University of South Florida

Digital Commons @ University of South Florida

College of Education Publications

College of Education

April 2004

Education Policy Analysis Archives 12/13

Arizona State University

University of South Florida

Follow this and additional works at: https://digitalcommons.usf.edu/coedu_pub

Part of the Education Commons

Reform Ideals and Teachers' Practical Intentions

Mary M. Kennedy
Michigan State University

Abstract
Reformers have been trying for decades to alter the fundamental character of classroom instruction in the United States, but have repeatedly been unsuccessful in fostering significant change in teaching practice. Several hypotheses have been put forward to account for this problem–that teachers lack sufficient knowledge (hence we need more professional development), that they lack sufficient will (hence we need accountability systems) or that they disagree with reform ideals or find other agendas to be more compelling in their classrooms. This paper addresses the third hypothesis by trying to ascertain what teachers care about when they respond to specific classroom situations. Numerous authors have suggested that teachers' beliefs, values, and perceptions influence their practices, but most papers in this area focus on just one teacher or a small handful of teachers and show how these particular teachers' ideas influence their practice. We still have little idea what kinds of concerns and intentions tend to be pervasive in teachers' thinking, and how these ideas differ from those embodied in reform ideals. The paper begins by reviewing reform literature and outlining its main themes. It then describes a study of teachers' interpretations of classroom situations and their intentions for specific things they did in those situations. From teachers' discussions of their practices, the author identifies the primary areas of concern that dominated teachers' thinking as they constructed their practices and shows where these concerns are similar to, and different from, reform ideals.

One of the most persistent themes in American education literature is a dissatisfaction with the quality of teaching. Associated with this dissatisfaction has been a continuing stream of reform proposals, each intended to rectify these perceived problems. Urgent demand for curricular or pedagogical reform, and proposals for what sort of reforms are needed, have been so pervasive that historians have begun writing histories of reform movements (Cuban, 1984; 1990; Gold, 1999; Hunt, 2003; Tyack, 1995). Their message is that reforms do sometimes alter particular features of schools, but that they rarely alter the instructional core of education, that is, the character of teaching and learning that most Americans recognize as normal classroom life. Yet, undaunted, demands for reform persist and a new proposal appears every decade or two.

What makes these various reforms important is that they focus specifically on classroom practices, and turn our attention to teachers. Several hypotheses have been put forward to account for why teachers seem to unresponsive to reform: that teachers lack sufficient *knowledge* (hence we need more professional development) , that they lack sufficient *will* (hence we need accountability systems) or that they *disagree* with reform ideals or find other agendas to be more compelling in their classrooms. This paper addresses the third hypothesis. Perhaps teachers interpret classroom situations differently than reformers would, and consequently pursue different outcomes than reformers value. Teachers' values have been shown in numerous studies to be important determiners of practice (Aguirre & Speer, 1999; Artiles, Mostert, & Tankersley, 1994; Brickhouse, 1990; Bussis, Chittenden, & Amarel, 1976; Lumpe, Haney, & Czerniak, 1998; Pearson, 1985; Porter, Floden, Freeman, Schmidt, & Schwille, 1989; Pressley, Rankin, & Yokoi, 1996). From studies such as these, we know that teachers tend to implement policies when they agree with them, to eliminate curriculum content they believe is relatively less valuable, to represent subject matter in ways that are consistent with their own beliefs and values, and to interpret policies and guidelines in ways that are consistent with their own beliefs and values.

One reason disparities may occur between teachers and reformers is that everyone, including teachers and reformers, holds multiple and sometimes conflicting ideals for our schools. As a society, we want our youngsters to learn particular content, but we also want them to be nurtured, to be developed into good citizens, and to be motivated to participate productively in society. We want teachers to be role models for moral and ethical behavior and to create positive climates for learning in their classrooms, but we also want them to be efficient and goal-oriented. We believe all students deserve equal treatment and resources, but sometimes we think particular students should receive more. We are divided on whether children should be controlled by external rules with consequences or whether, instead, they should be taught to regulate themselves. We want to socialize students to accommodate the prevailing cultural norms, yet we want them to be critical thinkers; we want to cultivate cooperation, yet enable them to compete in later life, and so forth. These different ideas wax and wane in their social popularity, and strain the education system. Several writers have struggled to understand and to explicate the various dimensions of these tensions (e.g., Cremin, 1990; Egan, 2001; Egan, 1997; Berlak and Berlak, 1981; Tyack, 1995).

Another reason we might expect to see disparities is that, both individually and as a society, we all espouse ideas that are more idealistic and pure than are the ideas that actually guide our everyday practice. Argyris and Schön (1996) refer to these two sets of ideas as our *espoused theories* and our *theories in use*. We may espouse, say a principle of honesty, but in particular situations we routinely violate our own espoused ideal. We do so for good reasons, of course, and

these reasons constitute our theory-in-use. This distinction is important in education because we know that teachers' practices often differ from the kinds of practices they espouse, and that they frequently describe their own practices as more consistent with reform ideals than outside observers believe to be the case (see, e.g., Applebee, 1991; Cohen, 1990 ; Oliver, 1953). It is not clear, when such disparities appear, whether teachers misunderstand the reform concepts, and really believe they are doing the things reformers advocate or whether they subscribe to the same ideals as reformers but their practices consist of so many exceptions to the rule that observers can't see the rule itself. In either case, the practices teachers actually engage in differ from those reformers espouse and often also differ from those the teachers themselves espouse.

Many contemporary authors (e.g., Brophy, 1989; Richardson, 1996; Stigler & Hiebert, 1999) now suggest that teachers' beliefs about such things as the nature of the subject matter, how students learn, and the role of the teacher in promoting learning, are of central importance in explaining teaching practices. Others suggest that teaching practices may follow more from the inherent conditions of teaching itself. For example, Labaree (2000) has listed several problems inherent in teaching that most people do not see or are not aware of: the fact that teaching cannot occur without cooperation of students, the fact that students are themselves captive audiences, the fact that emotions are necessarily part of the work, and that, consequently, part of teaching consists of emotion management; the fact that teachers are virtually isolated from other adults as they carry out their work, and the fact that most teaching situations are inherently ambiguous and subject to numerous interpretations.

These two hypotheses–that practices are influenced by beliefs and that they are influenced by the conditions of teaching– are not entirely distinct, for beliefs themselves could derive from the conditions of practice and could, in turn, influence them. The combination leads to questions about how teachers interpret their situations and how they use these interpretations to construct their practice. van den Berg (2002) refers to these interpretations as teachers' *meanings*–that is, the meanings that teachers ascribe to the events they see in their classrooms. These meanings, or interpretations, are important, for the practices teachers construct will depend heavily on their understanding of their situations. Of interest in this paper, then, is the nature of these interpretations and the kinds of intentions teachers adopt in response to them.

This paper aims to learn more, then, about how teachers interpret classroom situations and decide how to respond to them. It has two main parts. In the first, it reviews reform literature from several decades and outlines some of the themes that have dominated this literature. My aim in this section is to demonstrate that, even though there are many conflicting voices within this literature, there are also a few main themes that have persisted for some time now. In the second part of the paper, I describe a study of how teachers account for their classroom practices. In this study, my colleagues (Note 1) and I interviewed a sample of 45 teachers about specific classroom episodes in an effort to learn more about how they interpreted these episodes, what beliefs and values influenced their thinking, and what actions followed from their thinking. The intent of this paper is to contrast these rationales with reform rhetoric to see whether, and in what ways, the values embodied in teaching practices were similar to or different from the values embodied in reform ideals.

Reform Ideals

Though there are many differences in goals among pedagogical reformers, they tend to agree on a single premise that motivates their interest in reform: Something needs to be fixed. Some reformers perceive the process of learning

to be dull and dreary, some perceive classroom life to be stultifying or oppressive, some perceive school knowledge to be uninteresting, unimportant, or thin. One recent source characterized the American curriculum as "a mile wide and an inch deep" (Schmidt et al, 1997) These general perception have been reinforced by researchers numerous times throughout the 20th century. For instance, in his 1932 *Sociology of Education*, Willard Waller noted that school subject matter was boring and irrelevant to life outside of schools. Later on, Hoetker (1969) reviewed a series of studies stretching back almost to the beginning of the 20th century, in which researchers observed that teachers relied heavily on recitations in their instruction and that these recitations consisted of rapid-fire questions requiring rapid-fire responses, focusing on trivial facts and denying students the opportunity to think much about the content. Another literature review (Gall, 1970), done around the same time, also noted that teachers focused primarily on factual recall.

In the 1980's a spate of studies yielded evidence that the school content tended toward banality. Like earlier studies, these studies tended to attribute the problem to teachers rather than to, say, curriculum materials or administrative structures. For instance, in his study of elementary classrooms, Walter Doyle (1986) found that teachers transformed academic content into academic tasks, and that this transformation frequently destroyed the original significance of the content. Similarly, Linda McNeal (1986), in her examination of secondary classrooms, found that teachers reduced complex ideas to labels and lists, sacrificed depth for breadth, obscured difficult topics and omitted controversial ones. Moreover, the lessons she observed had been constructed by the teachers themselves and were not designed to meet school objectives. Both Doyle and McNeal attributed these practices to teachers' need to maintain control over their students. Doyle argued that routine tasks were easier to manage, and McNeal argued that, as teachers increased their concerns about control, they were more likely to trivialize knowledge and their students were less likely to be engaged.

But reformers don't necessarily take their cue from research. Many reformers have offered similar observations as they justified their goals. For instance, Mary Campbell Gallagher describes the origins of the 1960's curriculum reform by saying, "Disgusted with the dull and inaccurate lessons in commercial school textbooks in science and mathematics, a handful of scientists, mathematicians and educators . . ." (Gallagher, 2001, pp 283). And when The National Commission on Excellence in Education released its 1983 report, A Nation at Risk, it opened with this dramatic statement:

> We report to the American people that while we can take justifiable pride in what our schools and colleges have historically accomplished and contributed to the United States and the well-being of its people, the educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very future as a Nation and a people. What was unimaginable a generation ago has begun to occur--others are matching and surpassing our educational attainments. (National Commission on Excellence in Education, 1983)

So the perception that school content is trivial, or even downright wrong, and that instruction is been lifeless or uninspired, has been here a long time. And these perceptions, whether correct or not, have motivated numerous reform movements over the past half century. Though reformers disagree on what is needed, and how to go about doing it, they all believe it is possible to improve the content and quality of classroom instruction. Their proposals can be grouped into three broad ideas: the need for more rigorous and important knowledge, the need for more intellectual engagement with content, and the need to make

knowledge accessible to all students (Note 2) .

1. We need more Rigorous and Important Content

The first persistent reform ideal is to increase the importance of school subject matter and the rigorousness of the curriculum as a whole. Sometimes this idea is captured with phrases such as "more demanding" or "more challenging" curriculum, and sometimes with phrases such as "central ideas." But there are many different views about what makes knowledge important. One group of reformers wants students to learn important disciplinary ideas rather than lists of facts and figures. For instance, in addition to knowing the relevant names and dates of the civil war, these reformers want students to understand the causes and consequences of that war. In addition to reading or reciting passages from Shakespeare, they want students to understand the significance of these passages. In addition to learning computational procedures, they want students to understand how those procedures work. In addition to learning the accumulated body of scientific findings, these reformers want students to understand how science works. Most of these reformers want students to gain not only disciplinary knowledge but also the intellectual habits and values of these fields.

But another group of reformers wants to give students the knowledge and skills they will need to function in our society. They want students to acquire the ideas and values that define our culture and to be prepared for constantly changing technology and for an increasingly complex economy. And they fear that too much attention to the liberal arts will interfere with their goals. For these reformers, the most important ideas are those that are most culturally and technologically relevant.

When the American Academy for the Advancement of Science (1989) developed its reform proposal, it emphasized the first set of ideas. It wanted students to learn not just specific scientific knowledge but a number of ideas that had to do with the essential nature of science– that science assumes the world is understandable, that science demands evidence, and so forth. This organization also emphasized the importance of large organizing ideas such as equilibrium, systems and so forth. Similarly, the National Council of Teachers of Mathematics focuses on central mathematical ideas in this passage:

> School mathematics curricula should focus on mathematics content
> and processes that are worth the time and attention of students.
> Mathematics topics can be considered important for different
> reasons, such as their utility in developing other mathematical ideas,
> in linking different areas of mathematics, or in deepening students'
> appreciation of mathematics as a discipline and as a human creation.
> Ideas may also merit curricular focus because they are useful in
> representing and solving problems within or outside mathematics.
> (National Council of Teachers of Mathematics, 2000, p. 12)

On the other side, this passage from the National Commission on Excellence in Education illustrates the importance of practical knowledge:

> The people of the United States need to know that individuals in our
> society who do not possess the levels of skill, literacy, and training
> essential to this new era will be effectively disenfranchised, not simply
> from the material rewards that accompany competent performance,
> but also from the chance to participate fully in our national life. A high
> level of shared education is essential to a free, democratic society
> and to the fostering of a common culture, especially in a country that

prides itself on pluralism and individual freedom. (National Commission on Excellence in Education, 1983)

Although they differ from one another, all of these groups share a perception that the knowledge currently offered in our classrooms is either not very important or not very demanding, and that the task of reform is to correct that situation.

2. We need more Intellectual Engagement

The second persistent reform ideal focuses on how students interact with school subject matter. Reformers want teachers to increase students' interest, capture their imagination, or pique their curiosity. They want students to be intellectually engaged with important ideas and to be thinking hard about them. The notion of intellectual engagement is often associated with progressive education, where the emphasis is on physical activity as well as mental activity. One of the earliest examples of the progressive version of this reform idea is William Heard Kilpatrick's (1918) proposal for projects. Kilpatrick argued that the *purposeful act* was the central feature of life itself, and that it should also be the central feature of school life. He wanted classroom lessons to be organized around projects that students wanted to do, regardless of whether that meant building a boat, putting on a play, or trying to solve a problem of some sort. All of these would be more meaningful and engaging to students than would be the sort of learning activities that teachers normally assigned.

These twin ideas of meaningfulness and engagement appeared again in the 1960's reform movement, which relied heavily on a pedagogy called *discovery learning*. Discovery learning was intended to ensure that students acquired the most important ideas, that they thought hard about these ideas, and that they found these ideas more meaningful and engaging because of the way they interacted with them. Numerous curricula were developed during this period, most in mathematics and the sciences, and nearly all relied on complicated classroom activities that were designed to promote students' intellectual engagement with the content. Jerome Bruner, a central figure in the discovery learning movement, defended the proposal for discovery learning again in 1997, when he summarized his original reasoning as follows:

> Acquired knowledge is most useful to a learner when it is "discovered" through the learner's own cognitive efforts, for it is then related to and used in reference to what one has known before. Such acts of discovery are enormously facilitated by the structure of knowledge itself, for however complicated any domain of knowledge may be, it can be represented in ways that make it accessible through less complex elaborated processes. (Bruner, 1996, p. xii).

The importance of meaningfulness and intellectual engagement appeared again in the 1990's standards-based reform. Here is how the National Council of Teachers of Mathematics laid out the meaning-and-engagement theme:

> In effective teaching, worthwhile mathematical tasks are used to introduce important mathematical ideas and to engage and challenge students intellectually. Well-chosen tasks can pique students' curiosity and draw them into mathematics. The tasks may be connected to the real-world experiences of students, or they may arise in contexts that are purely mathematical. Regardless of the context, worthwhile tasks should be intriguing, with a level of challenge that invites speculation and hard work. Such tasks often can be approached in more than one way, such as using an arithmetic counting approach, drawing a geometric diagram and

enumerating possibilities, or using algebraic equations, which makes the tasks accessible to students with varied prior knowledge and experience. (p. 18)

This interest in real-world activities is not held by all reformers, but instead belongs to sub-set of reformers, referred to broadly as "progressives," who assume that the inherent interest of the instructional task is an essential tool for motivating students and engaging them in learning. Other reformers criticize progressives on the ground that an over-emphasis on engaging activities can lead to watering down the curriculum and to spending too much time on activities that do not have sufficient intellectual merit. They worry that activities lead to hands-on learning but not to minds-on learning.

Still, even non-progressive reformers acknowledge the importance of *intellectual engagement*, for learning cannot occur without intellectual engagement. Whether learning requires the kind of activities that progressive reformers tend to seek is a separate question. There may be other ways to intellectually engage students that do not involve complicated activities. Because of these disputes about the strategy for achieving intellectual engagement, I retain the idea of intellectual engagement in this analysis, but not the idea that this engagement must be achieved through either progressive learning activities or through direct instruction.

3. We need to make knowledge accessible to all students

The third persistent reform ideal reflects a commitment to making school knowledge accessible to the full range of students attending American schools, not just those who are gifted or who are college bound. When Cronbach and Suppes wrote their tome on disciplined inquiry in education, in 1969, they put the issue this way:

> The older form of education--transmitting facts and rules of thumb, and issuing a lifetime certificate of professional competence--has no validity in a world where social goals, communication patterns, and even scientific theories are changing constantly. At the other end of the spectrum, the school is asked to instruct the children from homes where there is no educational tradition and no preparation for responsible intellectual effort. The nation, speaking through its local and national leadership, is calling for the invention of new educational methods that will wipe out the cultural depression of the inner city. . . . Yet the reforms have not truly succeeded. An International Study that compared the mathematical achievements of adolescents in various countries showed that American students have a proper understanding of mathematics as a growing field of knowledge, but find mathematics more alien and uninteresting than students in several other nations. (Cronbach and Suppes, 1969, pp. 2-3)

In her reminiscence of the 1960's curriculum reform movement, Gallagher (2001) also stressed the importance of universal access:

> I must emphasize that while the Curriculum Reform movement benefited [sic] from national interest in keeping up with Russia's scientists, the Reformers themselves believed so passionately in their subjects that they wanted to teach *all* students, not just aspiring scientists and mathematicians. Phyllis Morrison told me, "A thing that we saw again and again, . . . is that if you treat science as an open-ended exploration, *all* the students" learn science. (p. 286)

Following the curriculum reform of the 1960's, the nation went through a spate of federal legislation designed to increase educational opportunities to students who had historically been underserved. Congress enacted legislation creating the Head Start program and the Elementary and Secondary Education Act, which included a large entitlement for disadvantaged students. These programs were followed later by programs for students with limited English and for special education students. In each case, a central purpose of the legislation was to provide greater access to education for a broader range of students.

In 1983, when the National Commission on Excellence in Education (1983) wrote its now famous *A Nation at Risk*, it opened with this statement:

> All, regardless of race or class or economic status, are entitled to a fair chance and to the tools for developing their individual powers of mind and spirit to the utmost. This promise means that all children by virtue of their own efforts, competently guided, can hope to attain the mature and informed judgement needed to secure gainful employment, and to manage their own lives, thereby serving not only their own interests but also the progress of society itself. (National Commission on Excellence in Education, 1983)

This third reform ideal is probably less contentious today than it has ever been. Nearly all reformers, nearly all citizens, and nearly all teachers, agree on the importance of giving all students access to school knowledge. However, there are still vigorous debates about how to achieve that goal, with one side wanting to maintain a focus on important ideas and a rigorous curriculum and the other wanting to focus on meaningful and engaging activities. In his history of efforts to "popularize" education, Cremin (1990) says this debate goes back at least to the 1830's, with one side pushing to expand educational opportunities and the other worrying that expansion would mean diluting the curriculum.

For many advocates, the issue hinges on how much we should focus on *important content* versus *intellectual engagement*. It is not clear that these two ideals must necessarily be mutually exclusive, but advocates frequently pit them against one another, forcing a complicated issue into a simple dichotomy. Chall (2000), for instance, pitches "teacher-centered" instruction against "student-centered." The former is oriented toward important ideas and the latter is oriented toward meaningful activities. For Chall, the former fosters student learning and the latter hinders it. Similarly, Ravitch (2000) pitted "progressive" education against "traditional" education, where progressive approaches emphasize meaningful activities and traditional approaches emphasize important content. For Ravitch, virtually all progressive ideas are anti-intellectual and lead to a less rigorous curriculum. These dichotomies do not address the fundamental nature of instruction, which is that it cannot occur without *both* important content *and* intellectually engaged students. Teachers must necessarily think about both things at once.

My goal in this study is not to settle any of these disputes, but instead to use these three broad values as a way benchmark against which to array the ideas that guide teaching practices.

Teachers' Rationales for their Practices

Method

To learn how teachers interpret their situations and justify their practices, we observed and interviewed 45 teachers as they taught a lesson of their choice. All

teachers taught in upper elementary grades. We sought teachers who taught in a variety of reform contexts, thinking that this sample selection procedure might increase the likelihood that the teachers had been influenced by *some* type of reform message. For efficiency reasons, we sampled clusters of teachers, that is, teachers residing in whole schools or in clusters of schools rather than visiting dozens of individual teachers scattered about the countryside. The final sample appears in Box 1 (Note 3).

Box 1: Final Sample of Teachers

Orientation of regional reform	Specific Policy Initiative	No. Schools visited	Demographic context of schools	No. of participating teachers
More important content	Vermont Portfolio assessment	1	Rural low-income white	12
	Edison School (Charter)	1	Urban low income Black	5
	California science project	6	Rural Hispanic, farming	11
More intellectual engagement; universal access	Professional Development Schools in Michigan	6	mixed urban and suburban	6
All three ideals	State-promoted NBPTS certification (North Carolina)	1	Rural low-income white	10
	NBPTS certification without state support (Michigan)	1	Suburban upper middle white	1

In the interview, we asked teachers to address very specific things that they did in their classrooms, rather than to talk about their general strategies or general aims. Following Schoenfeld (1999a; 1999b), we reasoned that the values that are relevant to teaching are those that are *activated by the situation*. Therefore, we wanted to learn how they interpreted each situation, how they responded and why they responded as they did. The interview strategy consisted of videotaping a lesson and then having both the teacher and the researcher observe the tape and select some specific episodes to discuss in the interview. When teachers received the tape of their lesson, they also received a card with instructions, which read as follows:

> When viewing the videotape, be sure to have a pencil and paper handy for notes, and be sure to have the tape counter showing so that you can write down the counter times associated with your notes or thoughts. (Press the "display" button in the upper left corner of the control panel).

> In preparation for the interview, try to select a couple of episodes that

were interesting or important to you. These might be times when

- something unexpected happened;
- you suddenly had an insight about what was going on;
- you realize something now, in retrospect, that you didn't think of at the time.

In the meantime, I will also watch the tape and will select some episodes to ask you about. Mine may be harder for you to talk about because they may refer to actions that were more automatic or that seemed obvious to you.

Expect the interview to last up to two hours, so that we have ample time to talk about both of our lists of events.

The interview itself was relatively unstructured but arranged to ensure that the following four issues were addressed for each episode discussed:

- How they understood the situation, or what they saw;
- Why they responded as they did;
- Whether their practice had changed over time;
- If practice changed, what prompted the change.

I address only the second question here, why teachers responded as they did. Readers interested in the questions about change are directed to Kennedy (2002).

Findings

Using this strategy of focusing on specific events, the 45 interviews yielded discussions of 499 specific episodes of practice. For all of these episodes, teachers talked not only about what they wanted to achieve but also about what they saw in the situation, what they valued, and what they had learned from various reform initiatives. The transcripts revealed two important patterns. First, there was a common pattern in how teachers talked about their practices which appeared to reflect their *lines of thinking* about their practices. These lines of thinking may actually be an artifact of the way the interview was conducted, but they were sufficiently widespread and sufficiently powerful that they warrant attention. The second general pattern was that teachers mentioned hundreds of different intentions, and their intentions spanned a much wider range of issues, or concerns, than reformers tend to think about. Across these 499 episodes, teachers described 937 specific intentions for their actions.

Lines of Thinking

The first pattern had to do with how teachers laid our their ideas. They generally started discussing an episode by mentioning either (a) what they intended to do, or (b) what they saw in the situation. For instance, when Ms Pass nominated an episode that she wanted to discuss, she did so by telling us *what she saw* in the situation:

I noted a bunch of different things. One was that I realized at one point in the tape that a child had his hand up, and almost gave up on me coming to him because I didn't see him very quickly. It probably wasn't a great length of time. But for this particular child who isn't down as having an attention deficit, but I feel he does to some degree anyway. And I thought I kept better track of making sure I was in closer contact with him. And found that at one point he had his hand

up for maybe 30 to 40 seconds, and he was about to give up on me when I happened to --.[Ms Pass, 3rd grade language arts, 25 years experience]

Ms Pass's perception of this situation includes far more than the fact that she failed to see a child's hand raised. She also realized that the child had difficulty learning and that she apparently had failed to make sure she was in close contact with him, even though she had intended to be. So part of what she sees is that she was not achieving one of her intentions.

This approach to beginning a discussion was very common. Teachers nearly always began by telling us either what they saw in the situation or what they were intending to do in it. So how teachers "read," or interpret, their situations is an important part of their lines of thinking about what to do.

Once teachers had offered these immediate impressions, we often asked for further elaboration (e.g., with a question such as, "Why was that important," or "What is the significance of that to you," etc) and these questions revealed another layer of thought. The next layer of thought that teachers revealed was a set of accumulated **_principles of practice_**--specific rules of thumb about how to achieve certain goals, how to respond to certain situations, what to expect from students in particular situations, typical patterns of student behavior, and typical patterns of relationships between what teachers do and how students respond. For instance, after Ms Pass noticed that she had not responded to the student whose hand was raised, the conversation proceeded as follows:

> [Do you feel it's important to address all students with their hands raised right away or is it mostly just this child?] No. I feel pretty much for all children. Their question needs to be answered. And that's another reason why I have them not sit with their hand up while they're waiting for me, because lots of time they even lose the question by the time I get to them. But if they take their hand back down, because I'm engaged with another student, sometimes they work out whatever the question was anyway. So I don't know that I feel that it's absolutely vital that I get to every child. And if a child puts their hand back down, then it's probably one of two things. The question didn't really pertain to what we were doing, or they really weren't stuck, and maybe they just wanted me to see something. Or, you know, these kids who tend to be stuck, and definitely need my help will put it back up again when I go back up, so. [Ms Pass, 3rd grade language arts, 25 years experience]

Here, Ms Pass has laid out a rather detailed explication of what happens when students raise their hands while the teacher is occupied with another student. Her general intention is to ensure that the question gets answered, but the question need not be answered immediately nor necessarily by Ms Pass. Her principle of practice for situations like this is that students do not keep their hand up while waiting for Ms Pass, but instead should put it down. Her reasoning is that, if they do this, they may work out the answers for themselves, or the question may become moot anyway.

So standing behind teachers' interpretations of their situations is a set of principles of practice that teachers have accumulated over time and that codify patterns of student behavior, patterns of teacher behavior, the myriad relationships between what teachers do and what students do, and some rules of thumb about how to respond to particular types of situations. These principles of practice represent teachers' understanding of how the system of teaching and learning works within their classroom settings.

Sometimes, but not always, teachers also referred to principles that they had acquired elsewhere, as from a professional development program or from a state policy. For instance, a teacher might refer to a principle of practice having to do with student motivation, and say that she (Note 4) acquired this idea at a workshop, or she might refer to a policy having to do with grading practices. So principles of practice can derive both from experience and from institutional policies and guidelines.

There is an another layer of ideas that extends even deeper still, for teachers often justified their principles of practice by referring to a set of standing beliefs and values that they may have held since childhood, or at least have held for many years, about such fundamental things as how students learn, what motivates them, and what the teachers' role should be in the classroom.

The line of thinking that generally comes out from a discussion of an episode, then, suggests that the most immediate thing in the teachers' awareness is her interpretation of the situation and her intentions for doing something about it. But behind these ideas are a set of accumulated principles of practice that codify the teachers' understandings of how classroom life works, and standing behind those principles of practice are a set of standing beliefs and values about the fundamental nature of teaching, learning, motivation, subject matter and so forth. In our interviews, teachers generally started by describing their intentions or by describing what they saw in the particular situation, then they moved back to their principles of practice, and then even further back to their standing beliefs and values. Teachers repeatedly used this general form when they laid out their accounts of their practices. The general form of their lines of reasoning is shown in Box 2.

Box 2: General Form of Teachers' Lines of Thinking
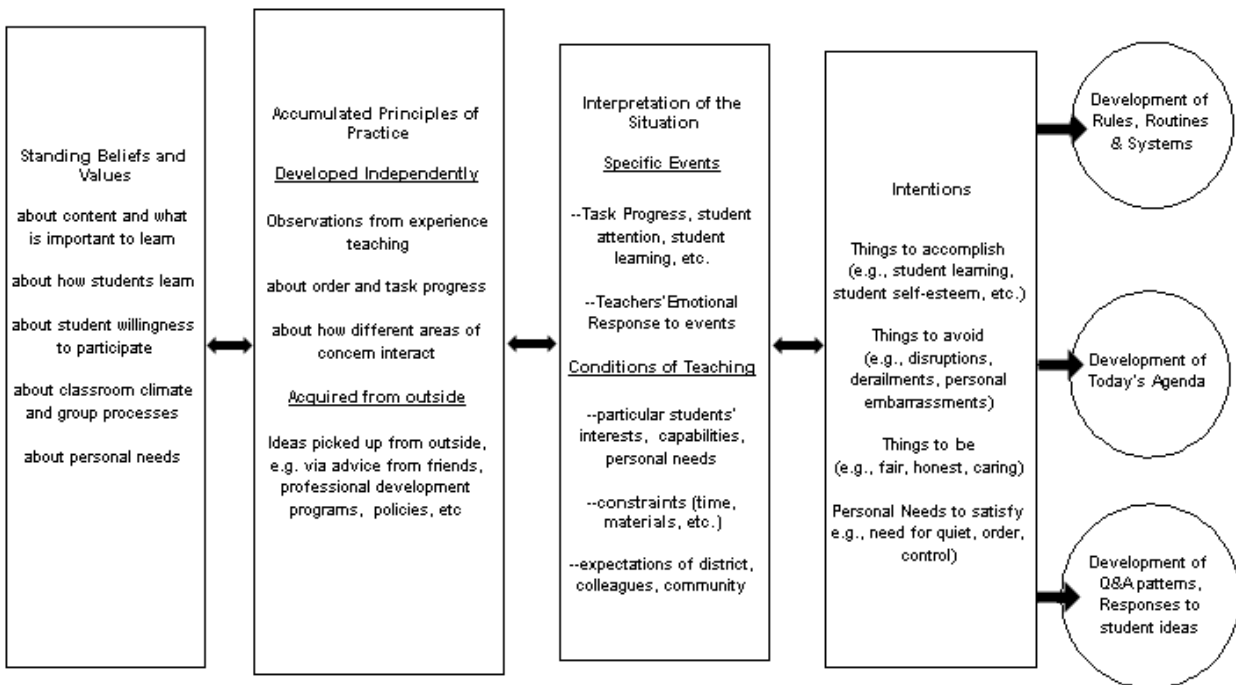
Though teachers laid out their ideas by starting on the right side and moving to the left, the sense of the conversation was that the ideas themselves developed sequentially moving from the left to the right. That is, ideas in boxes on the left were always brought up to justify the ideas to their immediate right. If a teacher

first announced an intention, and we asked for more information, she would typically move to her interpretation of the situation. If we asked for further elaboration, she would move to her principles of practice. The sequence suggests that each newly-revealed level of thinking is somewhat deeper and more long-standing than the one that preceded it in the conversation. The way these ideas were introduced suggests that, within the teachers' own thinking, the line of thinking actually begins on the left side, with teachers' most deeply held, most long-standing, and most general ideas about teaching and learning, and it ends on the right side with specific situations and specific actions.

The first box on the left, *Standing Beliefs and Values*, includes ideas that tend to be deeply held and relatively less malleable: general theories of student learning, theories of student motivation, beliefs about the teachers' role and responsibilities, and beliefs about the nature of subject matter and what is important to know about it. Often teachers articulated these ideas by referring to their own experiences as students, or simply as human beings. The second box, *Accumulated Principles of Practice* consists of observations about classroom patterns and rules and strategies for interacting with students. These principles appear to be have been built up in a manner that is consistent with the teachers' standing beliefs. If a teacher believes it is important to maintain control at all times, she tends to accumulate rules of thumb that help her do that. Accumulated Principles of Practice can include little tips and techniques that teachers read about in a magazine or pick up in the lounge, or general observations about how students tend to behave or how they tend to respond to different types of situations. The particular principles that are mentioned in a particular conversation are those that are relevant to the specific situation. Thus, a single teacher may mention different principles when discussing different episodes of practice, but is less likely to mention different standing beliefs and values.

Following these two left-most sets of ideas are two other important sets of ideas: their *Interpretations of the Situation* and their *Intentions*. These two sets of ideas are formed in the context of specific teaching situations, based in part on what teachers see and in part on their standing beliefs and values and their accumulated principles of practice. Finally, following the entire line of thinking is an action or a set of actions that is justified by this line of thinking.

Two important points need to be made about these lines of thinking. First, with only a few exceptions, these lines of thinking are internally consistent both within an episode and between episodes. That is, we usually didn't find conflicting ideas within a given line of thinking or even within a given interview. For instance, in one of her lines of thinking, Ms Defoe mentioned a standing belief that the teacher's role in the classroom was to *always remain calm and in control*, and every episode she nominated for discussion was an instance in which she perceived a situation that could get out of control, but that she was able to stop before it did. And in every case, she nominated the episode because she was happy with her own performance. In each of the episodes she nominated, then, she was congratulating herself for *remaining calm and in control*, and for preventing minor student infractions from escalating into major lesson distractions.

Second, the fact that these ideas are laid out in Box 2 in a linear fashion should not be taken to mean that influences cannot run in both directions. For instance, it is likely that teachers accumulate principles of practice that are consistent with their standing beliefs, but it is equally likely that, once teachers accumulate a set of principles of practice, these principles serve to reinforce, through instantiation, their standing beliefs and values. And it is also possible that new experiences can alter teachers' principles of practice and even their standing

beliefs. For example, Ms Toklisch described herself as a teacher whose practice had radically changed about 6 years earlier. She described the beliefs she had now but could also tell us what she used to believe. All of her principles of practice were consistent with her new belief system but she could also describe her former principles. Even teachers who had not undergone such big changes could easily say things like, "I used to think that students needed more flexibility and freedom, but I now see that they work much better with more structure." So standing beliefs and accumulated principles can influence teachers' interpretations of events, but interpretations of events can also alter standing beliefs and accumulated principles of practice.

A handful of lines of thinking do include inconsistencies. Here is an example of one. Ms Buford (Note 5) is a fifth grade teacher who has a difficult class this year. In particular, it includes a boy, Juan, who is highly volatile and prone to violence. Juan acts out a lot, has temper tantrums, and gets into fights with other children. Buford wants to keep him in class as much as possible, because she does not want to deny him the opportunity to learn (one of the three reform ideals) and because she wants him to learn how to behave in social settings. But in fact she expels him frequently because he causes so many disturbances and disrupts learning for other children. In addition, she perceives the other children in her class as easily distracted and excited, thus complicating the problem of Juan.

One thing Buford has decided to do this year is to maintain a very calm demeanor and a very calm classroom, with no joking or extraneous comments at all, in the hope that she can prevent both Juan and other children from getting overly excited and rambunctious. That means that she herself needs to be very calm and that she needs to avoid any actions that might incite Juan or the class as a whole. The "action" in this case, then, is a calm, deliberate, even boring, persona. Box 3 shows Buford's Line of thinking.

Box 3: Ms Buford's Line of Thinking about her Calm Persona

A close look at Buford's line of thinking reveals conflicting ideas. Some of Buford's standing beliefs are consistent with reform: She wants to be enthusiastic about her teaching, believes students should participate in a variety of activities, and that they should share ideas. These ideas suggest that she wants high intellectual engagement, a reform ideal. She also notes that, for all of this to happen, students also need to learn to cooperate and to listen. Also consistent with this theme is a principle of practice that she acquired from a recent workshop that encouraged teachers to promote children's internal motivations and to reduce their dependence on external consequences as a way to motivate students. All of these beliefs and values suggest that her ideal classroom is one that is exciting and filled with discussion about mathematical ideas.

But there is a second theme in her thinking as well, one that has to do with being on task. Among her principles of practice, for instance, is the observation that students get easily distracted and that it is very difficult to bring them back once this happens. Associated with that observation is a belief that teachers should serve as role models for being on task. When she talked about the episodes we had observed, she indicated that she sometimes curtailed discussions and particularly discouraged any comments that might lead a discussion off task. This strategy contrasts with the ostensible value she places on children sharing ideas, but is still consistent with a standing beliefs about the importance of the teacher serving as a role model for how to behave in class, and how to remain on task. So there is a tension here between the notion of encouraging enthusiastic participation, on one side, and keeping everyone focused and on task, on the other side.

Now move to her current situation, where these conflicting ideas must be translated into specific practices, in the context of this particular class. Buford perceives this group of children as constituting a particularly difficult class. She has many students who fall quickly off task, get silly and lose the thread of the lesson. And in particular, she has Juan, who is especially volatile, often violent, and who has repeatedly incited other students. She wants to increase Juan's internal motivations for participating, but at the same time, managing Juan while also keeping everyone else thinking about mathematics is extremely difficult. She notes that this class "wears her out. (Note 6)" Given her prior ideas, and her interpretation of this situation, she decides that she needs to maintain a very calm, deliberate persona while teaching this class, one that soothes the group and keeps the entire class on an emotionally even keel. She concludes that she cannot be the enthusiastic teacher she wants to be. On the contrary, she gives herself a number of specific prescriptions for her own behavior. No joking, no informal asides, no "pizzazz." This is not a pleasant outcome for Buford, who noted with disappointment, when observing the videotape, that the class is slow and even boring, but who also argued that this was a necessary climate for this particular group of students. In effect, Buford trades one reform ideal – intellectual engagement -- for another reform ideal: providing all of her children, including Juan, access to knowledge.

Buford's line of thinking illustrates the number and variety of things that can influence teachers' intentions and actions, but it also shows that these ideas can contradict one another. In Buford's case, she has a conflict between her standing value of having children share ideas with an enthusiastic teacher and her perception of this particular class as being too volatile to respond appropriately to such a climate. She decides, reluctantly, to adopt a persona that verges on boring. In spite of this, or perhaps because of it, the class wears her out.

The actions she took are consistent with some of her prior ideas but inconsistent

with others, and the pattern also helps us understand how Buford responds to outside reform initiatives. For instance, as a reform initiative, the workshop that encouraged her to increase students' internal motivations influenced her line of thinking but failed to influence her practices in this classroom, and Buford's testimony suggests that the reason for the failure had do with the particular circumstances of her teaching situation. In this case, then, the line of thinking helps us see how the interplay of beliefs and values, accumulated principles of practice, and the conditions of practice itself lead to a particular practice.

Teachers' Intentions

The second important pattern that was apparent as teachers talked about their practices was the number and variety of intentions that they mentioned. In fact, on average, teachers had multiple intentions for each action. For instance, here is how Ms Temple responded to a question about one of her practices during a phonics lesson:

> [You said something along the lines of, "I see some different ways of doing it." What was going on there?] When you have an "a-n" together it changes the sound it's "uhn," not "an". So we call that . . . a welded sound. What I'm looking for is for kids to recognize that; I have it up on my board, they have it on their cookie sheets [The children are arranging magnetic letters on cookie sheets. They have separate magnets for "a" and "n", but they also have a magnet with a blended "an" symbol], so I'm hoping that they recognize these welded sounds, because it changes the sound of the actual letter. That they use that so that they are thinking about what they're spelling. [Ms Temple, 5th grade language arts, 15 years experience]

Almost immediately after this, she offered two other intentions:

> [What was going through your mind?] I was trying to look at who it was that recognized the *aan* as the welded sound. And I was also making sure that they split the word in the right place, by the syllables.

So when Ms Temple said to her students, "I see some different ways of doing it," a relatively simple move in her lesson, her behavior actually derived from three separate intentions: She wanted to get students to recognize the "an" sound as a welded sound; she wanted to see which particular students had in fact used the welded sound when they spelled the word; and, meantime, she was also looking around to make sure that the students separated their syllables correctly. Such references to multiple intentions were very common in these interviews.

It should not be surprising that teachers hold numerous intentions for their practices. Society as a whole holds multiple and conflicting ideals for teachers, and teachers' ideas no doubt reflect all of society's ideas as well as a set of ideals that derive from their personal experiences. Moreover, it should not be surprising to find contradictions among teachers' intentions. The number and variety of things teachers care about, and the number and variety of intentions they have for their practices, virtually ensures that some of these intentions will conflict with others (e.g., Hammer, 1997; Lampert, 1985; Schwabb, 1978; Fenwick, 1998). Sometimes internal contradictions can create "knots" in teachers' thinking (Wagner, 1987). For instance, a teacher feel that she must stop being such a boring lecturer, yet she can't change her approach without appearing to be a phony, yet she must change, yet she can't . . . Wagner notes that when teachers get such knots in their thinking, they experience tension and

the tension in turn can lead them to be more rigid and less spontaneous.

But some understanding of the terrain of these intentions might also help reformers. The apparent resilience of teaching practices in the face of decades of reform initiatives raises the question of where reform ideas fit in the entire landscape of ideas that guide teachers' practices. Perhaps a map of their intentions can help us understand why teachers appear not to heed reform ideals.

In our interviews about specific practices, teachers volunteered numerous intentions for doing the things that they did. From these 45 teachers, and 499 specific episodes of practice, we eventually heard nearly a thousand references to intentions. This is an average of slightly over 20 intentions per person (Note 7). Understanding these intentions, then, is an important step in understanding the origins of teaching practices. Teachers' intentions varied in both their **form** (how they were expressed) and their **content** (what areas of concerns were addressed).

Expressions of Intentions

Many of the things teachers were interested in were not expressed as goals, or as things that they wanted to accomplish. In fact, many of them referred to things teachers wanted to *avoid,* such as lesson disruptions. If goals represent teachers' hopes, then classroom disruptions and the like represent teachers' fears. The difference is important, for hopes and fears are accompanied by different senses of urgency. Psychologists have been aware for centuries that people are "risk averse." In financial contexts, such as gambling and investing, for instance, people are more motivated to avoid losses than to achieve gains (Kahneman & Tversky, 1986). Teachers, too, may feel a greater sense of urgency to avoid those things they fear than to accomplish the things they hope for. Certainly the language they used when talking about avoidances indicated a strong sense of urgency.

Moreover, teachers' intentions include even more than just hopes and fears. A third set of intentions could be called *aspirations*. These are things teachers want to *be*, such as kind, sensitive, fair and so forth. Yet another set of intentions were expressed as *obligations*. Teachers felt obligated, or responsible, to their students, to their colleagues, and to society as a whole. Finally, a fifth set of intentions were expressed in terms of *personal needs* that teachers wanted to satisfy, such as a need to reduce confusion or to reduce emotional strain.

Notice that, even though certain types of intentions were more likely to be expressed with certain types of emotional valences, it is technically possible for any emotional valence to accompany any type of intention. For instance, one teacher may intend to promote intellectual engagement because this is something she believes is important and wants to accomplish, while another may hold the same intention because she feels obligated to students or their parents to do this. The content of the intention remains constant, but its emotional valence varies.

So of all the things teachers wanted to do, only some were expressed as goals, or as things teachers wanted to accomplish. Others were expressed as fears, aspirations, obligations or personal needs. These differences in how intentions were expressed indicate the kind and degree of commitment that teachers have to their various intentions. For example, when we asked teachers what would happen if they failed to meet an *obligation*, they usually indicated that they would feel *guilty*, whereas if we asked what would happen if they failed to *avoid*

something, they usually indicated a strong sense of urgency that they *not fail*. The phrases that teachers used to describe their intentions, then, reveal what is at stake for teachers if they succeed or fail, including how much of their own ego is invested in the outcomes.

This fact was most apparent when teachers talked about the things they wanted to avoid. When describing things they wanted to avoid, they often described anxieties over real or potential outcomes, and some even described their reaction to classroom episodes with words like "panic." These emotions often came up when teachers feared that they might lose students' full attention or lose control of the classroom, and they often articulated a strong need to avoid these outcomes.

Content of Intentions

Several writers have attempted to devise taxonomies of the things teachers or other educators need to think about as they are teaching. For instance, Joseph Schwab (1978) argued that curriculum developers must accommodate the four commonplaces of teaching: students, teachers, subject matter, and milieu, and the National Academy of Sciences (Bransford and Brown, 1999), argued that an effective learning environment must attend to four aspects of teaching: learners, knowledge, community and assessment to support learning. Notice that there are differences among these taxonomies. The National Academy did not consider the teachers' needs or interests as relevant to the learning environment, and Schwab did not consider assessment as relevant to curriculum. Neither taxonomy addresses the momentum of lessons themselves, which is of great interest to teachers.

Taxonomies such as these are usually based on idealized conceptions, not on empirical examinations, so it should not be surprising to learn that the intentions described by these 45 teachers did not fit into these ready-made taxonomies. However, they did sort into a few general *areas of concern*. Two of these areas of concern had to do with the problem of acquainting students with new knowledge: (a) Content coverage and learning outcomes, and (b) methods of fostering student learning. Two others had to do with moving students through the work: ©) maintaining momentum and (d) fostering student willingness to participate. The last two had to do with the personal and social issues: (e) the classroom as a community, and (f) the teacher's own personal needs. Each of these is area of concern is elaborated below.

Content Coverage and Learning Outcomes. When teachers talk about content, their language tends toward a sense of obligation–not to their states, their districts or their administrators, but to other teachers and to students. These teachers seemed very aware that they were part of larger coordinated systems of instruction, and in particular that the teachers who received their students the following year would expect the students to have learned particular content. They did not want to disappoint those future teachers. With respect to their obligations to students, they wanted to ensure that their students would be able to handle state tests or to handle the next year's curriculum. Box 4 provides a sample of comments from teachers that illustrate their intentions regarding content coverage. The sense of obligation is apparent in these excerpts.

Box 4: Examples of teachers' concerns about content coverage and learning outcomes

[Are you doing it just because it's there? I mean could you just decide "I'm not interested, so I'm not going to do this?] You could do that. You could do that.

It's up to the person I guess. But then that would be in your conscience because if you don't do it, you're making the kids lose out. [Ms Abundo, 3rd grade science, 2 years experience]

[So you could probably teach whatever you wanted.] But then I'd be doing a disservice to the seventh grade teacher who want to do their job too. Then they wouldn't have anything to build on. If everyone below me taught what they were supposed to, heck, it'd be a lot easier to teach them. [Ms Joiner, 6th grade writing, 3 years experience]

As a teacher in North Carolina, we have to stick to the standard course of study, and I follow those guidelines. . . . It's not a structured type of thing as long as we're teaching the standard course of study. . . . So my job is sticking to that standard course of study. And yes, it's going to show up at the end of the year with the assessments that we're doing. Yes, in first and second grade in literacy and in math. So those particular things are the things that I'm looking at from year to year to see how well I'm teaching those concepts and how well my students are getting those concepts. And the results I'm getting at the end of the year show that they're, they're getting what the state expects them to get and to move on to the next grade level. [Ms Fosnot, 2nd grade math, 7 years experience]

So when I look at kids and I'm saying they're coming in and they're not reading where they should be reading, so I'm going to have to work extra hard to get them on grade level and I have two years to do that and there is a urgency. There is a urgency when kids are in 5th and 6th grade and there not reading on level yet. Instructionally, they might not get as much instruction as they move on through the system out of the elementary school, so there is a urgency. So these particular kids for reading, this is really important for them now in there life and I do believe with instruction that they'll be ok. That is where the urgency comes in. [Ms Jaeger, 5th grade reading, 8 years experience]

[So at the beginning you said you do this, repeating in unison, kind of chanting almost thing that is going on, because. You're trying to accomplish what by doing that?] They want the kids to learn the sounds that these letters make without having to think about it. It becomes automatic. And if they give them a key word, especially with the ---(?) because those change so much. They give them a keyword so that-- for instance in the tape, I think it's the tape is playing, the sound is when I say. At the end we do what is called the quick rule, quick drill in reverse, where I, instead of saying the letter and giving the key word and sound, I say "what says 'ah'?" And I often get the kids on that, because they want to say a, when it's really o. And I gave them the key word there, o octopus ah. And the key word is there so that if they forget they can remember the word and hear the sound o in it. [Ms Temple, 5th grade language arts, 18 years experience)

An important matter within this area of concern is the difference between content itself and teachers' articulation of learning outcomes. Even when content is held constant, teachers can articulate a variety of different learning outcomes for that content. To see this distinction, look at the intentions expressed in Box 5, all of which came from math teachers in grades 5 or 6.

Box 5: Examples of teachers' desired learning outcomes in upper elementary mathematics

> [Math] is a whole different language. It's got it's own language, and it's own set of symbols. And sure it's about numbers, but you've got to understand what to do with those numbers. And in Vermont anyway, there's a major emphasis on using math language, and accurately applying math language. And yeah it's about numbers, but you've got to know what to do with them. And I think a lot of kids where they run into a problem is with problem solving. They don't know what to do with those numbers when they're confronted with a problem. What operation do I use. I spend a lot of time at the beginning of school, I spent a lot of time. [Mr James, 6th grade math, 6 years experience]
>
> They really have not completely mastered metrics, as far as I'm concerned, in any year that we've done it. They've gotten it enough to surface-satisfy the requirements and move on. Hopefully they'll master it at some other point. But this is really the first year they get into metrics and I, I really don't go for mastery at this level. [Ms Todd, 5th grade math, 20 years experience]
>
> I wanted them to realize whether what she was saying made mathematical sense or not and if I say "that's a good idea" then everybody is going to think, "Yep, yep, so she's right, and let's just do what she does." Because that happens a lot. If I make a judgment, then they just.– So I try really hard, especially since they're older, for them to be the judge. That's why I asked them, Does that make sense to you, or Does that seem like a reasonable way to think about how we could find area. That's what I always try to do. [Ms Toklisch, 6th grade math, 6 years experience]
>
> OK. On morning math, there came up a problem where we were trying to find common denominators, and then I had called on a student who knew the common denominator, but he couldn't tell me how to find the equivalent fraction. Say the number is 1/3, and he's changing it into 79ths because that's going to be his common denominator. He couldn't tell me what 1/3 would be equal to in 79ths [e.g., 26/79] and what that was called. And really I was wanting him to put a term with it. He really did know the process, but he just couldn't put a term on it. And because of the review, I was trying to remind everyone of the steps in the process, not just the answer. [Ms Taswell, 6th grade math, 14 years experience]

Despite the content similarities, the learning outcomes these teachers sought were remarkably diverse. This phenomenon was not unique to mathematics. Within each school subject, the learning outcomes that teachers defined addressed many different aspects of that subject. In the case of mathematics, some teachers were more interested in mathematical language and symbols, others in mathematical reasoning, others in mathematical procedures and conventions. In other subjects, though, similar variety was apparent.

Teachers' discussions of content, as an area of concern, reveal several important points about their intentions. One is that their thoughts about content are often based on a sense of obligation to their students and colleagues to cover the content that is designated for their grade level. Another is that they had their own ideas about what was important for students to learn about the designated content, and the values they placed on their content were remarkably various. Yet another important point about their intentions regarding content is that they rarely denied the importance of any content or learning outcome. In our interviews, we often inserted devil's advocate questions, asking they why not do something else. In the case of content, we often asked teachers why *not* teach some other content. The most frequent response was that the other content was also important, or that it would indeed be taught in some other situation, but that in this situation–for these particular students at this particular

time, this content was more important.

Strategies for Fostering Student Learning. The second main area of concern reflected in teachers intentions was fostering student learning. This is a concern distinct from concerns about the content itself, and has to do not with *what* to teach, but rather with *how* to teach. Intentions that reflected this area of concern tended to take a strategic tone that included intentions such as these:

- How or when to monitor student progress;
- Modeling problem-solving processes or thought processes;
- Defining learning goals that are appropriate for these students, or adapting the content to their needs;
- Helping students learn to monitor their time, stay focused, attend, etc.

Teachers' intentions regarding fostering student learning are probably closest to what most outsiders assume teachers think about. They indicate an interest in keeping track of what students are learning and thinking, and making sure students are responding in the way teachers had hoped for. Box 6 provides some illustrative expressions of intentions in this area of concern.

Box 6: Examples of intentions regarding fostering student learning

[Why do you ask students to give thumbs up or thumbs down?] Well, one thing about the thumbs up and down is that you don't really know if they know or if they're just following what their friend is doing. A lot of times I do have them writing things down and I walk around. That's another thing I like to do. I think maybe with the questioning it's just because it's some of the coursework that I've done lately, um, and its so much, there's so much emphasis on problem solving and thinking skills and so the questioning, I'm hoping, helps them to think, to get into different modes of thinking. So I guess that's why I was with that, more. [Ms Majordom, 3 rd grade math, 26 years experience]

Now, I purposely went to one of my harder words on my list because I did not want to lead this group of good spellers with the impression that we are going to work on easy words because that has been a general cry that I have heard of teachers who are working with more capable spellers that the kids think the words are really easy. The words are too easy. [Ms Lafayette, 5th -6th grade spelling, 28 years experience]

[Why did you pick that moment out in the tape, you said go to this moment?] This is the first time that this group of kids has worked together and I'm going to ask them right after this to share with their group. It's going to be really important to me as their teacher to know what they have written on that paper. If you taught for any number of years, you know that anything could be on those papers. So you really want to be aware of what's there so before you turn them loose in a group situation where they're sharing and commenting and asking questions or whatever might happen in that situation, so I thought it was important, I think instructionally to me, it's important to recognize that we need to keep track of where kids are along the process, not to just instruct and move on, that you need to know where each kid is individually. [Ms Jaeger, 5th grade literature, 8 years experience]

As an area of concern, fostering student learning is particularly important for teachers. Intentions in this area justify many of the strategies, techniques, and devices that teachers might draw upon to move students toward a learning goal. Reforms that concentrate on the content itself, rather than on how to help students learn content, are leaving this important problem entirely in the hands

of teachers.

Maintaining Lesson Momentum. As an area of concern, lesson momentum gets almost no attention from reformers. Yet in our conversations with teachers, we found numerous references to the importance of keeping things moving along, avoiding distractions, making sure everyone was on the same page, and so forth. Maintaining momentum was clearly a very important area of concern for teachers and included such diverse intentions as these:

- Making sure materials were ready and available;
- Making sure students understood what they were supposed to be doing;
- Monitoring student behavior and preventing disturbances;
- Adjusting procedures to accommodate student readiness and understanding;
- Making sure everyone was on the same page.

The most prominent specific intention within this area was *avoiding distractions*. Almost to a person, teachers indicated a strong desire to avoid distractions while they were teaching. They said that small distractions tended to escalate into larger ones, that escalation could cause them to lose control of the lesson, lose the momentum of the lesson, or lose students' attention, and that these disruptions often meant that they needed to go back and start all over because students forgot everything that had happened prior to the distraction. They worried that the classroom would dissolve into chaos. Much of the discussion about maintaining momentum used the language of avoidance and included a strong sense of urgency that gives one the sense that the need to move through the planned events in an orderly and stable way was urgently important to teachers, not just because disruptions took time away from learning, but also because they created emotional distress for the teachers themselves.

It might be easy to assume that concerns of this sort plague mostly novice teachers, and that they would not appear in interviews with experienced teachers, but that was not the case. Almost all teachers seemed to believe that the *potential* for a major disruption was *always present*, and that they had to be ever-vigilant to avert these disruptions. Moreover, the fear of losing control was articulated even among teachers who *appeared* to be quite composed. Often, the things they saw that triggered this concern were so tiny that they were not even visible on the videotape. They were often not visible to me even on re-viewing the tape numerous times. Yet these small aberrations were signals to the teacher that a potentially disastrous situation could occur if action weren't taken immediately. Box 7 provides some examples of these concerns and intentions. Notice that these comments do not all come from novice teachers.

Box 7: Intentions Regarding Lesson Momentum

[What would it mean to lose a kid here?] Well, in the small group, it wouldn't be a big issue, because I'm in very close proximity to all of them, and all I have to do is reach over and touch somebody's hand, and I bring them back in immediately. But, in a large group, you lose somebody in row 2, pretty soon, they'd have their neighbor gone, and they're playing with pencils or something. And it's not a huge issue, because you lose kids all the time. All the time. I'm not going to be able to keep everybody's interest all the time. But there is a general thing where you don't want to go off on a tangent, just lose everybody. [Ms Dawes, 4th -5th reading, 13 yrs exp]

[So you said when you put them in groups they were out of control. What do you mean by "out of control?"] Very difficult to get them to listen, because they were sitting, you know, in groups of four at a table. Even like during

times when they were supposed to be silent reading, then they're playing with one another and they're fiddling at each others desks and they're talking even when I was talking. It was just real difficult to stop. It was real difficult for them to stop talking and listen when they were in groups. They feed off one another, and if it gets started--. They would get rude and crude and nasty and mean and those were the kinds of things that were happening. [Ms Awkler, 5th grade math, 9 years experience]

[So what's the trade off here between having them volunteer these things and not write them versus writing them up on a chart in front?] Well timing definitely is the trade off, and keeping them engaged because when I write, well the kids have to wait till I am done writing. When you are writing then the kids tend to goof off ,you know. They start losing their interest and um or what the conversation is. [Mr Awles, 3rd -4th grade science, 9 years experience]

We do have a lot of children that can't keep their hands off of someone else, rubbing up against someone, just touching them to see if they can start reactions. And they're not, they're just, they'll say to you, if you ask them why they have their hands on someone else, they'll say, "We're just playing." But to me that's, it's not safe. The kinds of behaviors that the, just touching, putting your hands on someone else or, that's just not safe. [What do you mean by "not safe?"] Well, then you have the potential for a fight, you have the potential for someone getting um…hit in the back of the head. Someone getting knocked around, falling out of their chair sort of things. [Ms Taswell, 6th grade science, 14 years experience]

[What would be the problem with them slouching down or bumping into each other's space?] It would cause problems, cause fights. Like today um I had a student, Keith socked Shane in the arm, and the reason was "he was on my desk" I guess he kept asking him to move over or whatever. So that's the problems we get. We get the swinging under the desk, but if everyone's sitting up straight and my feet are down, my legs aren't swinging. Then I get the "he kicked me from the side" but if their feet are this way. So it, it a lot of problems I could avoid if I had them to sit up correctly. [Ms Furth, 3rd grade language arts, 3 years experience]

Many teachers seemed to believe that maintaining momentum was an important step in achieving their learning goals. How can students learn, after all, if they don't get through the lesson? It is not simply a matter of covering the content; it is a matter of getting students through the learning activities, discussions, quizzes and so forth that are designed to foster learning of the content. Yet one criticism reformers often make of American lessons is that they cover too many details, that big ideas are lost in the details and that students don't have an opportunity to intellectually engage with any of it. Many of our discussions with teachers revealed a severe tension between the desire to foster student learning, on one hand, and the desire to maintain lesson momentum on the other.

Student Willingness to Participate. The fourth area of concern reflected in teachers' intentions was student willingness to participate. Teachers indicated the importance of student willingness through a number of specific intentions, including these:

- Keeping students focused;
- Encouraging and affirming students;
- Challenging and motivating students; and

- Accommodating individual differences.

Teachers tended to care about student willingness to participate for two very different reasons. On one side, they understood that students could not learn if they didn't want to. On the other side they also knew that they could not entice 100% of their students 100% of the time to intellectually engage with the content. Children are too various in their interests and too easily distracted. So they frequently hoped for a lesser goal--that their students would *at least cooperate* with the lesson and learning activities and would not disrupt the rest of the class. The strongest desire for student willingness to participate extended well beyond the desire to avoid disturbances: Many intentions addressed students' attitude toward classroom life in general or toward their own ability to participate successfully. In fact, the most prevalent specific intention mentioned was that teachers wanted to *respond positively to students*. There was a widespread belief among these teachers that students would respond positively to the teacher if the teacher responded positively to them. Box 8 provides some examples of these intentions.

Box 8: Intentions Regarding Student Willingness to Participate

I think every child needs to feel equally important in the classroom. And that's why I shake their hands at the end of the day. I want to make sure there's a connection. I greet them at the beginning of the day and make sure that I acknowledge all of them. [Ms Mines, 6th grade writing, 26 years experience]

. . . there's a lot of kids that, once they get shot down, they stay down. So I didn't want to just deflate anyone's bubble by saying "no, that's not what we were doing" because there was a group that was reading separately. [Mr Waffner, 4th grade history, 25 years experience]

I try not to do anything that would be critical, even when they make a suggestion or do something that's clearly not in the right direction. . . . If I say, "That's wrong," it's not OK. I don't think you should tell that to a child. I don't thin you should say, "That's wrong. That won't work." [Ms Buford, 5th grade math, 25 years experience]

[Why have you decided then to not correct it?] I wanted to make him feel that he was making a connection. . . . So I was hoping to kind of ease him and make him feel better about what he had done. [Why is that important?] I really feel like their confidence is going to be better and they're not going to be shy about answering questions. Every time they raise their hand in class they're taking a risk. And if they always take the risk and fail, I am afraid that starts to diminish their enthusiasm to participate. So, I always try, even if the child gives a wrong answer, I try to say "that's really close, but let's look at it this way." [Ms Mueller, 6th grade science, 3 years experience]

I take, whenever the opportunity arises, the chance to say to children that all of us have capabilities, but they may be in different areas. [Why do you think that is important?] Because there are so many kids that think they're stupid, and dumb, because they can't compute well in math. Or because they are a divergent thinker, and they just plain look at the world differently. And kids need to know, "Yeah, you have an important role to play, here and in society in general." [Ms Macciolino, 5th grade history, 35 years experience]

[And what is it that you hope to accomplish with this project as a whole?] That they have pride in their work. That when they put it up they can be proud of themselves that "Gee, I did that." You know, that they'll say to their mom, "Take a look at my five." So I think you have to do those polishing kinds of

things at the end to show that its nice and its important and that they can be proud of the work they accomplish. [Ms Pass, 3rd grade writing, 25 years experience]

Many teachers believed that if students did not feel confident in themselves and their ability to succeed, they would not participate in learning activities and consequently lesson momentum could be lost and the disengaged students would not learn. The notion that self confidence or self-esteem was a prerequisite to learning came up far more often than the notion that *interest in the content* or a desire to learn might be a prerequisite to learning.

Another theme running through these comments was that fostering students' self esteem was an independent educational goal apparently distinct from other learning goals. Teachers wanted to encourage students, to affirm them, and to make them feel good about themselves and about their capabilities. These passages also reveal an important tension between the desire to affirm students, on one side, and the desire to foster learning on the other. Several references to the importance of affirming students came up in the context of a wrong answer. That is, the teacher asks a question to Suzy and Suzy provides a wrong answer. This answer provokes an immediate dilemma for the teacher because she can't let this answer go, but at the same time she can't do or say anything that might suggest that Suzy has a problem or is inadequate in some way. Because of their desire to encourage students , teachers find wrong answers to be especially troublesome. Almost to a person, teachers abhorred the idea of telling a child that he or she was wrong. Yet, since students are novices at the subjects they are learning, they are likely to often be wrong, thus placing teachers on the horns of an often agonizing dilemma.

Classroom as a Community. The fifth area of concern has to do with the social atmosphere in the classroom. Teachers wanted to create a particular kind of social climate in their classroom, and wanted students to learn to interact with the teacher and with one another in particular ways. For instance, they wanted order, cooperation, politeness, turn-taking, deference, and so forth. To this end, teachers mentioned one group of intentions that had to do with their own persona, and importance of providing a role model for students, and another group of intentions that had to do with norms of behavior for students. The kinds of intentions they mentioned included these:

- Maintaining a particular persona
  - Modeling civility and decorum;
  - Being fair;
  - Being honest;
  - Maintaining personal integrity;
  - Being likeable;
  - Facing up to and addressing political and social issues that arise in the classroom;
  - Maintaining their own authority; and
  - Reducing their own authority.
- Maintaining norms for students participation and interactions, including
  - Ensuring that everyone participates,
  - Ensuring equal opportunity to participate,
  - Taking turns speaking, cooperating,
  - Demonstrating mutual respect, etc.

Among these many ideas, the most frequently-mentioned intentions had to do with their own personae. A variety of intentions for persona were mentioned, and they were sometimes contradictory. One teacher wants students to respect

her authority, another wants to befriend students and diminish the distance between teacher and student. One teacher wants to be calm and quiet, another to be enthusiastic and lively. Despite this variety, a common premise running through these intentions was the belief that the teacher's persona influenced student behavior and student willingness to participate. Consequently, teachers tried to control their own movements, voices, and interactions with students in ways they believed would promote a more civilized classroom and a more stable learning environment. Box 9 illustrates some of teachers' intentions regarding their classrooms as communities.

Box 9: Intentions Regarding the Classroom as a Community

One thing I try to do is be really open with them, and really tell them how I feel, and listen to them. [Ms Aires, 3rd grade language arts, 3 years experience]

If I tell William he can't, but I tell Marquise he can, they might not like it but those are--that's what I'm saying and I'm the person in charge. It's a self-confidence thing for me that I've grown to respect myself more, respect that I am the person in charge and that they in turn respect me. [Ms Ames, 4th grade math, 1 year experience]

I don't think respect is something that's taught. Well, it's something that's taught through seeing. Because respect comes in very many different shapes and forms. But if the students see you showing respect to someone, they know that it is a proper situation for a teacher to be addressing someone that way, and then they may do it that way next time. [Ms Damon, 3rd grade Spanish, 8 years experience]

As a first year teacher, I want them to know that I am in charge, and it's scary when you release them to work on their own because anything can happen. And if someone walks into my room, I want them to know I'm in charge. And when you let them go, it's hard to just sit back and let them go. [Mr Sadowski, 2nd grade math, ½ year experience]

I knew I had to accept it because again I can't value judge, and they bring what they bring to class. I can't expect them to bring to class what I want them to bring. They bring what they bring. So if that's one of their ideas, then I have to get it up there. Everything they bring. I guess if I start to say "No, I'm not going to let you share that;" or "Yep, I'll let you share that," then I become some judge of their thinking and then I'm really not teaching them how to think for themselves and decide whether things are reasonable or not. So I feel like I have to take everything they bring and they brought that. [Ms Toklisch, 6th grade math, 6 years experience]

That's not my style, to be authoritarian. I don't want to be the dictator, to say, "you, you, you, you." That's not my personal style. [Ms Eckhard, 4th grade language arts, 6 years experience]

Satisfying Personal Needs. The final area of concern that arose in these interviews had to do with teachers' own personal needs. This is another area of concern that is rarely discussed in reform literature, or even in hortatory literature, but it is important to teachers, for they are unlikely to remain in this line of work if they can't find ways to make classroom life agreeable. Among the many intentions mentioned in this area of concern were these:

- Reducing mental burden of attending to too many things
- Reducing emotional strain

- Holding students' attention
- Having some order and structure
- Being true to one's self
- Being interested in the work
- Having a sense of accomplishment
- Self improvement
- Being appreciated

Even though personal needs were mentioned less frequently than other areas of concern, they were nonetheless important to teachers. Half the teachers participating in this study mentioned at least one personal need associated with teaching. Most frequently, they mentioned a need to reduce either the cognitive or the emotional burden. Both of these personal needs appeared to derive from feeling overwhelmed or confused by the number of different things they were trying to monitor. Box 10 provides examples of these intentions.

Box 10: Intentions regarding Personal Needs

> [Where did you get the idea of using a timer?] Well, I have a timer because we do timed tasks for arithmetic. But actually I'm using it for their work time because that way I don't have to pay attention to the clock. That way I can just focus on what they're doing and the clock is just running itself. [Ms Sesnerson, 3rd grade science, 5 years experience]
>
> It's very hard [teaching in this school] because I've never had to go home holding things on my shoulders as I have here. It's a terrible weight to have on your shoulders all night wondering if that kid is going to come back to school tomorrow . [Ms Damon, 3rd grade Spanish, 8 years experience]
>
> I like to have things ready because it just makes things easier for me, not running around finding, "Well, where's this, where's that?" I feel out of control if I don't have those things ready. . . That's not a good feeling, when I'm not organized, running around looking for something and not being able to find it is not a good feeling for me. And when I, when I get organized, that makes me feel good. It's something I don't have to worry about. It's just less stress with that. So that, that helps me a lot. I think it makes me a better teacher just because I'm not stressed, wondering where things are. I don't get rattled, and when I'm, you know, if I'm going to be rattled, it's going to make it easier for me to maybe say the wrong thing, or just come off the wrong way. [Mr Sadowski, 2nd grade math, ½ year experience]
>
> Today they were helping each other with story problems. [One student asked] "Can I help" "Oh please go help! I'm one person! Please help them! [Ms Bowes, 5th grade math, 30 years experience]

In a sense, these references to personal needs follow from the number and variety of other things teachers were trying to do. It is not surprising that teachers felt overwhelmed, given the variety of intentions outlined above. Teachers want to cover important content, foster student learning, keep their lessons moving along, increase student willingness to participate, be ethical and even-handed with their students, and encourage their students to interact with one another in a civilized way and to participate equally in classroom activities.

Summary of Intentions

Box 11 shows how frequently teachers mentioned intentions in each of these six areas of concern. The first thing that Box 11 reveals is that teachers mentioned

more intentions having to do with *fostering student learning* and with *maintaining momentum* than with any other areas of concern. This preponderance could reflect, at least in part, the types of practices we tended to talk about, but it also indicates that these areas of concern are highly salient in teachers' moment-to-moment decisions. The third-most-frequently mentioned area was student willingness to participate. However, as teachers discussed this concern, it was clear that they believed student willingness to participate depended more on self-esteem than on interest in the content or in the learning goal. Notice, too, that first these three areas of concern all have to do, in one way or another, with manipulating students: how to maintain lesson momentum, how to get students to cooperate, and how to get them to actually learn.

Box 11: Main Areas of Concern and Number of Intentions Mentioned within each Area

---

127 references to **Content Coverage and Learning Outcomes**, including

- Obligatory content coverage, specific required content or need to cover all chapters in the text; and
- Desirable learning outcomes such as acquiring factual content, learning to reason, or developing appropriate attitudes toward the material

215 references to **Fostering Student Learning**, including

- Specific teaching strategies such as selecting appropriate content for students, adapting content to student interests or capabilities, modeling thought processes and language usage, and monitoring and assessing student learning.
- Intermediate learning goals, such as helping students learn to manage their time, to focus, to write notes or use other study strategies, etc.

204 references to **Maintaining Momentum**, including making sure materials were ready and available, making sure students understood what they were supposed to do; monitoring student behavior, preventing disturbances, adjusting procedures to accommodate student readiness and understanding, and making sure everyone was on the same page.

165 references to **Student Willingness to Participate**, including keeping students focused; nurturing and affirming students, challenging and motivating students, and accommodating individual differences so that everyone is willing to participate.

123 references to the **Classroom as a Community**, which includes concerns about

- The teachers' persona as kind, fair, receptive, encouraging, honest, strict, etc; and
- Students participation and interactions, including ensuring that everyone participates, ensuring equal opportunity to participate, taking turns speaking, cooperating, demonstrating mutual respect, etc.

103 references to **Personal Needs**, including reducing emotional strain, reducing cognitive strain, need for order, quiet, sense of accomplishment, need to look good to colleagues, etc

---

937 Intentions mentioned across all six areas of concern

Box 11 is also important for what it tells us about the reform ideals. Two differences between teachers' in-the-moment intentions and reform ideals are apparent. One is that teachers' intentions cover a much wider swath than reform ideals cover. Even if all three reform ideals were present exactly as reformers would express them, these ideals would still be a small fraction of all the things teachers aim to do. The second important difference, though, is that teachers did not express their intentions in the same way reformers express their ideals. The differences bear examination.

One difference is that no teacher indicated a specific intention to ensure that the ideas they taught were *inherently* important. Instead, for teachers, content was important because it would be on a test, because it was in curriculum guidelines, or because they knew the teacher at the next grade level would expect students to know this content. Teachers seemed very aware that their instruction fit into a larger system of instruction, so the importance of any given content was defined according to how well it fit into this larger system. This finding suggests that reform initiatives that focus on curriculum standards and student assessments might have more influence than those that focus on, say, professional development as their principal lever of influence.

Similarly, no teacher specifically mentioned intellectual engagement as an important intention, but many talked of the importance of engagement *in general* and of the importance of student willingness to participate. Numerous teachers recognized that they could not succeed if their students weren't willing to attend and to take the instructional event seriously. The difference may seem slight, but it means that teachers may sometimes seek learning activities that will be *fun*, rather than *intellectually stimulating*, for they may seek any kind of engagement without necessarily focusing on *intellectual* engagement. This is an issue that cannot be addressed solely through curriculum materials, for different teachers can present the same content in wildly different ways, ranging from dreary to fascinating to amusing, and many of their strategies may succeed at sustaining students cooperation even if they don't succeed at engaging students intellectually.

Finally, teachers did not discuss universal access to knowledge, but they frequently discussed universal *participation* in their lessons. Again, this difference is slight but could make a significant difference in how teaching decisions are made. Ensuring that all students are participating could be analogous to ensuring that they are all cooperating. That is, the practices that teachers devise to achieve this intention may not in fact ensure that students have equal access to *knowledge*.

Interactions among Intentions

Because different intentions and different areas of concern can conflict with one another, teachers frequently had to make decisions about which intentions to pursue. Many of the practices teachers discussed with us were constructed after weighing tradeoffs or reconciling dilemmas among conflicting intentions, and teachers often described their thoughts using "on the one hand, on the other hand" terms to explain their reasoning in particular situations. The problem here is not the number of intentions, for even if they were cut by two-thirds, teachers would have difficulty balancing them if they all addressed different areas of concern. For example, imagine a teacher who focused only on the single most prevalent intention within each area of concern, thus reducing her cognitive burden from 20 intentions to six. This teacher would still be trying to do these six things simultaneously:

- Avoid distractions and ensure lesson momentum;
- Cover content that prepares students for the next grade level;
- Use teaching strategies that foster student learning;
- Affirm all students at all times to ensure their willingness to participate;
- Maintain a persona that will promote an appropriate classroom community; and
- Reduce the personal emotional strain that results from trying to do all the above.

Even this abbreviated list of modal intentions would be difficult to manage, for they would not always yield the same decisions. Here is a particularly telling example: Ms Chalmers was teaching her students about light and shadow. At one point, she mentioned that we couldn't have a shadow unless we had have a source of light, at which point a student responded that indeed you could, because she had a kitten named Shadow. This comment created an instant conflict within Ms Chalmers because she wanted to respond positively to all of her students but she also wanted to maintain the momentum of the lesson and did not want the discussion derailed by this comment.

> I was thinking, yeah, it was sort of off the topic, and I was trying to acknowledge the fact that a cat could be named Shadow, but what we were talking about was something else. Um, I guess I was trying to expand what she was saying, to move on to what we were actually talking about, rather than to have it digress into something else, and to see what the kid's knew. What their understanding was. . . . I guess my thought process was that I was acknowledging and thinking that Shadow was a good name for a cat, and that we were talking about shadow in a different context. To sort of move it to that and not say, "Oh, that was a silly thing to say, or that doesn't have anything to do with—. . . . At that time, we were in a little bit of a transition time there, and I did have a little bit of time, and I could give her that attention. But if it starts to be the kind of thing where everybody is telling a story. [Ms Chalmers, K-2 science]

It is by weighing the *momentary* importance of their many intentions that teachers construct their practices. At any given moment, one intention may become a more prominent concern in the teacher's reasoning. Across different situations, different patterns of intentions will emerge, and across time, different intentions may become more or less important in general. Teachers frequently face conflicting intentions, so that they are forced to choose which aim will take precedence in a given situation. The most frequently mentioned tradeoffs were these:

- Keeping the group on task vs responding to one student's confusion. Many teachers discussed the ambivalence they felt when it became clear that one student wasn't following the discussion. They feared that if they took the time to help that one student get back on track, they would lose the rest of the group. On the other side, they don't want to lose the one student either.
- Maintaining consistent rules versus responding to individual needs. Many teachers placed a high value on being fair and consistent in their application of rules, rewards and punishments. At the same time, they also valued accommodating individual differences and individual needs and allowing that there are often extenuating circumstances involved in a transgression.
- Disciplining students or correcting them versus affirming them.
- Allowing students to figure things out for themselves versus giving them

an answer. The dilemma here is that teachers tended to believe that students need to work things through for themselves, but they often feared that if they allow the time needed to do that, the momentum of the lesson would be lost or some content would never be taught.

- Pursuing an idea that interests students versus moving on. Sometimes students become *too* interested in a particular idea and the teacher faces a trade-off between allowing students to pursue an idea versus maintaining lesson momentum.

A close examination of these tradeoffs also suggests that teachers tended to resolve their tradeoffs by focusing more on *lesson momentum* than on other areas of concern.

So teachers have numerous intentions, more than one for most of the things they do. Though these intentions can be grouped according to the area of concern they address, the groupings do not convey all of the relationships that exist among these intentions. Teachers have a variety of beliefs about how success in one area of concern promotes success in another, as well as how progress in one might create a setback in another. They also have different emotional commitments to different areas of concern and they have different ideas about how to weigh them all to derive at their ultimate courses of action. The landscape of teachers' intentions is both dense and complicated, and intentions sometimes conflict and sometimes complement one another. It should not be surprising that reformers have a hard time creating a prominent place in this landscape for their own intentions.

Discussion

Many studies have tried to reveal the reasons why teachers do not implement reform ideals. My aim here was not to shed more light on why teachers *don't* engage in one set of practices, but instead to learn more about why they *do* engage in other practices. This examination of teachers' rationales for their practices suggests that there may be substantial merit in the hypothesis that teachers' interpretations of classroom situations, and the beliefs and values that contribute to those interpretations, could account for their long-recognized failure to adopt reform ideals. Whereas a reformer may interpret a classroom situation as presenting an opportunity for intellectual engagement, a teacher may interpret the same situation as threatening to disrupt lesson momentum. Whereas a reformer might interpret a particular student idea as intriguing or challenging, a teacher might perceive the same idea as presenting a conflict between responding to one student versus keeping the attention of all the rest. Whereas reformers' ideas could be summarized according to three areas of concern, teachers intentions reflect at least six areas of concern. Moreover, teachers hold numerous intentions within each of these general areas of concern and hold numerous intentions for most of their actions. Not only are teachers' intentions numerous and diverse, but they often contradict one another, so that it would not be logically possible for teachers to actually achieve all the things they intend to do.

Teachers' intentions also had strong emotional valences. Teachers *need* a living environment that is stable and pleasant for themselves, they are *obligated* to ensure that students learn the content that is assigned to them, they *fear* distractions and disruptions that will get their lessons off course and perhaps cause it to disintegrate altogether, and they *hope* to enlist students' willingness to participate and ultimately to foster student learning. These emotional attachments to intentions suggest that different intentions carry different senses of urgency. For example, the fear of distractions was strongly expressed by almost all teachers and appeared to dominate whenever there were two or more

conflicting concerns within a given situation.

The three reform ideals were also present in teachers thoughts, but they were barely visible in the complex landscape of competing intentions and the multiple areas of concerns that were important to teachers. Moreover, even when teachers intentions appeared to be very similar to reformers' ideals, teachers' intentions were expressed slightly differently than reformers' are. For example, teachers were often unable to reject alternative content, and instead responded to our queries by saying that all content was important, and that the content they chose to teach just happened to be most important at this particular moment. Their acceptance of all potential content may suggest that they have little or no basis for sorting out content or for ascertaining which is relatively more or less important. Instead, for teachers, important content was content that fit within the larger system of instruction.

Similarly, teachers embraced the idea of engagement, though virtually none of them used the phrase *intellectual* engagement. Moreover, even as they sought engagement, they also feared that too much engagement could hinder lesson momentum and could prevent them from finishing lessons on time. This tension between intellectual engagement, on one side, and the pressure of time and momentum on the other, is something that reformers rarely address but that teachers must address. Teachers also indicated that engagement was not an easy thing to manage in a classroom with 25 children, any one of whom may derail a conversation by misinterpreting an idea or getting confused– or by, conversely, "getting it" immediately and thus losing interest while waiting for others to get it. As these dilemmas arise, the clock is ticking, and teachers feel pressure to move along. And when teachers faced tradeoffs among competing intentions, lesson momentum was most likely to be the dominant concern.

The reform ideal that was most widely mentioned in teachers' rationales was the ideal of universal access to knowledge, expressed by teachers in terms of universal *participation* in classroom activities. Virtually all teachers in this study expressed intentions to include all their students, to encourage all their students, and to be fair in their treatment of all their students. Even still, as we saw in the case of Ms Buford, this intention did not translate unilaterally into a practice that reformers would necessarily admire. For Ms Buford, universal participation meant that intellectual engagement had to be sacrificed, and that classroom discourse had to be staid and dull so that a particularly volatile student would remain in the classroom. Few reformers have likely envisioned a situation such as Buford's, nor have they thought about how to resolve problems that arise when their own ideals conflict with one another.

This examination suggests that reform ideals are indeed present in teachers' thinking, though in somewhat different forms, but it also suggests that reform ideals compete with numerous other ideas, large and small, that teachers care about. Teachers interpret classroom situations in terms of six different areas of concern, and rely on their own prior beliefs, values and accumulated principles of practice to decide how to respond to situations as they arise. The problem reformers face may not be one of persuading teachers of their ideals, but instead one of persuading teachers to weigh different areas of concern differently as they make moment-by-moment tradeoffs.

Notes

1. My colleagues in this study were Paula Lane, Brenda Neumann, and Rachel Lander, all former graduate students at Michigan State.

2. Since the focus on this study is on the pedagogical practices teachers use

within their classrooms, I do not address the plethora of reform proposals that address textbooks or course offerings, school organization, market incentives and the like.

3. Note that, even though we selected teachers who might have been exposed to different reform initiatives, the study is qualitative and the numbers within each group too small to enable us to make systematic comparisons across these groups. The sampling frame was intended to ensure a variety of reform contexts, not to make direct comparisons of them.

4. Because most teachers in this sample are females, I refer to teachers in general as "she."

5. Ms Buford, 5th grade math, 25 years experience.

6. All of the ideas mentioned in the line of reasoning come directly from the interview. They are paraphrased in the chart, for brevity, but nothing is imputed. Every idea mentioned here was explicitly stated at some point in the interview.

7. Throughout this paper, I tend to refer to the number of times an idea was mentioned by teachers. To arrive at these tallies I did not include single-line or single-sentence references but instead tallied ideas only when the teacher provided a relatively lengthier passage. That is, if a teacher mentioned a goal or a constraint in passing I did not include it. The tallies I refer to here include only those places in the interviews where teachers provided a relatively well-developed passage discussing a particular goal or constraint or concern that was important to them.

References

Aguirre, J., & Speer, N. M. (1999). Examining the relationship between beliefs and goals in teacher practice. *Journal of mathematical behavior, 18*(3), 327-356.

American Association for the Advancement of Science. (1989). *Science for all Americans: A Project 2061 report on literacy goals in science, mathematics, and technology.* Washington, D. C.: Author.

Applebee, A. N. (1991). Informal reasoning and writing instruction. In J. F. Voss & D. N. Perkins & J. W. Segal (Eds.), *Informal reasoning and education* (pp. 225-246). Hillsdale, NJ: Erlbaum.

Argyris, C. and D. A. Schön (1996). *Organizational Learning II*. New York: Addison Wesley.

Artiles, A. J., Mostert, M. P., & Tankersley, M. (1994). Assessing the links between teacher cognitions, teacher behaviors, and pupil responses to lessons. *Teaching and Teacher Education, 10*(5), 465-481.

Berlak, A., & Berlak, H. (1981). *Dilemmas of schooling: Teaching and social change*. London: Methuen.

Brickhouse, N. W. (1990). Teachers' beliefs about the nature of science and their relationship to classroom practice. *Journal of Teacher Education, 41*(3), 53-62.

Brophy, J. (1989). Conclusion. In J. Brophy (Ed.), *Advances in Research on Teaching* (Vol. 1, pp. 345-355). Greenwich, CN: JAI Press.

Bruner, J. (1996). *The Culture of Education*. Cambridge MA: Harvard University

Press.

Bussis, A., Chittenden, E., & Amarel, M. (1976). *Beyond Surface Curriculum*. Boulder, CO: Westview Press.

Chall, J. S. (2000). *The academic achievement challenge: What really works in the classroom?* New York: The Guildford Press.

Cohen, D. K. (1990). A revolution in one classroom: The case of Mrs. Oublier. *Educational Evaluation and Policy Analysis, 12*(3), 311-329.

Cuban, L. (1984). *How Teachers Taught: Constancy and change in American Classrooms, 1890 - 1980*. White Plains, NY: Longman.

Cuban, L. (1990). Reforming again, again, and again. *Educational Researcher, 19*(1), 3-13.

Cremin, L. (1990). *Popular education and its discontents*. New York: Harper and Row.

Cronbach, L. J., & Suppes, P. (Eds.). (1969). *Research for tomorrow's schools: Disciplined Inquiry for education*. New York: National Academy of Education and Macmilan.

Doyle, W. (1986). Content representation in teachers' definitions of academic work. *Journal of Curriculum Studies, 18*(4), 365-379.

Egan, K. (1997). *The educated mind: How cognitive tools shape our understanding*. Chicago: University of Chicago Press.

Egan, K. (2001). Why education is so difficult and contentious. *Teachers College Record, 103*(6), 923-941.

Fenwick, D. T. (1998). Managing space, energy, and self: Junior high teachers' experiences of classroom management. *Teaching and Teacher Education, 14*(6), 619-631.

Gall, M. D. (1970). The use of questioning in teaching. *Review of Educational Research, 40*, 707-721.

Gallagher, M. C. (2001). Lessons from the Sputnik-era curriculum reform movement: The Institutions we need for educational reform. In S. Stotsky (Ed.), *What's at stake in the K-12 standards wars* (pp. 281-312). New York: Peter Lang.

Gold, B. A. (1999). Punctuated legitimacy: A theory of educational change. *Teachers College Record, 101*(2): 192-219.

Hammer, D. (1997). Discovery learning and discovery teaching. *Cognition and Instruction, 15*(4), 485-529.

Hoetker, J. and W. P. Ahlbrand Jr. (1969). The persistence of the recitation. *American Educational Research Journal 6*: 145-167.

Hunt, T. C. (2003) The Impossible Dream: Education and the search for panaceas. New York: Peter Lang

Kahneman, D., & Tversky, A. (1986). Choices, values and frames. In H. R. Arkes & K. R. Hammond (Eds.), *Judgment and decision making: An interdisciplinary reader* (pp. 194-210). New York: Cambridge University press.

Kennedy, M. M. (2002). Knowledge and Teaching. *Teachers and Teaching: Theory and Practice,* 8(3/4), 355-370/

Kilpatrick, W. H. (1918). The Project Method. *Teachers College Record.*

Lampert, M. (1985). How do teachers manage to teach? Perspectives on the problems of practice. *Harvard Educational Review, 55*, 178-194.

Lortie, D. C. (1975). *Schoolteacher: A sociological study.* Chicago: University of Chicago Press.

Labaree, D. F. (2000). On the nature of teaching and teacher education: Difficult practices that look easy. *Journal of Teacher Education, 51*(3), 228-233.

Lumpe, A. T., Haney, J. J., & Czerniak, C. M. (1998). Science teachers' beliefs and intentions regarding the use of cooperative learning. *School Science and Mathematics, 98*(3), 123-135.

McNeil, L. M. (1985). *Contradictions of Control.* London: Routledge and Kegan Paul.

National Commission on Excellence in Education. (1983). *A Nation at Risk: The Imperative for Educational Reform.* Washington, D.C.: United States Department of Education.

National Council of Teachers of Mathematics. (2000). *Principles and Standards for School Mathematics.* Reston VA: National Council of Teachers of Mathematics

Oliver, W. A. (1953). Teachers' educational beliefs versus their classroom practices. *Journal of Educational Research, 48*(1), 47-55.

Pearson, J. (1985). Are teachers' beliefs incongruent with their observed classroom behavior? *The Urban Review, 17*(2), 128-146.

Porter, A. C., Floden, R. E., Freeman, D. J., Schmidt, W. H., & Schwille, J. R. (1989). Content Determinants in elementary school mathematics, *Effective mathematics teaching* (pp. 96-113).

Pressley, M., Rankin, J., & Yokoi, L. (1996). A survey of instructional practices of primary teachers nominated as effective in promoting literacy. *Elementary School Journal, 96*(4), 363-384.

Richardson, V. A. (1996). The role of attitudes and beliefs in learning to teach. In J. Sikula & T. Buttery & E. Guyton (Eds.), *Handbook of Research on Teacher Education* (pp. 102-119). New York: Macmillan.

Ravitch, D. (2000). *Left Back: A century of battles over school reform.* New York: Touchstone.

Schmidt, W. H., McKnight, C. C., & Raizen, S. A. (1997). *A Splintered Vision: An Investigation of U. S. Science and Mathematics Education.* East Lansing MI: Michigan State University TIMSS.

Schoenfeld, A. (1999a). *Toward a theory of teaching-in-context.* Berkeley CA: University of California at Berkeley.

Schoenfeld, A. H. (1999b). Models of the Teaching Process. *Journal of Mathematical Behavior, 18*(3), 243-261.

Schwab, J. J. (1978). The "impossible" role of the teacher in progressive education. In I. Westbury & N. J. Wilkoff (Eds.), *Science, curriculum and liberal education: Selected essays* (pp. 167-183). Chicago: University of Chicago Press.

Stigler, J. W., & Hiebert, J. (1999). *The teaching gap: best ideas from the world's teachers for improving education in the classroom*. New York: The Free Press.

Tyack, D., & Cuban, L. (1995). *Tinkering toward Utopia: A century of public school reform*. Cambridge, MA: Harvard University Press.

van den Berg, B. (2002). Teachers' meanings regarding educational practice. *Review of Educational Research, 72*(4), 577-625.

Wagner, A. C. (1987). "Knots" in teachers' thinking. In J. Calderhead (Ed.), *Exploring teacher thinking* (pp. 161-178). London: Cassell.

Waller, W. (1932/1961). *The sociology of teaching*. New York: Russell and Russell.

About the Author

Mary M. Kennedy
116 Erickson Hall
Michigan State University
East Lansing MI 48824
(517) 432-5549
Email: mkennedy@msu.edu

Mary Kennedy is a Professor in the Department of Teacher Education at Michigan State University. Her research centers on the nature of teaching and on how it is influenced by external forces such as research, policy, or professional development. She has published two books and numerous articles on these issues and has won four awards for her work.

Ursula Casanova (U.S.A.)
Arizona State University
casanova@asu.edu

Erwin Epstein (U.S.A.)
Loyola University of Chicago
Eepstein@luc.edu

Rollin Kent (México)
Universidad Autónoma de Puebla
rkent@puebla.megared.net.mx

Javier Mendoza Rojas (México)
Universidad Nacional Autónoma de
México
javiermr@servidor.unam.mx

Humberto Muñoz García (México)
Universidad Nacional Autónoma de
México
humberto@servidor.unam.mx

Daniel
Schugurensky(Argentina-Canadá)
OISE/UT, Canada
dschugurensky@oise.utoronto.ca

Jurjo Torres Santomé (Spain)
Universidad de A Coruña
jurjo@udc.es

José Contreras Domingo
Universitat de Barcelona
Jose.Contreras@doe.d5.ub.es

Josué González (U.S.A.)
Arizona State University
josue@asu.edu

María Beatriz Luce(Brazil)
Universidad Federal de Rio Grande do
Sul-UFRGS
lucemb@orion.ufrgs.br

Marcela Mollis (Argentina)
Universidad de Buenos Aires
mmollis@filo.uba.ar

Angel Ignacio Pérez Gómez (Spain)
Universidad de Málaga
aiperez@uma.es

Simon Schwartzman (Brazil)
American Institutes for
Resesarch–Brazil (AIRBrasil)
simon@sman.com.br

Carlos Alberto Torres (U.S.A.)
University of California, Los Angeles
torres@gseisucla.edu