is not a sufficient condition--even for someone who has already made the mental shift. Reading students *is* a central task of teaching. By extension, learning to do it *is* a central task in learning to teach. But if a mentor considers

accomplishing the developmental task of shifting focus from self to others as a sufficient condition for being able to read students, it is unlikely that he or she will make working on the latter task a central feature of his or her mentoring agenda.

Learning "how to evaluate [student] materials on a subjective basis" is the task that best reflects the kind of teaching that Ken practices. As he has done away with objective, standardized tests in favor of weekly and semester learning journals, individual and collective article analyses, research papers, oral presentations/debates and movie reviews, assessing students' learning and assigning grades have taken a different meaning in Ken's classes. His novices are first confronted with the issue of subjective evaluation in the context of reading, commenting on and grading the first weekly journals. Ken resorts to what he calls "rear-loading" to help them learn this central task of his teaching practice. This is in keeping with his belief that people learn best from doing, making mistakes and then getting a chance to repeat the experience. He does not seem to have entertained the notion that one can learn equally well from successes. This is especially important for novices' fragile ego and nascent practice.

Intentionality in Mentoring

The qualitative differences between Ken's and Nancy's frames for action and ways of acting are indeed striking. I found the notion of intentionality useful in thinking about these differences. Intentionality, as I am using it, entails thinking carefully in order to act in the best interest of one's novice. Specifically, intentionality entails consideration of 1) the central tasks of teaching and learning to teach; 2) where the novice is in his/her learning--in other words the novice's ZPD; and 3) the appropriateness of the kind and amount of guidance and assistance to be offered. To think carefully about these constituent elements of intentionality entails asking questions such as, "What task(s) of teaching will this activity or action help my novice learn to accomplish? How central is it or are they to teaching in general and to the kind of teaching practice that I am trying to help him or her construct? How important is it that the novice learn to accomplish this/these task(s) now?

Is he or she ready to tackle this/these task(s) now? What kind of guidance and assistance does he or she need, and how much of it should I provide?"

To answer all these questions inevitably calls for being deliberate, systematic and structured.

I do not mean to suggest that a mentor must stop for a mental check for every action he or she wants to take. I do not mean to suggest either that a mentor must consider all three elements of intentionality before taking any action; or that he/she must systematically plan every single action. However, I submit that mentors can think at a more general level about their own teaching practice; about how they themselves came to practice that way; about what it takes to practice that way; about what makes learning their kind of teaching hard for novices who may not have experienced it themselves as students; and finally about how they can help novices learn to practice that way.

This implies two things: First, that mentors must be students of teaching, of learning to teach and of mentoring; and second, that good, i.e., educative, mentoring rests upon a vision of good teaching and a theory of learning to teach linked to a role that gets enacted in various activity settings that must be designed and created. At a more specific level, mentors can watch or listen for opportunities to learn as well as for cues or calls for guidance or assistance. Opportunities to learn must be taken advantage of. They do not ensure learning in and of themselves.

This leads me to make a distinction between mentors' actions and acts of mentoring. I submit that not every mentor's action is an act of mentoring. All the things that a mentor at the pre-service level does daily in the context of his or her teaching practice--generally in support of students' learning--are potential learning opportunities for his or her novice. In this sense, some actions that the mentor takes with no conscious intention to help the novice learn to teach can be educative for the novice, provided he or she recognizes or interprets the action as a learning opportunity. But I want to reserve the term "acts of mentoring" for those actions that the mentor takes with forethought about the

novice's learning--which suggests intentionality as defined above. In other words, by acts of mentoring, I mean a mentor's purposive actions in the service of his or her novice's learning. Ideally, one should be able to link such acts to evidence of the novice's learning, but that is not an indispensable condition for calling an act of mentoring an educative one. Potential for fostering the novice's learning may be a more appropriate criterion for judgement.

The foregoing is clearly undergirded by a normative view of mentoring. It is a view that says that mentoring is more than a social function; a view that lays emphasis on the educational dimension of the practice. Mentoring, as I view it now, entails entering and being in a pedagogical relationship with a newcomer to the profession or a less competent practitioner. Pedagogy--the practice or study of rearing, educating, or generally living with children (van Manen, 1990)--embodies the constant need and desire to act thoughtfully on behalf of their well-being and learning. To act thoughtfully means to act upon good intentions, i.e., intentions that are in the best interest of those to whom one stands in a pedagogical relationship.

To view a mentoring relationship as a pedagogical one highlights the educational dimension of working with novice teachers. It brings to the fore the mentor's intentions, their quality and his or her ways of acting upon those intentions. Mentors who take their educational role seriously do not act just as cheer-leaders, emotional supporters or local guides. Instead, they act as *educational companions*--to use a phrase coined by Feiman-Nemser & Parker (1993).

> When mentors take on an educational role, they still help novices cope with immediate problems [what local guides do], but they also keep an eye on long-term, professional goals such as helping them learn to uncover student thinking and develop sound reasons for their actions. Mentors work toward these ends by inquiring with novices into the particulars of their teaching situation, asking questions such as, "What sense did students make of that assignment? Why did you decide on this activity? How could you find out whether it worked?" (Feiman-Nemser & Parker, 1993, p. 716).

To keep an eye on long-term, professional goals suggests a conception of learning to teach as a process that continues beyond a practicum or the entry year into teaching. Such a conception does not warrant setting total independent practice as a goal of mentoring at the pre-service level. To see learning to uncover student thinking as a long term professional goal presupposes seeing uncovering student thinking as a central task of teaching--at least a certain kind of teaching.

The long-term professional goal of developing sound reasons for one's actions points to a particular view of the teacher. In sum, the definition of an educational companion rests upon a vision of good teaching and of the good teacher. The kind of teaching envisioned places students and their ways of thinking at the center of the teaching/learning process. The good teacher is able not only to act responsively and responsibly in his or her transactions with the children to whom he or she stands in a pedagogical relationship, but also to justify his or her pedagogical actions in an articulate manner. The role of the educational companion is to get novices started on their journey toward becoming such a teacher. Learning to learn to teach, then, *is* a legitimate goal of mentoring or educational companionship.

"Inquiring with novices into the particulars of their teaching situation" is a central feature of the enactment of this role. It indicates the need for an inquiry stance and jointness in working with novices, and it suggests that learning to teach is situated and a function of participation in the accomplishment of authentic tasks of teaching.

Nancy's case illustrates the foregoing discussion of the educational companion. The same statement cannot be made about Ken. On several occasions Nancy praised Betsy and refered to her as an exceptional novice. Yet, she argued that Betsy would only "have the tools she needs" to continue to teach and learn from teaching beyond student teaching. This suggests an awareness that learning to teach--especially learning the kind of teaching that Nancy has embraced--is a complex and long process; and that student teaching is only a beginning in that process.

Ken also admired Mickey very much. He found her to be a creative person with a good work ethic, contrasting her with a former novice who "could not chew a gum and walk at the same time." In contrast with Nancy, Ken declared his novice fit to teach after only five weeks into a fourteen-week student teaching. "I'm not really worried about [Mickey] at all. She's going to be fine. The only problem she's going to have is getting a job. I mean literally." However, the case shows that there were reasons to be worried and to provide her with more assistance than she received. The outcomes of the Vietnam War unit are illustrative in this respect.

Towards a Conclusion

The relation between learning and development in learning to teach

The discussion of intentionality has led me to speculate that, in the last analysis, the differences between Ken and Nancy as regards their mentoring practices may have to do with an issue that has preoccupied and still preoccupies (educational) psychologists--that of the relation between *learning* and *development*. A related issue has to do with *the nature of learning*: How much of it is individualistic (intrapsychological) and how much is social (interpsychological)?[30]

Nancy clearly conceptualizes learning to teach from a learning perspective whereas Ken conceptualizes it from a developmental one. She tries to teach what Ken thinks will develop with maturity. Nancy places premium on the transactional nature of learning in learning to teach. While Ken is a strong advocate of cooperative learning and values teacher collaboration, he seems to see learning teaching primarily as a solo activity by the teacher as an independent artisan. These perspectives shape how these two mentors frame student teaching/internship and how they conceptualize and enact their roles.

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[30] The recent exchange between Cobb (1994), Driver et al (1994), and Bereiter (1994) is a good illustration of the dispute between two intellectual communities: adherents to an individual constructivist perspective and adherents to a socio-constructivist/socio-cultural perspective on learning. The dispute is over the location of mind: In the head or in the individual-in-social-action? (Cobb, 1994)

Nancy clearly sees mentoring as a form of school-based teacher education. Ken believes that teacher education happens at the university. Mentoring is about providing novices with opportunities to practice teaching and critiquing their performance. "I have no aspiration for a Ph.D.," he argued, "but I would like to be engaged in teaching other people to teach--which is one of the reasons why I've spent time teaching at the university on a couple of occasions."

Teaching at the university is something Ken yearns for and would like to do on a more regular basis upon retiring from high school teaching. However, he has been consistently critical of university-based teacher education/educators since we met. Asked what would be helpful now to help him be a mentor he argued:

> I think participating. Again that is my crusade. I would like to be more responsible for the education and training of the teachers at the university. Not me personally, but people like me. I think mentors ought to be actively engaged and be one of the principal [people] responsible for the training of and the evaluation of prospective teachers. And not at the end when they just come in their classrooms. Now, there are a lot turf issues here because there are a whole host of people at the university who have been doing that sort of thing and have had that principal responsibility for generations. They are probably in all likelihood gonna have a lot of difficulty with that idea.

What might help besides teaching at the university?

How Nancy and Ken became the mentors that they are points to some ideas about learning to mentor. Both Ken and Nancy have taught at the university. Both made dramatic changes in their teaching practices as a result of working collaboratively with some university-based educators. The difference is that in Nancy's case, the work was focused on helping less competent practicing teachers learn to teach science in new ways through workshops. In Ken's case, the work was focused on exploring together how to teach American history in new ways. Ken's and one of his colleague's classrooms were the sites of this exploration. The work agenda did not include helping other teachers learn to teach in new ways.

Besides Nancy's own dispositions to continuously and systematically reflect on her mentoring practice, the nature of her collaborative work may have lent itself better than Ken's to being drawn upon as a resource for thinking about supporting her novices' learning. This suggests two related things. First, it suggests that mentoring *is* a reflective practice and that learning to mentor is an ongoing process that involves systematic reflection. Second, it suggests that just as teachers need opportunities to think critically about their teaching practice in order to make needed changes, mentors need opportunities to reflect on mentoring and learning to teach.

Reflection in and on mentoring can be fostered by frame analysis--which is by definition an (auto)biographical research act--and repertoire building. These two types of reflective inquiry--of which this dissertation is an example--can 1) facilitate mentors' personal theorizing in order to allow both personal and public scrutiny of their practical knowledge; and 2) provide images of mentors in action that could provoke other practitioners to not only critique their own ways of acting but act differently. In sum, mentors must be students of teaching, learning to teach and mentoring. By adopting such a stance, they can induct novices into their ways of knowing and how they use what they know, as well as help novices cultivate habits of mind that include an inquiry stance and dispositions toward transparency in practice.

In particular, mentors need opportunities to reflect critically on their ideas about learning to teach. As a result of exploring the relationship between ideas about learning to teach and role definition/enactment, it appears to me that role definition/enactment is more a function of how the mentor thinks the learning occurs than it is a function of what he or she thinks novices need to learn. What this suggests is that a theory of learning to teach must include not just ideas about what novices need to learn or develop, but importantly ideas about how the learning occurs in the double sense of opportunities and especially cognitive psychological processes. Clarification of the latter set of ideas has important implications for role clarification and enactment.

Of course this is not a novel idea among educational researchers concerned with teacher learning and learning to teach. Carter (1990) argued that "[t]he question of how teachers learn is clearly basic to the enterprise of teacher education" (p. 291). But she deplored the fact that

> Only recently . . . have researchers begun to systematically frame and study this question. For the most part, attention in teacher education has traditionally been focused on what teachers need to know and how they can be trained, rather than on what they actually know or how that knowledge is acquired. The perspective in other words, has been from the outside, external to the teachers who are learning and the processes by which they are educated (Carter, 1990, p. 291).

Carter went on to argue that "except for vague references to development, change, and growth, investigators are largely silent about the nature of the learning process in teacher education" (p. 295). Finally, she called for frameworks "that focus more explicitly on *what* is learned [by teachers] and that specify more fully *how* that knowledge is acquired" (p. 295).

There has been a lot of research along those lines in recent years (see Kagan, 1992 for a review). However, the how question does not yet seem to be an important item on the agenda of people who design or study mentored learning to teach programs. Practicing mentors are in a good position to contribute to making progress in solving the puzzle posed by this question. Further research by both outsiders and insiders should focus on how mentors think about this question.

For practitioners in particular, it would be helpful to think in terms of a *situated learning to teach curriculum*. I believe that such a curriculum is a necessary condition for a mentor-novice relationship to be productive. Otherwise mentoring is reduced to a haphazard process with limited consequences for the novice's learning. The principal feature of a situated learning to teach curriculum is that it is lived and embodied in everyday activity. It can be conceived of as consisting of a set of ideas about 1) what novice teachers need to learn or develop and why--in other words the content or substantive requirements

of learning to teach and their justification; 2) how the learning occurs in the double sense described above; and 3) opportunities that exist in context and must be taken advantage of or opportunities that must be created to foster learning. Thinking in those terms shifts attention away from the more common focus on mentoring as a social function to thinking about it as an educational practice.

APPENDICES

Appendix 1: Instructions for logs and reflections, and interaction log form

C3: Learning from Mentors
Mentor Teacher Log & Reflection

DIRECTIONS

The Log

For the week of [insert dates] we are asking you to keep a log in which you record all the daily interactions that you have with your novice teacher about teaching and/or learning to teach. These include brief exchanges that may occur before, during or after teaching, as well as more extended conversations.

The Reflection

At the end of the week, please write a reflection about something that you think your novice learned or is learning about teaching and/or learning to teach.

Do not worry if the log seems too brief. You will have an opportunity to elaborate on both the log and reflection in a follow up interview.

C3: Learning from Mentors
MENTOR TEACHER LOG

Please be brief & specific!

Your Name: _____

Date	Interactions Initiated by		Time		Place	Focus/Topic
	You Novice	Other	From	To		

C3: Learning from Mentors
Novice Teacher Log & Reflection

DIRECTIONS

The Log

For the week of [insert date] we are asking you to keep a log in which you record all the daily interactions that you have with any adult in your school about teaching and/or learning to teach. By "daily interactions" we mean brief exchanges that might occur before, during or after teaching as well as more extended conversations. By "any adult in your school" we mean your mentor teacher, other teachers, student teachers, university staff or some other adults in the school.

The Reflection

At the end of the week, please write a reflection about something that you learned about teaching and/or learning to teach during the week.

Do not worry if the log seems too brief. You will have an opportunity to elaborate on both the log and reflection in a follow up interview.

C-3: Learning from Mentors
NOVICE TEACHER LOG

Please be brief & specific!

Your Name: _____

Date	Interactions with	Initiated by	Time From	To	Place	Focus/Topic

Appendix 2: Log coding form and instructions for coding

NC RIL
NATIONAL CENTER FOR RESEARCH ON TEACHER LEARNING

Project C-3: Learning from Mentors
Coding Guide for Logs
June 2, 1993

Purpose of the scheme

The purpose of the proposed log coding scheme is not different from the purpose of the logs themselves, that is, to give us a general picture of the shape of mentoring and other significant interactions that novices have in our various sites. The categories that we identified grew out of the questions we would like to answer using log data only:

1. Whom do novices talk to?
2. How often do novices talk with their mentors?
3. How does the frequency of interactions with mentors compare with the frequency of interactions with others?
4. When and where do the interactions occur?
5. What % of interactions focus on planning and what % on teaching that has occurred?
6. What is the ratio of planned, regularly scheduled interactions compared with informal, spontaneous interactions?
7. What do mentors and novices talk about?
8. How do novices' entries compare with mentors' entries?

How to use the coding scheme

1. Filling in basic information

Fill in or check as follows:[1]
N_/_ or M___ #_1_ — Log#_1_/_3_ — Program___.___High School_ —
E___ or S_/_ — PS_/_ or I___

Note: The mentor/novice pairs have been numbered from 1 to 23 (See attached list of participants).. Thus, N_/_ #_1_ means "novice of pair 1." Pending the choice of pseudonyms, we will use this as a device for identifying individual participants.

Log# _1_/_3_ means that the log being coded is the first of three logs collected in that site. For the sites where data collection is still in progress, just fill in the log number.

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[1] N = Novice; M = Mentor; E = Elementary; S = Secondary; PS = Pre-service; I = Induction.

1

2. How to code

It makes sense to code vertically, that is, for each interaction on a given day, check the appropriate box(es) in each category (from A through K).

3. Unspecified length

Some participants use phrases like "all day long," "moments," or "brief moments" to indicate the length of interactions. Code such phrases as 0-5 minutes.

4. More than five interactions per day

The form can accommodate up to five interactions per day. In case there are more than five interactions on a given day, please use the boxes under Saturday and Sunday, as there will be no entries on those days in most cases. However, if there are entries on those two days, use the unchecked boxes and make a note of it under comments, or on a separate sheet to differentiate between entries.

5. More than one topic per interaction

If an interaction has more than one topic, please check all the relevant topics in category K, as well as all the relevant points of reference in category H.

6. Interactions not involving the mentor

If the novice had interactions that did not involve the mentor, it is very unlikely that they will be found in the mentor's log. Please code such interactions as "not relevant" in category I. In case an interaction occurred only once with a particular individual (other than the mentor), check "not relevant" in category J.

7. Summary of the week

Note that category M is not relevant with respect to mentors' logs.

8. Other comments

In the space provided, please write anything that the coding form cannot capture, based on your knowledge of the participants. (For instance, an interaction may have several topics, but you may know that one of them was more central.) Use this space also to list the problems you encountered while coding.

Interactions	M ___ or M ___ # ___ -- Log # ___ / ___ -- Program _____ -- ___ & ___ or S ___ -- PS ___ or I ___							
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
A. Length							
1. 0-5 minutes	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []
2. 6-15 "	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []
3. 16-30 "	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []
4. more than 30	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []
5. not indicated	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []
B. Number of people							
1. two	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []
2. more than 2	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []
C. The people							
1. mentor or novice	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []
2. peer(s)	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []
3. univ. pers.	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []
4. other teachers	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []
5. admin.	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []
6. others	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []
7. don't know	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []
specify:	---------	---------	---------	---------	---------	---------	---------
D. Initiator(s)							
1. mentor or novice	[] [] []	[] [] []	[] [] []	[] [] []	[] [] []	[] [] []	[] [] []
2. self	[] [] []	[] [] []	[] [] []	[] [] []	[] [] []	[] [] []	[] [] []
3. others	[] [] []	[] [] []	[] [] []	[] [] []	[] [] []	[] [] []	[] [] []
4. not indicated	[] [] []	[] [] []	[] [] []	[] [] []	[] [] []	[] [] []	[] [] []
specify:	---------	---------	---------	---------	---------	---------	---------
E. Place							
1. classroom	[] []	[] []	[] []	[] []	[] []	[] []	[] []
2. other places in school	[] []	[] []	[] []	[] []	[] []	[] []	[] []
3. out of school	[] []	[] []	[] []	[] []	[] []	[] []	[] []
4. not sure	[] []	[] []	[] []	[] []	[] []	[] []	[] []

1

Interactions (cont'd)

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5

F. Type
1. face-to-face
2. over phone
3. in writing

G. Number of topics

H. Point of reference
1. one
2. more than 1

1. before event
2. after event
3. during event
4. not time or event-related
5. not sure

I. Is Interaction Recorded on both logs?
1. yes
2. no
3. not relevant

J. Does Interaction occur at a regular time?
1. yes
2. no
3. not sure
4. not relevant

K. Topic(s)
1. classroom discipline/management/culture
2. student behavior - individual
3. group behavior
4. progress/learning - individual student
5. progress/learning - collective
6. evaluation/testing/assessment - formal
7. homework
8. student needs - social, personal

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Interactions (cont'd)

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
9. school	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []
10. routines/procedures/schedule	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []
parents	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []
11. teacher role/professionalism	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []
12. plans - general	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []
13. plans - specific	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []
14. teaching/ pedagogy - Novice	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []
15. Novice's progress	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []
16. Novice's personal/emotional concerns, needs, status	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []
17. Teaching/ pedagogy - Mentor	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []
18. Teaching/ pedagogy - Other	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []
19. General Ideas	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []
20. about program	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []	[] [] [] [] []

Summary of the week

L. Frequency of interactions with mentor (over the course of the week)

1. Fewer than once a day   []
2. Once a day   []
3. More than once a day   []
4. Fewer than 3 times a week   []
5. 3 to 5 times a week   []
6. More than 5 times a week   []

M. Frequency of interactions with others (over the course of the week)

1. Fewer than once a day   []
2. Once a day   []
3. More than once a day   []
4. Fewer than 3 times a week   []
5. 3 to 5 times a week   []
6. More than 5 times a week   []

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Appendix 3: Mickey's concept list for the Vietnam War unit

TITLE: "WE – AT – NAM"
a look at the varying perspectives
of the Vietnam War
OR,
THEME: "different strokes for
different folks!"

terms:

Gulf of Tonkin Resolution
Tet Offensive
Kent State tragedy
Geneva Accords
SEATO
Pentagon Papers
POW/MIA
My Lai Massacre
Hawks
Doves
dissidents
ARVN
VC
Khmer Rouge
Paris Peace Accords
17th Parallel

working concepts:

Colonialism
Freedom
Democracy
Communism
Domino Theory
Containment
expansionism
isolationism
Militarism
Pacifism
imperialism
Vietnamization
Nationalism
Nepotism

Appendix 4: Mickey's "Vietnam in 21 questions" worksheet

Vietnam in Twenty-One Questions

This is what you've all been waiting for, the game we promised you, the adventure of your life! Your task is to work independently (by yourself) and try to answer as many of the following questions as possible. You will be given library time and, as Mr. L. mentioned in class, there will be a prize (woo-woo; bribery!) It is imperative (really important) that each of you try to complete this as it will facilitate your future assignments.

ANSWER

1. Who formed the Vietminh (Independence) League and why? Communists + other nationalists to fight Japanese

2. Why did the Vietminh attack the French after World War II? wanted freedom from French

3. Who was the Bao-Dai and why was he significant? French puppet leader int Saigon — supported by U.S.

4. What happened at Dien Bien Phu on May 7, 1954? Vietminh pierced French, U.S. wouldn't help French

5. What was decided at Geneva in 1954 that specifically dealt with Vietnam? cease fire + Vietnam divided into North + South

6. Who was Ngo Dinh Diem and why was he important? neither Bao Dai — an anti-communist — took over South Vietnam against Geneva Convention 1954

7. How did we support Diem until 1961? Gave $ to Diem

8. How did John F. Kennedy try to direct the Vietnamese conflict?
Sent troops to help as advisers + helicopters & pilots

9. What was the ultimate fate of Diem?
he was overthrown and executed

10. What was the Gulf of Tonkin Resolution?
President could take any necessary measures to repel & attack against US troops

11. Why did we bomb North Vietnam in February, 1965?
Stop North Vietnamese from going into South

12. Under Johnson and his commander of MACV (Military Assistance Command) General Westmoreland, how would you characterize the escalation of the war? Rapid, but not successful.

⦅13.⦆ What did the National Mobilization Committee to End the War do on April 15 and October 21, 1967?

14. Describe the effects of the TET offensive of January 30, 1968.
① War had spread to several cities ② body counts exaggerated—we weren't winning

15. Why did Johnson announce that he would not be a candidate for reelection in 1968? he would lose

16. What was Nixon's plan for "winding down the war"?
gradually withdrawal troops + let Vietnam take over

17. What effect did the My Lai Massacre have on American Anti-war movement gained strength—riots-strikes

18. Describe the Kent State tragedy (May 4, 1970).
Students rioted, 4 students killed by National Guard.

19. Why did Nixon resume bombing of North Vietnam and mine the harbors of Haiphong and other ports?
To "End the War"

20. What did the publication of the Pentagon Papers reveal?
We were lied to about why we were there and what occurred

21. How did the war finally end?
South Vietnam surrendered after U.S.
Pulled out in 1975.

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