

Motivation to learn during student teaching

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RUNNING HEAD: Motivational Filters

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ABSTRACT

Preservice teachers (interns) are motivated to learn and take up teaching practices that appear useful to them in becoming good teachers. In this paper, we argue that judgments about which practices to take up are made on the basis of *motivational filters* employed in social contexts by interns as part of self-regulated learning. These filters are complex, arising from student teachers' experience in multiple learning contexts, including their own experience as secondary students, in teacher education courses, and as teacher interns in secondary schools. Components of filters include interns' developing teacher identities, their relationships to those promoting the practices, and the perceived fit of the promoted practice with interns' conceptions of the "real world" of teaching (Nolen, Horn, Ward, Stevens, & Estacio, 2005). In our person-centered multi-context ethnography of teacher development, motivational filters changed as interns participated in the distinct social contexts of university teacher education and practice in secondary schools. In this paper we take a situated perspective to describe the processes of change and the resulting changes in interns' motivation to learn, with particular attention to the role of multiple contexts. We draw connections to several motivation theories, including goal theory (Ames, 1984; Nicholls, 1989; Nolen, 1996; Pintrich, 2003), future time perspective (Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004), self-regulated learning (Boekaerts, 1995; Zimmerman, 2006), and to situated theories of learning and identity development (Grossman, Smagorinski, & Valencia, 1999; Holland, Jr., Skinner, & Cain, 1998; Lave & Wenger, 1991), and discuss implications of this research for motivation theory and for teacher education practice.

Until recently, achievement motivation theories have attempted to explain motivation to learn in terms that work in any learning context. Largely, these theories have focused on the individual as the unit of analysis, and on content (or aspects of content) as an explanatory variable. For example, Middleton and Midgley (2002) wrote that contexts with a “press for understanding” were likely to lead to increases in learners’ mastery motivation. In Deci & Ryan’s (2000a) self-determination theory, autonomy-supportive contexts provide support for learning that is perceived to be self-determined, while controlling environments do not. Individuals have been thought to have particular orientations to learning which they bring to new contexts; theorists have suggested that these orientations or general traits then interact with contextual variables to produce motivation to learn (Nicholls, 1992b; Nolen, 1988; Thorkildsen & Nicholls, 1998).

A common, though sometimes unstated, goal of such theories is the description and production of learners who are motivated and have the requisite knowledge and strategies to be independent or “self-regulated learners.” Perry, Phillips, & Hutchinson (2006) describe such learners as “metacognitive, intrinsically motivated, and strategic (p. 238).” Similar descriptions are found in other research on self-regulated learning. These learners are thought to use this set of skills and motivations to learn effectively in a wide range of settings (Boekaerts, 1995; Corno, 2001; Rheinberg, Vollmeyer, & Burns, 2002; Wolters, 2003; Zimmerman, 1989; Zimmerman & Martinez-Pons, 1990).

In the last decade, however, motivation researchers have begun to reconsider the role of context in motivation. Concepts from sociocognitive, sociocultural, and situated learning perspectives have been employed to explore how motivation arises in the

particular contexts in which learning activity is embedded (Turner, Meyer, Midgley, & Patrick, 2003; Turner & Patrick, 2004; Volet, 2001; Walker, Pressick-Kilborn, Arnold, & Sainsbury, 2004). While sociocognitive theories of motivation tend to focus on the individual and to take a variable-centered approach to studying learning contexts, situated perspectives consider persons acting in social contexts as the essential structure: in a sense, individuals are always “contextualized” (Turner, 2001). A number of advantages accrue to a contextualized approach, not least of which is the promise of describing the development of motivations to learn, something that has largely eluded motivation researchers to date (Turner, 2001; Volet, 2001).¹ Taking a sociocultural or situated approach to motivation, however, raises questions about the description of self-regulated learners as individuals dealing with various contexts to direct their own learning. If motivation is situated in social contexts, a more accurate model of the learner would focus on the coregulation of relationships, values, resources, and meanings from which learning arises through activity (Hickey & McCaslin, 2001).

Identity theorists have faced some of the same problems as motivation theorists: Where does individual identity end and identity-in-context begin? To what extent does identity cross contexts? Can we conceptualize of identity apart from the social contexts in which it is necessarily embedded? Adults entering professions must go through a process of identity development. Students *become* teachers or doctors or social workers over time and in various contexts. In sociocultural/situated theories, members of groups are

¹ Ryan and Deci (2000) have described a process of internalization of motives in which values held in the social context (e.g., family, school, culture) are progressively internalized when conditions support the development of competence, self-determination, and relatedness. Evidence to support these claims have come from survey and experimental research, but not from longitudinal examinations of developing learners in different contexts.

identified through the practices they use in cultural worlds (Holland et al., 1998; Lave & Wenger, 1991). When one describes a person as a certain “kind of teacher,” the identifying features are almost always the practices they employ (e.g., the “warm demander” who cares for and supports his students but demands that they strive for high standards). When students discuss the kind of teacher they want to be, their “teacher identity,” they speak of specific teaching practices which they affiliate with or reject. To the extent that student teachers learn to teach by taking up the practices promoted by their instructors, supervisors, or cooperating teachers, they are forming new identities as teachers. Motivation to learn these practices, then, is central to the professional identity development that is learning to teach.

In our study, we investigated the relationships among identity development, social contexts, motivation to learn and learning to teach. Using a situated perspective that draws on activity theory, anthropological accounts of identity development, and previous accounts of teacher learning, we describe how novice teachers make motivated decisions about what teaching practices to learn, how well to learn them, and whether or not to incorporate them into their repertoire of teaching approaches.

Motivation and Identity in Figured Worlds

Grossman and her colleagues used activity theory to frame one of the few longitudinal studies of teacher learning to follow novices from their formal teacher education program through their first year of teaching (Grossman et al., 1999). Using observation and interview data, these researchers studied how beginning teachers’ identities and practices developed through mediated interaction in the different settings and arenas in which their professional development takes place. In our work, we also take

a situated perspective that draws particularly on the work of anthropologist Dorothy Holland and her colleagues (Holland et al., 1998), and activity theorists Jean Lave and Etienne Wenger (Lave & Wenger, 1991). Like Grossman and her colleagues, however, our interest is in how individuals negotiated becoming teachers simultaneously in multiple contexts.

We use Holland's term "figured worlds" to describe social contexts as historical phenomena to which members are recruited or into which people enter, which themselves develop through the practices and interactions of their participants (Holland et al., 1998). Graduate students (hereafter referred to as "interns") are recruited into the world of university classes, seminars, and peer groups we call "TEPworld." TEPworld was constructed through the work of faculty and teachers who designed the teacher education program, but continues to evolve through the participation of all its members, including students themselves. Likewise, each intern also becomes a participant in his or her "Fieldworld," which consists of a middle or high school math or social studies department, classes of students, one or more master teachers called Cooperating Teachers (CTs) in whose classrooms they teach and who most closely supervise their actions, the other teachers and sometimes other interns in the department, and a University Supervisor (US) who with the CT evaluates their teaching and helps set goals for their improvement.

Figured worlds are socially organized and reproduced, they divide and relate participants, and depend upon interaction and intersubjectivity for perpetuation. To the extent that interns begin to identify with these figured worlds, they behave as if adopting or adapting the promoted teaching practices of that world will lead them to become good

teachers. However, the meaning of these practices may be different in different worlds. The characteristics of the many Fieldworlds vary, but almost all contain some assumptions, activities, and values that are in conflict with those of TEPworld (Grossman, et al, 1999). The interns, as the only ones who participate fully in both worlds, are responsible for deciding how to negotiate these conflicts as they recontextualize practices learned in one world into the other.

In the beginning of the TEP, interns are “newcomers” (Lave & Wenger, 1991) in both worlds. As newcomers, they are

“caught in a dilemma. On the one hand, they need to engage in the existing practice, which has developed over time: to understand it, to participate in it, and to become full members of the community in which it exists. On the other hand, they have a stake in its development as they begin to establish their own identity in its future (Lave & Wenger, 1991, p. 115).”

The intern’s situation differs in an important way from those described by Lave & Wenger, however, in that both TEPworld and Fieldworld are temporary contexts. In addition, interns imagine a third “world,” that of their as yet unknown future classrooms, school, and community, for which the TEP is preparation. Therefore they may hold themselves separate, at least initially thinking of their developing teacher identities as individual and under their control. This may encourage interns to “pick and choose” from among the practices promoted in TEPworld and Fieldworld those that fit with their imagined teacher self.

This selection from among practices promoted in their learning contexts is the focus of this paper. By looking closely at students becoming teachers in specific contexts, we have developed a theory to explain developmental changes in their motivations to learn. These motivations are situated in specific social contexts and attached to particular

identities in those contexts. But interns must travel between sometimes conflicting figured worlds, working on an imagined future teacher identity at the same time as they develop identities, positions, and motivations in their present worlds.

Data Sources

In the study from which this analysis is drawn, we collected several kinds of data from the members of TEPworld and Fieldworld. In TEPworld, we observed and wrote detailed field notes multiple times in each of the courses in the university program; all 60 interns and their instructors were participants. Eight focal interns (4 math, 4 social studies, with 2 male and 2 female students in each subject area) were selected from among volunteers in those disciplines for in-depth study. The In addition to the TEP course observations described above, these 8 focal students participated in 7 observations and 60-120 minute interviews in their student teaching field placements. We interviewed their cooperating teachers (CTs, N=8) and university field supervisors (USs, N=4), and TEP course instructors (N=12) about interns' contexts for learning to teach, their views of good teaching, and their roles in helping interns to become good teachers.

Participants. The TEP intern cohort comprised 53 students and had the following demographic background: 68% female and 89% white. There was one African-American student, one Latina student, and four Asian or Asian-American students. We attempted to maximize diversity in the focal student sample along several dimensions, including age, marital status, ethnicity, immigrant status, and teaching experience, while keeping the two subject area groups roughly equivalent on these dimensions. There was 1 Chinese-American male (math) and a White immigrant in each group (1 male, 1 female), and 5 White Americans.

Timeline. The TEP is a 5-quarter program beginning in the fall of one academic year (September, year 1) and ending in the winter of the next (March, year 2). Starting with a beginning of the year experience, interns are either in schools or at the university, with increasing time and responsibility in the field each subsequent quarter. Observations of TEP courses began in Fall of year 1 and continued throughout the program for a total of approximately 100 hours. Based on our prior knowledge of the program, we knew that methods courses were a source of affiliation and identity development with secondary program interns, so we paid particular attention to courses in math and social studies methods, but we observed in all TEP courses. We began field observations in the second (Winter) quarter, when interns first enter their primary student teaching context, where they stay for 3 weeks. In spring, they return to the same field placement for 4 weeks. In the fall of year 2 interns return to the field for full-time student teaching for 2-3 months, from inservice weeks before the school year through all or part of November. In the final quarter of the TEP, interns return to the university full time. We observed and interviewed interns once in winter, twice in spring, and three times during full-time student teaching in the fall. Our last preservice interview occurred at the end of their final (winter) quarter.

Intern interviews. Interviews were conducted during interns' field experiences, taking place immediately after a field observation. In this TEP, interns spend increasing amounts of time in the field each quarter, in blocks of time in which their TEP courses are suspended. Interviews took a past, present, and future structure to elicit interns' developing views on their teaching, the social contexts in which they learned to teach, promoted teaching practices, and teacher identity. Questions were developed to avoid

shaping students' responses while maintaining the likelihood of obtaining information relevant to the study's questions. The "past" portion of the initial interview focused on intern's experiences as students, tutors, camp counselors, and teachers prior to entrance into the TEP, their reasons for becoming teachers, their entering expectations for teacher education, and their experience in the program to date. Between interviews the research team discussed issues that arose in just-completed interviews across cases (e.g., assessment, classroom management) as well as issues that were particular to an individual or subgroup. These issues became a focus of the "past" portion of the next interview. A complete list of interview questions is provided in the appendix.

Interviews with CTs, supervisors, and instructors. Each instructor, CT, and US were interviewed once for 30-60 minutes. Interviewers did not ask about the 8 focal students specifically, but rather elicited descriptions of participants' views of good teaching, their own roles in helping interns become good teachers, and the social contexts in which they operated. Instructors were asked about details of their courses and about the learning climate and social relationships in the focal participant's class. Supervisors and CTs were asked about the structure and climate for learning in the field setting, including their own goals for students, their roles for supporting intern's learning, and the social structure of the department and school in which students practiced. A complete list of questions is provided in the appendix.

Researchers' relationship to the TEP. Nolen and Horn are instructors in the TEP we studied, so we took several steps to avoid perceptions of coercion and reduce responses based on social desirability. Recruitment of volunteers was conducted by Ward, who was a PhD student not associated with the TEP. We did not recruit and select

focal participants until after Nolen's instructor role was complete. Horn did not know the identity of participants in her course until after her instructor role was complete. Neither ever interviewed or observed interns who had been in their classes, so their only relationship with their assigned focal participants was in the context of the study.

Analytical Strategy

In general, we took a grounded theory approach to the data, looking first for general themes of interest/motivation, identity, and social context ("figured worlds"). We organized and analyzed our fieldnotes, artifacts, and interview transcripts in the qualitative data analysis program, ATLAS.ti. Our initial simple coding scheme quickly developed into a rich array of observations of how interns position themselves in figured worlds of teaching, and how they use or resist practices as practical and conceptual tools (Grossman, Smagorinsky, & Valencia, 1999) in figuring their identities. Because we have collected data from interviews and fieldnotes of university classes and student teaching (and other field experiences), we were also able to look across these data sources for instances of "representations of teaching," statements about past, present, and future selves, and their relationships with peers, faculty, and cooperating teachers.

As we individually and collectively coded data, we also began to notice the reasons interns presented during interviews for wanting to learn or not wanting to learn different aspects of teaching, and what to attend to in the process. We coded these various statements "filters." Much of the time, interns were talking about what they thought would make them a better teacher, and how they thought what they were learning related to those teacher identities (forms of utility filter). It became apparent through our coding and analytical discussions of data that there were many components to the

“utility” filter, and also that interns made other statements both during interviews and in university classes about reasons for learning various aspects of teaching. This led us to create a taxonomy of motivational filters and to check these formulations across cases and across *time* for each case.

This latter strategy was implemented to study how the motivational filters of an individual-in-practice changed over time and across contexts. In ATLAS.ti, we created hyperlinked “chains” of instances of motivational filters as an individual used them at different times during the program, and paid close attention to the contexts in which the filters were both implemented and developed.

Findings

Using Motivational Filters

As we analyzed fieldnotes and interview transcripts, it became evident early on that interns were making active choices about what to learn in courses, and to what extent. Interns actively questioned the practices instructors promoted, both in small and large group discussions. The following exchange took place in Adolescent Development II, a third-quarter course that focuses on classroom management, differentiated instruction, and English language learners. The interns are discussing a reading on behavior management in light of their previous 3-week field experience.

FS1: How do you model for your students to pay attention to you? Seems condescending.

FS2: Maybe it's more for elementary students. I think the choices and structure aspects are more universal.

FS3: I liked how [the author] broke it down to the different types of reinforcement.

[Fieldnotes Apr 14, 2005, ADII]

In this small group discussion, the first intern questions the feasibility of using a particular promoted practice (modeling paying attention), given her representation of secondary teaching with adolescent students and her future identity as a teacher, including her position and relationship to her students. She may be drawing on her own experience as an adolescent student, or on her recent field experience with adolescents, or both. The second intern agrees, but uses her representation of adolescent students and secondary classrooms to suggest that the other promoted practices are a better fit.

In this example, it is possible to see the role of social context in shaping students' judgments about what practices to take up in their own repertoire. The first intern is testing her critique of this practice by raising it in her "base group," a group of students who have been working together for about three weeks in this course. She is supported by the second student, but also challenged to be open to some of the author's message. The third intern then adds another aspect of the reading that she found useful, possibly encouraged to do so by the second intern's statement.

Our interpretation of this and similar observations as exemplars of using motivational filters was further supported by focal student interview data. In the first interview, we asked focal students "what kind of student" they were in high school and college, and what kind of student they were now. Dania, a math intern and self-described diligent high school student, captured the self-regulatory approach she and other interns used in classes:

Dania: I come to class, I pay attention, I don't promise to take notes and I don't promise to have done the reading ahead of time, but at the same time I'm trying to pick up what sounds important. So like Assessment, I may not find it the most interesting of courses but I can see how useful it is. So I'm trying to pay attention to that and actually do some of the reading. [*Dania, Interview 1, Feb 14, 2005*]

This quote captures what we have come to call a *utility filter*. “What sounds important,” in Dania’s view, is anything she is likely to find useful in her own teaching. Unlike descriptions of self-regulated learners found in the literature, which emphasize motivated, diligent, and strategic students, many of the adults in this TEP seemed to be self-regulating by allocating time and attention only to certain promoted practices. Other practices and ideas were being “filtered out.”

Being capable graduate students, TEP interns realized they may have to learn to write or talk about a practice to satisfy an instructor, but that this only required a surface-level familiarity, not the deep and ongoing plan-practice-reflect cycle they would need to employ to fully take it up and be able to use that practice. The context of university classrooms contributed to the success of this kind of selective effort:

Dania: There are other classes where the professors don't check on the reading very carefully at all so I don't do it.

Interviewer: And that's different from the way you were in high school?

Dania: In high school I did everything I was supposed to do.

[Dania, Interview 1, Feb 14, 2005]

This comment reflects both a change in strategy and a change in Dania’s identity as a student. In her current position as a graduate student in a professional preparation program, she feels her role has changed from the “good student” who obediently studies what is put before her, to critical driver of her own education as a teacher. Her confidence in this approach so early in the program suggests that she has a clear and (to her) convincing representation of what secondary math teaching entails, based largely on her experience as a student (Grossman et al., 1999; Lortie, 1975). Inexperienced interns may

not realize that their representations of the “real world” of teaching may be oversimplified or incomplete.

By itself, the fact that interns were making conscious choices about which ideas and practices to take up is not surprising, and does not take us too far from current theories of motivation and self-regulated learning. But these data, and the larger corpus they represent, suggest that making a utility judgment or other decision about what to filter in or out is based on a complex relationship of individual in context, across multiple contexts. *How* students make these decisions, the nature of these filters and how they develop and change over time in social contexts became the focus of our motivational analysis.

The Nature of Motivational Filters

In our data, we identified a number of filters in use at various times. These included interns’ history as students, their personal interests, their relationship to the source of the promoted practice, their own values as a teacher as projected into their future classroom, and their view of the “real world of teaching.” Initially, all of these filters were self-referenced rather than data-driven, although this began to change during full-time student teaching for most interns. Three kinds of filters are described in more detail below.

Individual Interest. Interns are college graduates with degrees in mathematics, biology, history, and the like. They could pursue a variety of possible careers. Many come to the teacher education program after working in other fields, after teaching in other venues (e.g., camps, coaches, employee educators), or after experience as emergency-certified teachers. Some interns are interested in learning about adolescents,

most about learning and teaching, and particularly about teaching their subject area specialty. The teacher education program provides instruction in these and other areas, including philosophy, educational history, and multicultural education. Some interns find that one or more of these courses matches a well-developed interest. Most of the history/social studies interns, for example, found the class on democracy and education interesting. Some, like Abe, had a long-term interest in learning about other people's thinking, which broadened the field of relevant courses:

Every one of the classes that we've taken so far would have been things I would have chosen to take anyway. So it's still very much that intellectual curiosity about everything that drives me in the classes. (Abe, Interview 1)

Abe saw the Math Methods course as an opportunity to pursue and deepen his interest in thinking and understanding, especially as it related to his subject interest (mathematics).

The best, the number one thing [in the program] for me has been the two quarters of the methods course. Yeah, the stuff that we've been studying in there has been real interesting and practical. ...The philosophy of teaching definitely...resonated. The idea of inquiry based learning and going after like, kind of the deeper meaning like for math, instead of just algorithmic stuff, a focus on understanding. (Abe, Interview 1)

Abe's belief that the material was both interesting *and* practical suggests that he sees the relevance of this aspect of TEPworld for his future teacher identity. As our observational data show, he was willing to try out or take up the strategies and concepts

he learned, possibly incorporating them into his teaching identity; learning was not just a matter of task orientation an intellectual curiosity.

Histories as students

Interns' memories (and current experiences) of their own identities as students served as a powerful filter. Lortie (1975) wrote that novice teachers' years of observing teachers in school function as an apprenticeship of observation – different from other apprenticeships because the observer never practices. This conception may miss an important point: Interns retrospectively reconstruct the *effect* of their teachers' practices on them: their emotional and cognitive responses to those practices. Far from just observing, they participated in the same actions as their teachers, according to their roles and the interpretive structures in those figured worlds.

In the following example, the assessment class had just finished a lengthy whole-class discussion of the problems associated with giving “zero” grades for late work. The instructor had contributed to this by stating her belief that, contrary to common belief, this practice did not mirror the “real world” of work. She pointed out that in the real world of work, adults are often late with assignments, but although there are consequences for this, employers don't act as if the work was never done.

Student A: sometimes as a student, it was frustrating when teachers accepted late work because I handed some things in on time.

Student B: I feel the same way, too, so I think students should lose a percentage of something if they turn something in late. You take that penalty in order to get something. I think that's fair. [*Fieldnotes*,

Assessment class, Feb 28, 2005]

The two students' memories of their experiences as students serve as motivational filters, denying the applicability of the instructor's argument. Student B's agreement serves to affirm A's existing position, uniting against the instructor's promoted practice.

Filters related to the source of information

Interns in our study used filters related to the source of the practice or idea being promoted. These included the respect or affiliation they felt with the source, the source's position relative to the intern, their power in their figured world, and the extent to which they saw the source as "in touch" with the real world of secondary teaching. Ryan and his colleagues (Ryan & Deci, 2000b; Ryan, Stiller, & Lynch, 1994) have argued that

"quality of relatedness to others is a major influence on processes of internalization such that values and practices are more likely to be adopted as one's own and experienced as volitional or self-determined when conveyed by [those] to whom one feels positively related" (p. 230).

We found evidence to support this position in our data, but found that relatedness was bound up in sources' identities in specific figured worlds, including their position and power relative to the intern.

Relationships with instructors. Methods instructors were seen as important sources of useful information by the interns in our study, and the use of filters during methods course to screen out practices was infrequent among our focal interns. Both the Math Methods and Social Studies Methods instructors were highly respected for their knowledge of "good teaching" and "modern practices." Both instructors are well-regarded for their work with practicing teachers, and both have institutional power through both grades and the writing of employment recommendations. Interns tended to

identify with these instructors, incorporating their views of good teaching, perhaps because they appeared to share common goals as well as knowledge and interests in subject matter. After the end of the two-quarter methods course, both groups of interns expressed a wish for additional courses with those professors, some visiting them in their offices for consultations. We observed the focal interns in our study trying out and taking up at least some of the practices promoted by these professors.

Relationships with Cooperating Teachers. Learning from knowledgeable others happened in Fieldworld as well as TEPworld. Interns varied in the level of respect and identification they felt for their cooperating teachers. To some extent this depended on whether the practices CTs modeled and promoted were similar to those promoted by the methods instructors. CTs had the advantage of immediacy; since try-outs occurred in Fieldworld, CTs and University Supervisors were best-placed to provide feedback. The practices they promoted were likely to be in response to a perceived need on the part of the intern, and could be immediately tried out. Not all CTs were friendly to TEPworld's views, and some described TEPworld-promoted practices as "unrealistic" or "ivory tower" ideas.

Interns also judged the similarity between their CT's practices and their own current or future identities. Brett, a former emergency-certified math teacher had undergone a major change in his identity and practices in TEPworld, resulting in changes to his motivational filters. He subsequently identified his CT with his *former* (now "bad") teaching identity, which made it difficult for him to view her input as valuable. In the system of teacher employment, both methods instructors and CTs write recommendations for graduating interns, but the CT's evaluation often carries greater weight. University

field supervisors are responsible for the formal evaluation for certification. This gives CTs and USs considerable power of position over the intern, and can result in the intern performing their promoted practices as a form of “doing school” – satisfying a more powerful person long enough to garner a favorable report.

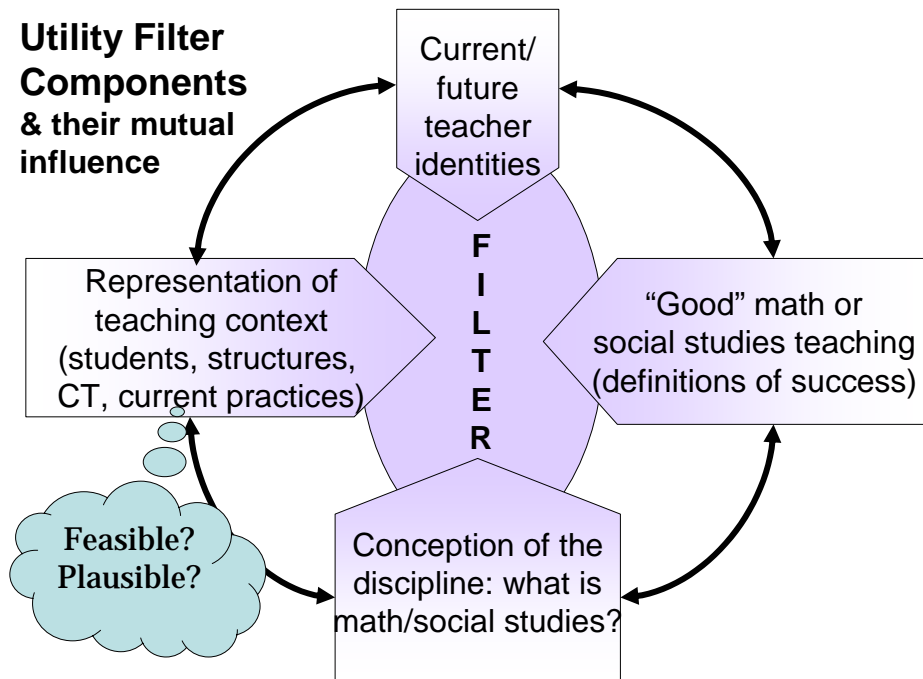
Relationships with Peers. Peers were also accorded positions as valuable sources of information, as illustrated in the discussion above. Interns increasingly turned to each other while they were in TEPworld, especially during the third term when they no longer met regularly with their methods instructors. Some classes provided more opportunities for interns to collaborate, and some instructors specifically encouraged them to serve as sources of feedback and ideas for each other, either through pair or small group projects, or through role-plays of teaching situations. A subgroup of social studies interns also met regularly in local cafés and pubs to discuss life in their various figured worlds. Several of the participants in our study mentioned the cohort structure, where students share many classes, as a strength of the program. Interns often mentioned learning from their peers. Karl, a history/social studies intern, remarked in his first interview, “I’m really impressed with how smart [my fellow students] are, and how much I can learn from them.”

As described earlier in this paper, peers interacted in TEPworld and Fieldworld contexts, and could influence the filters of their fellow-students. Particular students were positioned by their peers as “experts” of one sort or another, often due to a perception of greater experience in teaching. Two of our focal interns had taught before, and their peers often turned to them both in and out of class for opinions or examples. Sometimes peers were positioned over instructors as sources of useful information for their greater

connection to a perceived “real world” of teaching. For example, Brett offered a well-attended workshop on classroom management in response to a general feeling that the “official” part of TEPworld, including instructors, was not providing enough guidance or specific practices were being filtered out.

Filter Development Leads to Changes in Motivation to Learn: The Case of Utility Filters

Interns used utility filters to screen out promoted ideas and practices that they did not feel would help them as teachers. The complexity of utility filters captures the multiple considerations needed to make these decisions. To make a utility decision, an intern draws on her representations of classroom teaching contexts, her image of good math or social studies teaching, her conception of the disciplines of math (social studies), and her current and future teacher identity. Although components may vary somewhat, these facets were considered by all of the focal interns in our study when faced with a promoted practice. A schematic of a utility filter is shown in Figure 1.

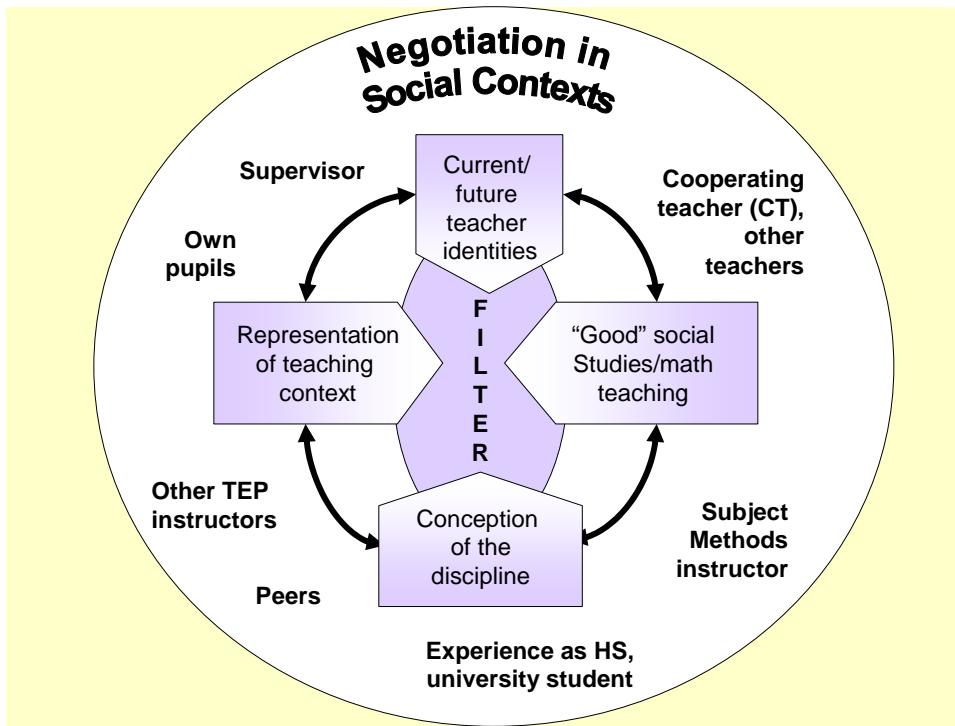


The arrows between components indicate that they are interdependent, and that changes in one component can lead to reconsideration or change in another.

Utility filters do not exist solely in the head of the intern. Filters and their facets are public in several senses:

1. They are employed in public as a way to test ideas with other members of the figured world
2. They influence and are influenced by collective norms and images of teaching in both Fieldworld and TEPworld
3. They lead to public actions or tryouts in these figured worlds, which are subject to negotiation and feedback before, during, and after the event, and which themselves change the figured world in which they occur.

The socially-situated nature of these filters is characterized in Figure 2. In the outer circle are members the figured world (Fieldworld and TEPworld are collapsed here for simplicity), as well as representations of the intern's previous experience in these and other worlds (e.g., their experience as high school students).



For example, the intern’s pupils and CT in Fieldworld have an obvious influence on her representation of the teaching context and thus her openness to certain practices promoted in TEPworld. By trying out a new TEPworld practice, the intern also influences Fieldworld. The same processes can also work for practices promoted by Fieldworld which are brought back to TEPworld by interns, potentially influencing the community norms and beliefs and causing peers to reconsider their own filters. The extent to which others influence the components of an intern’s utility filter is, in part, subject to the nature of the intern’s relationship to that source (see the discussion of relationship filters in the previous section). The influence of her own history as a student is tempered by the intern’s reinterpretation of that experience in light of her current representations of “good teaching.”

Examples of Filter Development and Changing Motivation to Learn

The primary engine of motivation filter development, and thus changes in what students were willing to learn, was changes in filter components. Promoted practices in the Assessment course were the target of active filtering on the part of many students, whose conceptions of classroom assessment were limited to testing. Interns tended to see assessment (testing) as a necessary evil, but not something that was centrally related to teaching. This view was based in large part on their own experiences with assessment as students, which for most was limited to unit tests and quizzes, papers, and major exams. The philosophy of the instructors and the textbook, however, was that authentic assessment was an essential and daily part of the teacher's job. Without valid and ethical assessment practices, they argued, interns could not become "good teachers" because they would not be able to base their teaching decisions on student learning data. Two focal participants serve to illustrate the development of utility filters and accompanying changes in motivation to learn. Both were social studies interns.

Hilary. Hilary had an interdisciplinary social science degree from a small liberal arts college. Her background was in social justice work with urban youth, including work with homeless adolescents and in a teen health center in a local high school. She had several years' experience as a summer camp counselor, and was a camp administrator during the summer between Spring and Fall quarters. Her view of assessments was as separate from her real work as a teacher:

Hilary: Anyhow, TEP's reinforced ideas that I have held onto that I think about what makes a good teacher. Things that I had *not* realized what makes a good teacher until this new experience in the field is things like assessment, right, which is the class that has just been plaguing me and I've been struggling with so much... Well, assessment, who likes assessment? (laughs) I don't like the facts and figures and I don't like the

data necessarily like - and they're foreign concepts to me, it was like learning a new language. *[Interview 1, Feb 8, 2005]*

Although Hilary had taken four weeks of assessment prior to her 3-week field experience, it was not “until this new experience in the field” that she began to consider it as part of being a good teacher, and not “foreign concepts.” As her representation of “good social studies teaching” changed in the context of Fieldworld, her utility filter began to open to admit promoted assessment practice.

Hilary’s willingness to try to master assessment content was influenced by the instructor and by her teacher friends who had graduated from the TEP. She had positioned these individuals as credible sources of good teaching practice, and their views made it through Hilary’s relationship filter.

Hilary: I knew it was something that I had to work through, I had to like - I had to stick with it, I had to work really hard at it, because I had to get it. I knew that it had a purpose. I didn't know what the purpose was but I knew it had a purpose. People kept telling me it had a purpose. [Instructor] said it a lot, like it's going to be important. I have friends who are teachers who've gone through the TEP program, and they both have said that assessment is very, very important - it's an asset when you know how to assess students well. I mean, it makes you a better teacher when you really understand the concepts, so being motivated by becoming the best that I can be, that was really important to me. *[Interview 1, Feb 8, 2005]*

Hilary’s identity as a teacher evolved within the contexts of her work with at-risk youth. For her, being a good teacher was about having a positive impact on her students’ lives through building relationships with them. Assessment didn’t seem to fit with that image. When she entered Fieldworld, however, her interactions with students there around assessment continued to modify her representation of good classroom teaching to include the kinds of assessment practice promoted in TEPworld.

Hilary: So that was something I sort of worked through and now being in the field, I'm actually seeing how important assessment is. The kids are really looking to have the work that they do be validated ...I'm realizing that it's like, just in my experience this week, when you assess a student...you're sending messages to them that that what they do is important. *[Interview 1, Feb 8, 2005]*

Karl. Karl had a history degree from a large university, and had worked for three years as a teaching assistant in a history department. His experiences in high school and university featured assessments on oral participation and writing papers. That experience did not prepare him for making an assessment' criteria public in advance.

Karl: I try to be really open-minded, but I think the whole assessment thing is way too much formal, and kind of takes away my personality as a teacher. For example, when you write essay questions to do these rubrics, you have to give the students too much, to me it's kind of dumbing down a little. *[Interview 1, Feb 16, 2005]*

When the instructor promoted teaching big ideas rather than focusing on facts, and skills as well as content, Karl used his representation of good social studies teaching to filter out these practices.

Karl: But like the whole thing about content, she totally, I think we need content too, and [to her] it's all about the rationale and all is all about the skills that they learn. ...In the discussions I never said anything, but I was really uncomfortable with what [the instructor] was espousing. *[Interview 1, Feb 16, 2005]*

The conflict between his representation of social studies teaching and the instructor's position led to a devaluing of her as a source of information. In contrast to Hilary's experience in Fieldworld, where her participation there challenged her initial views of promoted assessment practices, Karl found the teachers in his department were "much more conservative than I am, much more about content *[Interview 1, Feb 16, 2005].*"


As Karl and Hilary learned in both TEPworld and Fieldworld, their filters (and motivation) continued to develop in response to interactions with others in context.

Hilary found that assessment started to make more sense on her return from the field, but then when she went back in the spring ran into some differences between assessment practice in Fieldworld and the promoted practices of TEPworld.

Hilary: The problem is, I don't see much assessment going on like formal assessment happening. Like I'll help my CT grade log books which is sort of what they do their homework in. And so I'll help them do that. So that'll be interesting. But I think they're pretty lax on grading. There's not a lot of tests. So as far as assessment goes I'm not quite even sure how I'm going to apply a lot of the things. I did a timeline assessment assignment and I haven't decided how much of that I'm going to transfer over. I might use, as an assessment, a checklist or something. But again, they already have a system here at Nathan Hale about the log books. *[Interview 2A, May, 2005]*

Karl, on the other hand, began to see some usefulness in TEPworld's promoted assessment practices. At the end of a long list of things that he learned in TEPworld but had filtered out of his practices, he states:

Karl: ...and then assessment I learned something (laughs). In connection with me being in the field and giving assessments, [I learned] how difficult it is for a teacher and how you really have to try to be fair and make it clear and understandable for them. And to make clear what your expectations are and especially in the big classes. *[Interview 2B, May 13, 2005]*

Karl described how he argued “against assessment all the time” with his peers in TEPwobut that when they evaluated their instructors he would “totally argue and everybody would always cite [Assessment Instructor]” and how “this is not up to [her] standards.” Interaction with peers in the context of their role as students in TEPworld, then, influenced his utility filter, changing what he was willing to learn:

Karl: So even though I still don't agree with a lot of stuff, but it really helped me a lot and I want to learn more about it, to read more about it, to make it better. *[Interview 2B, May 13, 2005]*

Karl went on to describe how he had brought his assessment textbook to his Fieldworld, but was unable to negotiate introducing assessment practices from TEPworld. He told the

interviewer how his CT had explained that changing practices “made it complicated for him,” and that the CT “showed me how he wanted to do it.” Negotiating these practices across contexts, recontextualizing them, led Karl to a modified position on the practice itself.

Karl: I don't think, like these rubrics and everything? I will find a middle way, I think, between what my CT does and what the book does. It's too complicated in a way, I think [*Interview 2B, May 13, 2005*].

Hilary, too, modified her filter by the end of her 4-week spring field experience. Her earlier belief in the need to learn promoted assessment practices was abstract; in her words, “I didn't know what the purpose was but I knew it had a purpose.” Her initial conception of assessment as tests made it difficult for Hilary to learn from the ongoing informal assessment she saw in Fieldworld. Through interaction with her CTs and students, however, she modified her representation of classroom teaching. Specifically, she appeared to change her notion of the function of assessment in teaching, one of the main goals of the assessment instructors. Hilary's assessment discourse was shifting from a practice one does in order to be able to grade students to a practice useful to her growth as a teacher, particularly in terms of understanding her students' thinking. In the following quote, she told the interviewer about an interaction he had observed with a disengaged senior who had immigrated to the US from Central Asia.

Hilary: But I told him today, because he didn't hand his paper in and I didn't really expect him to, but I told him today, I was like, “Look, the paper isn't just for a grade. It's for me.” [*Interview 2B, May, 2005*]

The fact that Hilary casts her wish for him to turn in his assignment in terms of her relationship with him suggests that she is beginning to integrate the practice with her teacher identity, which emphasizes positive relationships with students:

I told him, “I’m really curious to see what you think about the movies, the movies we selected and how it went. I’m curious to see what you picked up from the two of them. I mean, honestly I just want to know what you’re thinking.”

Hilary positioned the student as an important contributor to the kind of teacher she wanted to become, emphasizing her own position as a learner:

I said, “I’m learning to be a teacher and all the feedback that you guys give me is going to help me become a better teacher. And so how you do on this paper is going to help me in the future to teach other people better.”
[Interview 2B, May 2005]

Summary

These two cases suggest the utility of examining motivational change as situated in the contexts of learning. One can see the influence of both individual histories and co-regulation with others in TEPworld and Fieldworld, and we get a sense of how filters change as interns’ representations of the classroom, purposes and identities as learners and teacher, ideas about good teaching, and relationships with others evolve over time and interaction. It is especially relevant to adults *becoming* something new (in this case, teachers) that identity and motivation seem to be bound up so tightly. As one student claimed in a large-group discussion of pop quizzes:

I don’t think I’m a big fan of deceiving students and scaring them! I’m more of a fan, say, of “compile a list of key things in the chapter, work in groups,” *that’s just me. I’m just not a scare tactic kind of guy.*

[Fieldnotes, Assessment SS/LA, Jan 26, 2005 (emphasis added)]

The fact that students frequently publicly tested the connection between practice and identity attests to identity as a powerful filter in its own right.

Implications and Future Research

Implications for Teacher Education

The analysis presented here, and the larger study of which it is apart, have implications for teacher educators. Knowing the relationships among the aspects of utility filters, as well as other motivational filters, provides insight into how to increase students' motivation to learn certain promoted practices. Here are two examples.

Utility filters and representations of classroom teaching. At the beginning of a teacher education program, interns' representations of classroom teaching are likely to be sketchy, and based on their own experience as students. Without a complex sense of the contexts in which practices will be employed, teacher educators are forced to try to persuade interns that new and unfamiliar practices will indeed help them become the teachers they want to become. Hilary stuck with assessment class requirements, though frustrated and confused, because she had faith in others' assurances that assessment was a critical part of good teaching. It was not until she experienced this in the context of her field placement, that she began to flesh out her representation of classroom teaching and see how assessment practices fit. Earlier field experiences might help students develop a more nuanced view of classrooms and departments as contexts for teaching practice. But because interns' filters are based on their novice representations of classroom teaching, these early experiences need to be carefully designed and mediated if those representations are to change. Work to investigate this implication is ongoing, and early results are encouraging.

Utility filters, "good teaching" in the subject, and relationships to the source.

Interns entered the TEP expecting to learn subject-area pedagogy in their Methods class.

They tended to identify most strongly with their Methods instructors, with whom they shared content interest and a sense that subject-specific pedagogy would help them to become the teacher they wanted to be. Pedagogy instructors, then, could be instrumental in showing how practices promoted in other courses (assessment, adolescent development, etc.) were part of “good teaching” in the discipline.

Negotiating practices, identities, and motivation. As teacher educators, we find the link between practices, identity development and motivation to be particularly important as it relates to our own teaching effectiveness. Instead of characterizing students as being “resistant” or “open” to change or new ideas, the idea that interns are negotiating their views of practices with us, their peers, CTs and supervisors gives us a place to start in optimizing our own practice. Grossman et al. (1999) write about the difficulty of developing a teaching identity during *student* teaching, given the various activity settings (or “figured worlds”) in which interns participate:

“The ultimate goal for preservice teachers is to assume the professional responsibilities of a teacher and to teach competently. However, the specific images of what professional responsibilities entail or what it means to be a competent teacher may differ dramatically in different settings...Student teachers often find themselves in tugged in different directions, with university faculty, supervisors, mentor teachers, and school systems encouraging different approaches to teaching” (p. 5).

Given the centrality of practices to teacher identity, it is not surprising that interns are wary learners. Their conceptions of teaching develop through interaction with us, their students, and the many others that inhabit TEPworld and Fieldworld, along with their sense of teacher identity. Helping them understand the potential place of a practice in the teaching context requires methods that take

this development into account. As they consider the desirability of taking up particular practices, it may be particularly important to help them use techniques for assessing and interpreting evidence of student learning and engagement that take the social context into account.

Implications for Motivation Theory

As we move toward a more situated view of motivation, opportunities arise for studying its development (Nolen, 2001, 2006; Turner, 2001; Vauras, Salonen, Lehtinen, & Lepola, 2001; Volet, 2001). Recent work has provided evidence that context matters, and that motivation constructs are not invariant across situations and time, making more variable-centered investigations of development difficult to support (Nolen, 2006; Turner & Patrick, 2004). Our study of teachers' developing motivation to learn promoted practices finds that motivation development occurs in adults when they are in the process of identity development.

Many cognitive or sociocognitive accounts of achievement motivation have taken for granted that learning is good, and that our focus should be on developing accounts of how students come to desire to learn, and of what interferes with that desire. Our participants showed us that this view is simplistic. The extent to which they questioned what was presented by both their instructors and their cooperating teachers and supervisors demonstrated that part of their role in both contexts was to judge what learning was of most worth. Because we studied students across learning contexts as they were in the process of identity development, we were able to identify processes of motivational change related to sometimes contested views of practices being promoted. In particular, we developed the concept of "motivational filter" to capture the

relationships between aspects of being a learner-in-context and motivation to learn the practices valued and contested in those contexts.

The concept of motivational filters marks a shift from thinking about general or even situation-specific approaches to learning (goals, orientations) to seeing learners as making moment-to-moment decisions about what they will learn and how well. Further, an understanding of the aspects learners take into consideration when filtering provides us with a more complex representation of how motivation to learn develops. In our study, interns' identities as students and teachers, their relationships with other members of their multiple worlds, and the processes of negotiating practice with powerful others all shed light on why they choose to take up or dismiss a promoted practice, and how those decisions might change with further experience in teaching-learning contexts.

The use of motivational filters in our study would qualify as a type of co-regulated learning (Hickey & McCaslin, 2001; McCaslin, 2004). Typical accounts of *self*-regulated learning assume some form of mastery motivation, or suggest that metamotivational strategies are used to maintain effort (Corno, 1993; Wolters, 2003). We found that motivation to learn developed, and was supported or contested, as part of negotiating values and practices in interaction with others in ongoing social contexts.

The question naturally arises, "Are these processes limited to the adult 'expert learners' we find in a graduate teacher education program?" Future work should explore whether younger and less-expert learners use motivational filters, how early, and what those filters might look like. Enough researchers have described how high school students learn how to do well enough to satisfy their teachers, while only occasionally throwing themselves into learning whole-heartedly, that we suspect motivational filters

might be in play in adolescence. Some have questioned whether “choice” is ever really available in formal educational settings, and therefore are skeptical of research that uses free choice settings to measure continuing motivation. To the extent that learners choose the amount of effort, nature of engagement, and even the seriousness with which they “learn,” choice may be a more telling measure than some may think.

Appendix A: Focal Participant Interview Protocols

Interview #1 (Winter 2005)

Past:

- What were your experiences like in high school?
- What were your experiences like after high school?
- Can you tell me how you decided to become a [subject] teacher?
- Why did you decide to come to the TEP program?

Present:

- Tell me about your first year in TEP so far. How are things going?
- I'd like to ask about your classes, field placements, and other experiences you've had since you've been here.
- Have you had experiences here so far that you would describe as particularly good? Can you tell me about one of those?
- Have you had experiences that you would describe as particularly bad? Can you tell me about one of those?
- I asked you earlier to describe the student you were in high school and college. How would you describe yourself as a student now?
- Let me ask you to think about the other TEP students you've come across here. Would you say that in general they are more different from you or more similar?
- What would you say has been the most difficult thing here for you so far? How did you handle (or how are you handling) that?
- What's been easy for you here so far?
- Has anything surprised you about your classes?
- Think about your professors in the TEP program. What would you say they think it means to be a good teacher?

Future:

- Let me ask you to think about the next several quarters that you'll be spending in TEP:
 - What are you looking forward to in your time here?
 - What are you concerned about?
- Okay, let's imagine it's a few years from now, and you've graduated with your Masters in Teaching. What matters most to you about the kind of school you get a job in (*middle school/high school, pay, colleagues, setting (urban/suburban)*)? Why do those things matter to you?

Interview #2 (Spring 2005)

Present:

- Follow up on issues left over from last interview (*e.g. last quarter's coursework, clarifications, concerns*)

- *Check in:* How are things going this quarter? (*coursework, field placement, relationships with students, CT, supervisor*)
- Have there been any surprises? (*good, bad. What was learned? Why do you think your expectations were different?*)

Future:

- *Goals:* What do you hope to get out of this time in the field? (*Why did you decide to work on that? Who/what do you think will help you reach those goals?*)

Interview #3 (Spring 2005)

Present:

- How was your time in the field?
- Last time we spoke, you said you hoped to _____. What kind of progress do you feel you made toward that goal? (*supports/ impediments for progress*)
- Have there been any surprises? (*good, bad. What was learned? Why do you think your expectations were different?*)
- What things have you learned in the program so far that you feel are the most important to you as a teacher?

Future:

- Looking ahead to your student teaching next fall, I want to get an idea of how you're thinking about it. Walk me through what you imagine a typical day will be next fall.
- What other things do you feel you need to learn about teaching?
- Where/when do you think you'll learn those things? *Who will be involved in helping you learn these things (broadly – might include the kids, peers, family)*

Interview #4 (Fall 2005)

Past:

- What have you done over the summer to prepare for student teaching?
- How are you thinking about using assessments in this student teaching experience? How does assessment fit in your teaching practice?

Present:

- How are you feeling about your content knowledge for the classes you're teaching this fall?
- How are you thinking about establishing classroom norms? What are you doing (or plan to do) to establish those norms? How do those plans relate to how you want to teach math/ss?

Future:

- How different (or similar) do you expect this student teaching to be to your last student teaching experience? What are some of your main expectations?
- What are your expectations for how students can/will work in collaborative groups?
- How do you want your students to see you?
- What are your goals for learning this fall? Who do you want to help you learn?
- What do you think a good teacher is?

Interview #5 (Fall 2005)

- You talked last time about developing [fill in classroom norms or talk about how you saw them work to establish classroom norms].
 - How have those norms been working out? Any problems?
 - Are the norms helping you teach the way you want to teach, or do you see any conflicts?
- Last time you said you felt _____ about your subject-matter knowledge. (IF they felt shaky, start with “How is that going now?”)
 - Can you talk about how you’re using that subject-matter knowledge in your teaching?
 - How do you know when they really learn something that you’re teaching them about the subject?
- How do you think you’re students are seeing you now?
 - How does it match up with how you want them to see you?
- Tell me about the class I just watched – what are they like to teach?
 - If we talked to your CT, how would s/he characterize the class?
- Talk about a student who you’re worried about, who is struggling.
 - Probe for description, ideas about causes, strategies intern is using as needed. Where are they getting their strategies (specific classes? Prior experience? CT? “Instinct”?)
- How are things going with your CT(s)?
 - Probe for working relationships, changes
- You talked a few weeks ago about [fill in learning goals].
 - How is that going? Are you getting opportunities to work on those things? When/how?

Interview #6 (Fall 2005)

- You talked last time about a student in your class who was struggling (remind intern of student if needed).
 - How have things been going with that student?
 - How have you been working to address his/her struggles?
- How well prepared did you feel you were for student teaching?
 - What did you think prepared them for student teaching?
- What resources did you draw on during your student teaching?
 - Is there anything that you’re surprised wasn’t useful to you?

- What did you think they learned during their student teaching?
 - What things do you feel like you need to know that you don't know?
 - How do you know you still need to know them?
- Describe a good teacher
 - *Explore for relationship of this representation to their teaching selves.*
- Tell us some things that made you feel successful as a teacher.
 - Something that left you dissatisfied?

Interview #7 (Winter 2006)

Past:

- Looking back on TEP, what do you think about your experience? What was most valuable in getting you where you are; what was missing?
- Think about the kinds of practices you learned in methods. What were your favorite and least favorite practices from methods and why?
- Tell me about some method or practice that you learned in TEP that when you tried to implement it, it didn't work out like you expected.
 - *Probe for why they chose to try that practice, what they did to adjust if they did, probe any expectations that were violated, ask them what they think about using that practice in the future.*

Present:

- Tell me about the creation of your portfolio this quarter. Can you take me through what you've put into it? Why did you choose to include what you did?
- What was it like putting together this portfolio? How did you approach it?
- We want to talk now about the "Working in Schools" course this quarter. In the class, there are different visions of what teaching's all about. Some examples:
 - When do you give up on kids?
 - As first-year teacher, how and when do you ask for help? How do you promote yourself?
 - What obligations do you have to parents?
 - How creative do you need to be?
- Of the different visions of teaching presented by guest speakers, which did you resonate (affiliate) with?
- Some of them conflicted with each other (e.g., "leaving teaching at school" v. "committing yourself completely to your students")—what do you do with that?

Future:

- What are your short-term plans?
 - *Probe for looking for a particular kind of school, just getting a job, etc.*
- Think about your (present) future classroom. Are there any ideas or practices that you've learned in TEP (in courses or in the field) that you definitely want to use when you teach?
 - *If yes, tell me about them and why you want to use those ideas/practices*

- *If no, tell me how you see your practices differing from the ones you learned in TEP.*

Appendix B: Interview Protocols for Instructors, Cooperating Teachers, & University Supervisors

- *(Instructors)* What are your goals for student learning in your course?
(CTs, USs) How did you become a (CT, US)?
- In your view, what does it mean to be a good teacher?
- How do you think one learns to be a good teacher?
- What do you do to support interns to become good teachers?
- *(Instructors and CTs)* What is the role of the intern in your (course, classroom and department)?

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