

Challenging Instruction for "All Students": Policy, Practitioners, and Practice

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"The ultimate goal of mathematics education in South Carolina schools is the development of broad-based mathematical power for all students." [South Carolina Mathematics Framework, 1993, p. 10]

"All students" you can't actually do that . . . You can't say, 'All humans will be nuclear engineers.' Some of us have the ability to become nuclear engineers; some of us are content putting the gas in the car. So some of these people who put these demands on us . . . have never been principals; never worked with children; never had a course on child development. And I don't know where they're coming from with these requirements. What they're saying is not a realistic thing." [Principal, Butler Elementary, South Carolina]²

"*All students*" has become a prominent theme in recent instructional reforms. Professional associations as well as federal agencies and state governments propose a fundamental refocusing of what counts as worthwhile knowledge in classrooms, arguing that *all* students' encounters with school subjects should not be confined to memorizing basic facts, skills, and procedures. They argue that school work should also involve understanding the central concepts, ideas, and ways of knowing literature, mathematics, science, and other subjects. These proposals would require substantial change in the content and pedagogy of the K - 12 curriculum if every American child, especially those who have been marginalized historically, has an opportunity to master more rigorous academic content. The quotations that open this paper suggest that local educators may not see things in quite the same way as school reformers.

In the study reported here, I investigated the local implementation of state policy initiatives that propose more intellectually rigorous academic content for all students. After situating my work in the state instructional policy environment in South Carolina, I describe my theoretical perspective and research methodology. I then explore local educators' responses to state policy proposals in relation to their teaching of students who have traditionally not succeeded in school. I analyze local educators' beliefs about, and knowledge of, "disadvantaged" students, learning, teaching, and classroom management and consider ways in which this web of beliefs and knowledge was influential in the decisions these local educators made about implementing state policy. In light of this analysis, I consider the challenges involved in implementing policies that propose "all" students should do more intellectually challenging work.

The intent of this work is to contribute to a modest, but growing, literature that explores the policy implementation process from local enactors' practices and perspectives (McLaughlin, 1987, 1990; Schwille, et al. 1983; EEPA, 1990). My purpose is to contribute to this literature by analyzing the implementation process in schools that enroll predominantly poor students and students of color. My central argument is this: To understand local educators' implementation of policies that challenge conventional wisdom about educating poor students, it is necessary to consider enactors' knowledge and convictions about students *in relation* to their beliefs about teaching, learning, and classroom management.

² All names, including place names, used in this paper are pseudonyms.

SITUATING THE STUDY: THE STATE POLICY CONTEXT

South Carolina's reform strategy, like those of many other states and national reforms, is to propose a challenging pedagogy and more intellectually rigorous content for everyone. The state's mathematics framework defines "all students" as:

Students who have been denied access in any way to educational opportunities as well as those who have not; students of all ethnic origins; students who are female as well as those who are male; and students who have not been successful in school and in mathematics as well as those who have been successful (p. 28, also NCTM, 1991)).

The Early Childhood Development and Academic Assistance Act of 1993 (Act 135) requires districts and schools to develop new instructional plans to educate students "with academic difficulties" and/or "at risk" students. These reforms specifically target academically "at risk" students for engagement with more intellectually challenging academic content..

It is not clear, however, whether reformers expected all students to study and gain mastery of the same demanding content. For example, Act 135 states that "all children will be prepared for the fourth grade and all students will graduate from high school with their peers." A similar sentiment appears in the state's mathematics framework: "all students in South Carolina must experience a common core of relevant mathematics." One reading of these statements is that all students in South Carolina should study the same demanding mathematics curriculum. Indeed, parts of the mathematics framework are explicit on this matter, suggesting that "every student in South Carolina must learn the mathematics necessary to experience a successful life." And according to the framework, the mathematics needed "to experience a successful life" is roughly analogous to the National Council of Teachers of Mathematics' (NCTM) standards.

But while proposing a curriculum designed to "provide a common body of significant mathematics" that is "accessible to all students," the state's framework also notes that this curriculum:

Can be modified in a variety of ways to meet the needs, interests, and backgrounds of individual students or groups of students to permit them to progress as far into mathematics as their achievement allows (p. 29).

Of course, modifications of this sort seem essential to the pursuit of equity: Equity is not a synonym for equality. Still, the prospect of modifications suggests that what reformers intend by a more ambitious curriculum for all students does not necessarily mean that every student will study a subject at the same level of ambitiousness.

Recent reform proposals also provide sparse guidance for teachers about what might be entailed in reconstructing their teaching to actively engage all their students in learning more intellectually rigorous content. Consider the following statement from the mathematics framework:

- "Students must learn mathematics through an active, constructive approach that emphasizes understanding mathematics."

This statement raises many questions: what might be involved in creating an "active" and "constructive" learning environment for learners who have traditionally been marginalized by the school system? Although the frameworks provide some sample instructional activities and classroom scenarios, they raise as many questions as they answer.

These issues are not unique to South Carolina. The ideas about instruction advanced in the recent state and national reforms are underdetermined (Cohen, Spillane, Jennings, & Grant, 1998; Ball and Wilson, 1997). Notions of equity are also underdetermined in these reforms (Ladson-Billings, 1994). My analysis of South Carolina's state policy documents, for example, suggests that at least three interpretations of the "all students" ideal are plausible. One interpretation is that all students would master the same demanding content, at the same rate, and with the same instruction. A second interpretation is that all students would have access to the same demanding curriculum and similar instruction but their mastery of the content might vary. A third interpretation is that reformers would simply jack-up the outcomes all students are expected to reach but leave local school systems to decide on curriculum and instruction.

There are plausible explanations for the underdetermined nature of these policy proposals. To begin with, there is no consensus on what might constitute more effective and intellectually rigorous instruction for poor students and students of color (Delpit, 1988; Fine, 1994; Hirsch, 1996; Knapp & Associates, 1995; Ladson-Billings, 1994). A second reason is that ambiguity is frequently necessary in order for policies to gain the necessary political support for adoption (Kingdon, 1984). Unpacking the notion of all students might undermine support for the policy.

There are at least two tensions that underlie any attempt to manage these issues. First, recent reforms that promote challenging instruction for all students are in the direction of the democratic goal of schooling and might, if they were taken to their logical conclusion, undermine the social efficiency and social mobility goals of schooling as reflected in the sorting function of schools (Cohen, 1985; Labaree, 1986; 1988). Second, while reformers must offer local educators some guidance and incentives to get them to adopt a more intellectually rigorous pedagogy, they are also trying to ensure that those who are closest to students, local educators, develop the instructional strategies that meet their learners' needs. Left unresolved and underdetermined in state policy, these equity and instructional issues are delegated to the local level where administrators and teachers have to make something of them.

FRAMING THE WORK: POLICY ENACTMENT AND ACCESS TO KNOWLEDGE

Some scholars argue that "street-level bureaucrats" make the only policies that really matter; that is, those that shape the services that clients receive (Lipsky, 1980). Teachers and school administrators ultimately decide whether policy-makers' aspirations are reflected in students' learning experiences. To cope with limited resources including time, expertise, and materials, as well as with uncertainty about the goals and means of teaching, teachers develop routines that frequently fail to address the needs of particular students (Cuban, 1993; Weatherly & Lipsky, 1977). Further, teachers usually practice alone with little peer or managerial supervision. These conditions support the status quo in teaching and undermine the implementation of reforms that aim to fundamentally change it. Further, while the cultural resources of students from middle and upper income families match those of the school, the cultural resources of poor students and students of color (e.g., language, social norms) typically do not (Bourdieu, 1977). Thus, middle class and upper middle class students have a competitive advantage over poor students and students of color because they enter school with

cultural capital that facilitates their progress. These perspectives, however, support a somewhat deterministic view of life in social institutions. The "street-level bureaucrat" perspective suggests that teachers' behavior is determined by the social and organizational conditions of their work. Individual agency is downplayed. Similarly in Bourdieu's cultural capital model, not only does the school remain something of a "black box" but the agency of practitioners, parents, and students is ignored (Lareau, 1987). Recent scholarship pays more attention to human agency. Research on teacher change and policy implementation suggests that local educators' beliefs about, and knowledge of, subject matter, teaching, and learning are influential on whether and how they revise their practice in response to policy (Cohen, Spillane, Jennings, & Grant, 1998; EEPA, 1990; Spillane & Jennings, 1996). Similarly, teachers and students are not passive participants in the social reproduction of inequality in schools. Poor students and students of color often engage in passive or active resistance in school (Anyon, 1981; Connell, Ashendon, Kessler, & Dowsett, 1982; Willis, 1977). Teachers often believe that children of poverty are incapable of handling instruction beyond basic skills (Anyon, 1981) and need highly controlled classrooms to learn these skills (Good and Brophy, 1986). Teachers' assumptions may be rooted in cultural mismatches between teachers and students which lead to teachers misinterpreting the cognitive skills and abilities which students bring to school (Heath, 1983). Teachers' beliefs influence the learning opportunities they mobilize for students with teachers tending to assign poor students less demanding academic work (Barr & Dreben, 1983; Clark and Peterson, 1986; Gamoran, 1986; Meier, 1995). Hence, the decisions local educators make about whether and how to enact state policies that encourage more intellectually rigorous instruction for all students are likely to be influenced by their beliefs and knowledge.

In underscoring individual agency, I do not mean to suggest that social and organizational arrangements are not influential in local educators' work. They clearly are. But, they do not determine what individuals do, at least not entirely. Social theorists have increasingly tried to attend to both social structure and individual agency, bringing individual constructions of social structure more to the fore, and arguing that social structure is both constituted and constitutive (Giddens, 1979). Social and organizational arrangements influence teachers' work, but how they influence that work depends in part on what teachers make of them.

METHODOLOGY

Data was collected in South Carolina between 1992 and 1996 as part of a three state study of the implementation of state instructional policy. For this paper, I used data from four elementary schools, two of which are located in the same large, urban school district and two of which are situated in two rural districts. The student population in one urban school was almost entirely African American, and almost all were eligible for free or reduced lunch. At the other urban school, 60% of the students qualified for free or reduced lunch and approximately 54% were African American. One rural school enrolled almost all African American students, all of whom qualified for free or reduced lunch while fifty-four percent of students at the other rural school were African American, and approximately 65% qualified for free or reduced lunch.

State policymakers, central office administrators, school principals, and teachers were interviewed, interviews were tape-recorded and transcribed, and ranged from 60 - 90 minutes. These interviews focused on a common set of concerns and issues including how educators viewed the practice proposed by reformers, what they saw to be the key instruments of reform, and their involvement in reform activity. I interviewed 18 of the 32 informants more than once.

Interview questions were altered systematically as researchers became more familiar with the circumstances surrounding participants' efforts to deal with reform issues or as new policy issues arose. In response to the passage of Act 135 in 1993, for example, researchers developed a new interview protocol to explore the local response to this state legislation. Further, researchers used themes that emerged from on-going data analysis of state policy documents and interviews to guide subsequent data collection. The data collected through interviews were supplemented with document analysis including school improvement plans and district office policy documents. Researchers also observed classroom instruction using an observation protocol that focused on categories that included the nature of instructional tasks and discourse, grouping arrangements, use of texts, and student engagement with instruction. Observers used audio recordings of classroom discourse to supplement the field notes.

The collection and analysis of data were integrated (Miles & Huberman, 1984). Analyzing interview, document, and observational data early in the study, researchers noticed issues that they pursued in later interviews. This interaction between data analysis and data collection allowed researchers to test working hypotheses that began to emerge from the data analysis. By continually considering the interaction of data analyses with data collection, researchers clarified and strengthened their understanding of educators' ideas through searching for confirming and disconfirming evidence. For the purpose of this paper, I used four coding categories - local educators' conceptions of disadvantaged students; local educators' convictions about and knowledge of teaching and learning; local educators' responses to reformers' press for a more intellectually rigorous pedagogy for all students; and practitioners' efforts to revise their practice.

MORE AMBITIOUS PEDAGOGY FOR ALL: A LOCAL PERSPECTIVE

Local reform documents resembled state policy statements with the "all students" theme figuring prominently in the improvement plans of the four schools. The improvement plan of one rural school, for example, stated that "all individuals are capable of success" and "cultural diversity enriches society." Similar sentiments were reflected in one of the urban school's plan -- "all people are capable of learning" and "all people deserve to be treated with fairness and respect." Although statements advocating equity and respect for diversity were plentiful in local written documents, a common theme in local educators' talk was that all students cannot be expected to learn the same content, at the same rate, and to achieve at the same level. An urban teacher argued that "not everyone will achieve, but everyone should have the opportunity to achieve as much as they can, as far as their potential is concerned." A rural administrator expressed a similar opinion:

I think all children can learn. Now, I believe that they all can learn at different abilities. I know that from myself. I would love to be able to know nuclear physics right now, but, I mean, the Lord didn't give me what it takes to just put that all in there [point to his head].

A rural school principal remarked:

I do the best I can -- I can't save the world. The ones that I can help, I do . . . there will always be some who are not going to come 'up to par.' And I'd just try to prepare them the best I can up to their God-given, natural ability.

These practitioners' comments were representative of those expressed by most interviewees.³

The tone of these comments suggests that local practitioners were not convinced that all students had the "God-given, natural abilities" to engage in the rigorous academic work advanced by state policy-makers. Local educators' comments echoed popular societal views that some children will do better than others academically because of "innate ability." But, circumstances differ radically in other countries and societies where ability is not seen as a given but something that is malleable, something that hard work by educators and students in school can develop. For example, one recent study concluded that teachers, students, and parents in China and Japan place much more emphasis on student effort rather than innate ability in students' academic success (Stevenson & Stigler, 1992). In contrast, Americans place much more emphasis on innate ability.

If Not For "All," For Whom is Ambitious Instruction not a Realistic Goal?

Local educators used terms like "at risk" and "disadvantaged" to identify students for whom they believed that the more intellectually rigorous instruction was inappropriate. They expressed a sense that these "disadvantaged" students came to school lacking essential cognitive and social skills as well as lacking motivation and interest in learning and therefore the higher level learning standards were inappropriate for them. Local educators invariably linked these student characteristics to family background or home environment. They believed that the characteristics that put students at risk of failing in school were a product of their home upbringing. Local educators' talk about the relationship of students' deficiencies to family background at times, though not always, appeared to be a proxy for either social class or race. For instance, a rural school administrator said that "white, middle class and upper middle class" students do better in school because their parents give them experiences which prepare them for school. He cited as an example, "they grocery shop with them--the things that we are trying to do now [in school] already have been done by these type of parents." Another administrator said the deficiencies were a product of different "cultures;" that is, race:

The mother and the children will congregate; the black males will congregate. And whatever happens when this occurs is detrimental to the black child. He doesn't have a role model for one; he feels separate, certainly; and that comes into the school as disrespect [for authority].

Although this perspective was not a dominant one, it did surface frequently in one rural district. To understand these practitioners' rejection of state policy-makers proposals, however, it is necessary to consider their conceptions of "disadvantaged" students together with their knowledge and beliefs about teaching, learning, and classroom management.

Catching-Up the "Disadvantaged" By Fixating on Basic Skills. A prevalent pattern in local educators' talk was that many of their students were "disadvantaged" because they lacked certain verbal skills and experiences that were prized in school, and getting these students up-to-speed on these basic skills was essential if they were to benefit from schooling. Believing "disadvantaged" students needed to master the basics before they could advance to the more

³ Only four of the 32 interviewees expressed views that differed from this perspective. We take their perspectives up in the next section.

intellectually rigorous instruction advocated in state policy, most local educators argued state reform proposals were inappropriate for their students.

Local educators spoke about differences between the "good" verbal skills needed and learned in school and the "not-so-good" verbal skills "at risk" students pick up at home. A rural second grade teacher explained:

A lot of times their vocabulary is very limited from...what they're hearing at home, and basically being sat in front of the TV, and that's it, you know, no conversation at home and a lot of time spent watching TV and not reading.

An urban teacher in the same school thought that her conversations with students were, for many of them, the only ones they had with adults. Practitioners' concerns about language skills were often intermixed with concerns about the "limited" experiences that students had outside school. An urban second grade teacher explained, "they [students] have less experience, you know, some of the children you can ask have you ever seen a rhinoceros and a lot of them will say no." In practitioners' views, because "at risk" students did not learn certain language skills outside of school meant that these students were less able to capitalize on in-school learning opportunities.

Teachers and administrators blamed these deficiencies on their students' home environment referring to things such as lack of reading material in the home. A principal said:

[I]f you go into their [students'] homes, you wouldn't find a magazine and you wouldn't find a newspaper. These children get out of school come May 31st. Very few of them are going to use, especially in the lower grades, the skills they learn. They won't have an occasion to read unless they read a billboard or something... We have a small library. It opens once a week, but the ones that it caters to are middle-class kids.

Others saw it as resulting from patterns of adult-child interactions. A rural educator explained:

We're dealing with cultures where children are something that you have there, but they're not to get in your way. They're to be told what to do, but they're not to talk back, . . . we have children that come in...[and] their vocabulary skills are just nil.

In this administrator's view, these home norms did not prepare students well for the classroom.

Local educators' conception of "disadvantaged" students as deficient in basic language skills, coupled with their understanding of the learning process, meant that teaching "disadvantaged" students basic skills consumed their instruction. Believing that mastery of the basics was a prerequisite for learning the more intellectually rigorous material and processes advocated in state policy, local educators argued that these reform proposals were inappropriate for their "disadvantaged" students, at least until these students had mastery of the basics. A 2nd grade teacher, Ms. Brady was representative. She contrasted her experiences teaching in an urban school with her current class in a rural school:

I did teach...in a private school and I felt like I was a facilitator...So we did a lot more critical thinking-type activities because they already knew the basics. I didn't have to go back and backtrack to try to get them to where they needed to be. Whereas here [current classroom] I

feel like I'm constantly trying to play catch up...I repeat myself a lot more here. I do a lot more vocabulary because their vocabulary is more limited.

Ms. Brady believed that understanding of complex concepts and higher order thinking was possible only after students have mastered basic skills.

Teachers' comments in interviews supported a behaviorist view of learning (Skinner, 1954). From the behaviorist perspective, learning precedes in a hierarchical and linear fashion from basic skills, which form the building blocks or component sub-skills for higher order skills and thinking, to more complex concepts and processes (Gagne, 1970). Cognitive psychologists, however, argue for an alternative model in which learning, even of the basics, involves active mental construction and thinking by students (see for example, Leinhardt, 1989; Glaser, 1984; Resnick, 1989). Learning is more organic, rather than hierarchical and linear, and engagement with more complex ideas and thinking is not dependent exclusively on mastery of the basics.

Ms. Brady's beliefs were reflected in her teaching. Students in this class spent most of their instructional time doing worksheets or board work on basic skills. During one observation, students began the day by trying to alphabetize eight words written on the board (store, corn, morning, thorn, your, born, four, game). They also had to answer six addition and multiplication problems ($37+25$, $91+9$, $38+24$, $173+219$, $7*5$, $5*6$). Students worked on these exercises on their own, with some help from the teacher. Although students worked diligently on the assignment, most could not correctly alphabetize the words and they seemed unclear about what it meant to alphabetize. The arithmetic problems appeared equally difficult for students. For the problem $37+25$, many subtracted 5 from 7. Some forgot to "carry" the ten. The individualized work was followed with a whole class review of the exercises. This work took up the entire morning, and the teacher informed the observer that she had planned to read a storybook and to talk about main ideas in the story but time did not permit it.

Ms. Brady reported that she often planned to do "higher-level work" but rarely was able to because basic skills took up the time. When asked about the state reforms, she noted:

No, it's not realistic given our student population. No, it's not . . . the more critical thinking type activities and things that they are calling for especially in the [South Carolina] Mathematics Framework, some of the activities types of things they want us to do are not realistic because we're constantly playing catch up. I mean it's good in theory...

This second grade teacher was the rule rather than the exception. Seeing their students chiefly in terms of deficiencies in fundamental knowledge and skills, most teachers filled their instructional time catching up on basic skills. Some teachers, like Ms. Brady, said they agreed with reformers' ideas about conceptual understanding and higher-order thinking. But understanding learning from a behaviorist perspective they never got beyond basic skills.

The Salience of Structure and The Progress of Ambitious Instruction for All. Another pattern that figured prominently in local educators' talk concerned disadvantaged students "inappropriate" classroom behavior and their lack of motivation and interest in learning. Concerned about classroom behavior and students' lack of interest in learning, local educators focused on creating highly controlled and structured classrooms and many were convinced that enacting more intellectually challenging instruction would undermine order.

Local educators argued that the students they considered “disadvantaged” did not know how to behave in school. An urban fifth grade teacher argued similarly: "Our children are much less disciplined and that's because of the environment that they come from, most of their parents are either not at home or don't care." Another teacher elaborated on the sort of behavior that she believed placed students at a disadvantage in the classroom: "Talking to each other and yelling all the time . . . when you meet the parents, you understand why [laughs] they do. Maybe there are a bunch of people in the house and they have to yell to be heard." From the perspective of these educators, students were disadvantaged because the behaviors they learned at home were not valued in school.

A related theme concerned student motivation and interest. An urban teacher noted, "it just doesn't seem like they're [disadvantaged students] interested in it [school work]." An urban principal commented:

We have children in this school that we're trying to convince of the value of hard work that are from third and fourth generation welfare families. Yeah, it's hard. They are disadvantaged . . . It makes me angry that we have to do this stuff, to be real honest about it. I have difficulty dealing with parents who I see so clearly should be doing certain things for their own children which they are not doing.

An urban fifth grade teacher argued “that's one thing that keeps the children from being motivated . . . if there is no accountability at home it's very hard to set up accountability at school . . .” For most local educators, a shared characteristic of students they labeled disadvantaged was a lack of parental support which contributed to their lack of motivation and interest in learning.

These educators were convinced that to address the motivation and behavioral problems of disadvantaged students they had to maintain tight control of classroom activities. Structure was equated with highly regimented classrooms where teachers took complete control and student-to-student interactions were minimized. These concerns were especially important when it came to the implementation of an ambitious pedagogy for all students because local educators were convinced that a traditional didactic pedagogy was more compatible with maintaining classroom order while the instructional changes advocated by reformers were incompatible with this goal.

Ms. Carlton, a fifth grade teacher in one of the urban schools, was representative. Students' behavior was a dominant theme in her talk about teaching. She remarked that, "at home they [students] don't have any structure, they can do whatever they want to do. That's why I believe a lot of children in the school just do what they want to, they get up and out of their seats or they talk all day." She believed that if her students, a majority of whom she saw as disadvantaged, were going to learn she had to maintain a tight rein on them. She took complete control of all classroom activities, insisted that students sat quietly at their desks, and that they spoke only when asked a question by her. Observations of her classroom attest to the importance of structure in Ms. Carlton's teaching and confirm that reformers' ideas about a more ambitious pedagogy have not penetrated her practice. Students spent most of their instructional time doing worksheets or board work rarely interacting with each other about the academic material.

For this fifth grade teacher, the reforms she understood the state to be promoting - group work and thematic instruction - were not conducive to the structured classroom environment she

struggled to maintain daily and that she believed was essential for her disadvantaged students. As she explained, this pedagogy was simply not feasible in her classroom:

They [students] definitely need more structure . . . I've tried to do the thematic units . . . but I think that the students get more out of hand when they're not very structured. When you work out of the textbook and they have something directly in front of them and they're constantly working, they're much more disciplined than if you are doing group activities or even individual activities where there's a lot of movement.

To maintain control, highly determined tasks which had clear steps for completion and which students could complete on their own were crucial. As she put it, "I find when I do activities that are more creative, where they're more actively involved . . . they think they're playing and they don't think that they're learning. It seems to cause a lot of chaos in the classroom." Hence, she rejected reformers' proposals for a more demanding pedagogy for all students.

The public and many professionals appear skeptical about the appropriateness of more intellectually rigorous content and pedagogy for poor students. Still, recent studies suggest that poor students and students of color can master more demanding intellectual content (i.e., key disciplinary concepts and ideas) while simultaneously learning basic skills (Fuson, 1996; Fuson, Smith, and Lo Cicero, in press; Knapp and Associates, 1995; Mayer, 1999). A recent study of 140 classrooms, suggests that academically demanding work may be especially relevant to, and advantageous for, poor students' academic success (Knapp, et al, 1995). Further, a recent study, involving 94 teachers in 40 schools, concludes that the "NCTM teaching approach" did not hinder students' performance on traditional tests (Mayer, 1998). While higher ability students benefit more from the approach, the performance of poor students and students of color on traditional tests were not hindered by the teaching approach (Mayer, 1998). Though not conclusive, this research certainly questions the conventional wisdom about educating poor students.

Policy Enactment and Local Educators' Webs of Beliefs. To understand these local educators' responses to calls for more intellectually rigorous instruction for all students, it is necessary to consider their convictions about "disadvantaged" students *in relation* to their beliefs about teaching and learning. This interlocking web of beliefs is key in understanding what enactors do and don't do by way of implementing state policy.

The pervasiveness of a "deficit" perspective on poor students among these educators was striking. While public policy has helped popularize this deficit perspective (Natriello, McDill, and Pallas, 1990), some scholars have critiqued this view, observing that it blames students and their families and shifts the debate about education reform away from improving schools (Fine, 1990; Richardson, Casanova, Placier, & Guilfoyle, 1989). Adopting a social constructivist rather than an epidemiological perspective, these scholars claim that students are disadvantaged because the school culture, which is modeled chiefly on a dominant middle class culture, does not match their language and learning processes. In this view, students' "disadvantaged" position is not simply a product of social background but is constructed in the interaction of school and home cultures. Poor students and students of color do have resources for learning but these resources are rarely valued by public institutions like schools, at least not valued as highly as those of other social classes and cultures (Lareau, 1987; Heath, 1983). Most local educators in this study believed that the students whom they perceived as "disadvantaged" had scant, if

any, resources that might have helped them learn in school: they saw these students chiefly in terms of their deficiencies. Their convictions about “disadvantaged” students were supported by their behaviorist views of learning. As most teachers viewed learning as a linear and hierarchical process in which knowledge of the basics was a prerequisite to any engagement with more advanced concepts, it is not surprising that they would define those students who lacked these basics as “disadvantaged.” Their beliefs and knowledge about poor students, learning and teaching were mutually supporting.

While poor and minority students do bring resources to school that often go unidentified and unacknowledged by teachers, it is also the case that these students frequently lack conventional basic knowledge and skills that they need if they are to have access to opportunity in contemporary society (Delpit, 1995). Delpit argues that as new instructional approaches find their way into classrooms, many of which are understood by practitioners as focusing on instructional processes rather than content, there is a fear that the content needs of those students who cannot acquire conventional knowledge outside the school will not be addressed. Students need to acquire this knowledge if they are to have access to power and opportunity. While teachers much recognize that poor students and students of color need access to this knowledge, they also must recognize these students’ strengths as resources for learning (Delpit, 1995; Ladson-Billings, 1994).

AN ALTERNATIVE LOCAL PERSPECTIVE

The responses of a principal and three teachers in the two urban schools to the state policies contrasted with general patterns described above. To explore these alternative views, I offer vignettes of two of these teachers below. Although these teachers’ conceptions of disadvantaged students were similar to other educators, their responses to instructional reforms that challenged the conventional wisdom about educating poor students were very different. Both constructed instructional practices that were in the direction of state policy proposals. While these two teachers were firmly convinced that their new approaches to instruction were an improvement, they did not minimize the difficulties involved in undertaking these changes. Further, these teachers’ efforts to construct their practice were subject matter specific. Ms. Bank focused chiefly on reconstructing her mathematics practice, while Ms. Sosa concentrated on revising her reading practice.

A Vignette of Fifth Grade Mathematics.

A veteran teacher, Ms. Banks was, as she put it, “big on math.” She taught a fifth grade extension class at Forest Elementary and believed that her “disadvantaged” students lacked basic mathematics skills and were not well-behaved or motivated to learn. She remarked, “our children are much less disciplined because of the environment that they come from . . . they haven’t learned the discipline to sit in a school and pay attention and learn.” Yet, her mathematics instruction contrasted sharply with rote drill in basic skills, and there was much about her practice that resonated with state reforms. Over the past eight years, she reported that her teaching has focused increasingly on understanding mathematical concepts rather than exclusively on skills and procedures. “I kind of like to identify things that are more conceptual,” she explained, “that aren’t operations.” Banks devoted entire units to key mathematical concepts including algebra and number systems.

One unit involved students working in groups to design their own number systems. Banks was excited about the number systems her students developed and their engagement with the

mathematics. Students' success with the unit contributed to her conviction that "disadvantaged students" can learn conceptual material in mathematics. She remarked:

I'm a believer! Don't underestimate what these children can learn. And it is not a necessity that they know how to add or subtract, multiply and divide to do this. They can understand concepts, so there is no point in stopping and drilling the life out of these children for five years.

Ms. Banks developed the unit around mathematical concepts including "place value" and "zero," and she got students to experiment with number systems that had different bases. She noted:

Kids came up with their own symbols, came up with their own rules, came up with their own bases and actually gave a demonstration of how to count in their numeration system. They understood place value and the zero place value holder.

For Ms. Banks, her "disadvantaged" students' engagement with and success in grasping these concepts and their ability to think about the concepts, was a primary impetus for her continued efforts to revise her instruction.

Ms. Banks did not ignore students' mastery of mathematical skills. When she taught skills and procedures her chief concern, however, was getting students to understand the processes. She remarked, "I love even taking the operation of division or multiplication, and showing children what they're doing instead of just saying to them, 'you multiply this number by this number.'" For Ms. Banks, a mastery of the basics was not a pre-requisite for understanding mathematical concepts. As she explained it: "Everybody thinks that you can't understand this [place value] until you understand that [basic skills and operations] and they're wrong. This [place value] was done with children who could not add and subtract but they understood this." She held lofty goals for her students, 90% of whom she considered disadvantaged. She remarked: "I think children need to learn that numbers are not something you have to be afraid of. Numbers are something you can do something with. You have control . . ."

Banks believed that engaging students who she saw as disadvantaged, with mathematical ideas and concepts was necessary because it helped them develop a purpose for learning. She explained, "what you have to add to those children ["disadvantaged"] is to give them a purpose, a reason [for] why they're learning. A lot of children come with that from the home: this group does not." She was convinced that intellectually rigorous and engaging instruction was the way to address student interest and motivation:

It's the kids that are sleeping. It's the kids that are not motivated. It's the kids that are causing trouble. And I know half of that would disappear if we could provide the motivation, but it's a vicious circle . . . I don't believe we are gonna change these children until we change our instruction cause we can't change their homes so we got to change what we do here.

She believed that traditional forms of instruction and motivation did not work well for "disadvantaged" students: "A report card for the most part here does nothing but depress children and turn them off. So we have to motivate in a completely different manner."

Ms. Banks has devoted much time learning about mathematics instruction, participating in workshops sponsored by "AIMS" and "Math A Way of Thinking" as well as an on-going collaboration with a mathematics educator, Dr. Apple, at a local university. Speaking about her work with Dr. Apple, she remarked: "I went to the curriculum leadership institute and learned about a unit on the number system . . . Dr. Apple got me interested in whether I could change the ability of the children I work with to understand mathematics." Banks acknowledged the influence of these learning opportunities and was convinced that her colleagues would only change if they had similar experiences. With her new knowledge, she began to revise her teaching and seeing her students' success in grasping difficult mathematical concepts, she continued to change.

A Vignette of Second Grade Literacy.

Rita Sosa had taught at MacDonald Elementary for 16 years where, according to Sosa and other staff, students typically live with one parent or other relatives on some form of government assistance, many remained at the school for less than two years, and most read below grade level. She believed that most of her second graders came to school deficient in the verbal and behavioral skills, as well as the motivation essential for success in school. Comparing the students she taught to middle class students she remarked: "they [middle class students] are just more verbal and they have more experiences, [and] they have a lot more attention." Ms. Sosa reported that she had taught reading and writing traditionally for most of her career, dividing students into ability reading groups, using basal readers and their accompanying workbooks, and focusing chiefly on the rote acquisition of phonics and sight word skills.

Ms. Sosa reported that her own love of reading and her growing awareness of her students' lack of interest in books were a primary impetus for change. She commented:

I felt like in the past, when I taught reading straight out of the basal and I would say, "Okay boys and girls, it's time for reading." They would say, "Oh no!" You know, big groan. And I thought, I'm teaching these children to hate it. I mean, they associate the word reading with doing worksheets and drilling on phonics . . . Well, I just think that I felt frustrated. I'm a reader. I love to read and I felt like I was not fostering that love through my reading instruction.

She reported becoming increasingly aware that instruction in basic skills was inadequate because without understanding that reading was a way of making sense of the world, students had little desire or ability to learn skills and use them. Taking a course on teaching reading skills through literature and using Regie Routman's book Invitations as a text, she began to teach differently:

I thought the course sounded interesting because I liked to teach reading and I liked children's literature. So, I thought oh well, at least I will learn about some new books...and I had heard something about whole language and I knew something had to change. I just couldn't do it [teach reading as she had been] anymore. Once I took the course I got interested and started reading other things...

As a result of the class, I'm reading Regie Routman's book, Invitations, so I'm going to start implementing some of the things she suggests . . .

In one year, Ms. Sosa abandoned the basal reader and began to teach reading using children's story books. Ms. Sosa took additional courses, read other books about using literature to teach reading and took a course on Writer's Workshop. Trying out different ideas she learned about, Ms. Sosa developed a practice in which students learned reading and writing skills but in ways that did not delay or foreclose engaging students in conceptual understanding of text. For Ms. Sosa, reading was not a set of hierarchical skills that need to be learned in order to reach the culminating activity of reading, but a process that involved motivation, skills, and comprehension, all intertwined and interdependent. Her new approach to reading instruction involved a combination of whole class, small group, pair and individual activities and included time each week for listening to students read individually and work on particular reading skills. She reported, and observations confirmed, that her approach to reading instruction engaged students with central literary concepts including literary genres and character development.

Ms. Sosa claims that she found the changes in her approach to reading instruction useful because all of her students became interested in reading and became better readers. She saw students who came into her class as non-readers learn to read and eagerly pick up books. She explained, "immediately, I noticed a difference in students. I told them when they came in that the emphasis would be on reading and writing in this class . . . and during parents night . . . all of my kids came into the room and . . . picked out books . . . just spontaneous." Seeing her students' attitudes toward, and confidence with, reading change encouraged Ms. Sosa's efforts to reconstruct her practice. When asked about the appropriateness of her approach to reading instruction for her students, she commented:

I realized that most of my students don't have people in their lives who like to read or who do read . . . So, if I don't show them that reading is wonderful, who's going to? They can know all the phonics in the world, but if they don't learn in school that reading is something people do, the phonics aren't going to help.

Ms. Sosa saw reading skills as essential but not sufficient for her students. Engaging students in talking about the books they read, Ms. Sosa came to appreciate the valuable resources her students brought to school that helped them make sense of text. Although she saw her students lacking some essential reading skills, she no longer viewed them as lacking experiences which were resources they could use to make sense of the texts they read.

DISCUSSION AND CONCLUSION

When it comes to providing all students with opportunities to engage with a more demanding curriculum, this account suggests a tremendous gulf between the rhetoric of reform, on the one hand, and local practice and rhetoric, on the other. Recent instructional reforms appear to be progressing slowly everywhere (EEPA, 1990; Spillane & Zeuli, 1999). My account suggests that this problem may be accentuated when it comes to the education of students who have traditionally been marginalized by the school system. In the schools studied, the reforms were flatly rejected as inappropriate by most educators. Understanding learning from a behaviorist perspective and seeing disadvantaged students chiefly in terms of their deficiency in basic language and behavioral skills, local educators shelved proposals for more intellectually challenging content and pedagogy. Believing that teaching the basics was a prerequisite to any instruction in more intellectually demanding content, teachers fixated on getting disadvantaged students up-to-speed on basic skills and never managed to get to more intellectually challenging content.

A web of beliefs that are interdependent and mutually self-supporting undergird these local educators' responses to state policies that pressed more intellectually rigorous instruction for all Americans. Thus, to alter their beliefs about poor students these local educators would also have to alter their beliefs and knowledge about learning, teaching, and classroom management. Beliefs that are "part of interlocking networks of beliefs" are not easily changed (Kennedy, 1997, p. 7). Moreover, teachers' beliefs about, and understanding of, teaching and learning are formed in childhood and adolescence through their length "apprenticeship of observation" to teaching during their own schooling, and rarely adequately challenged in teachers' professional preparation (Lortie, 1975, p. 61). Beliefs that are formed in childhood are especially resilient to change (Kennedy, 1997).

It is unlikely that with time the rift between reformers' aspirations for all students and these local educators' convictions will narrow, absent some major interventions that would allow these educators to reconsider their knowledge and beliefs about learning, teaching, and students. Reformers offer local educators limited help in reconsidering their knowledge and beliefs about learning, teaching, and students, failing to elaborate what their proposals might look like or involve in practice. Images of reformed practice in policy are frequently underdetermined and do not speak to the situations of practitioners who teach disadvantaged students. How might a teacher in a rural school get her first graders, who have not mastered standard English, to talk about books? How might one teach the procedure for adding decimals within the context of a discussion about place value? Simply telling teachers that all students can and should do intellectually demanding academic work is unlikely to be adequate in forging such tremendous instructional change. An urban school principal put it most poignantly noting, "I think it takes more than just saying everybody can learn and it takes more than just putting it out there and just saying do it. I mean there's some stepping stones in between." Reformers everywhere have offered few "stepping stones" that might help local educators bridge the gap between their existing practice and the ideal of a challenging pedagogy for all students. State policy-makers in South Carolina and elsewhere have not developed a practice of policy-making that is capable of challenging local educators' web of beliefs and knowledge.

Based on my analysis, I identified a number of issues that might inform the design of policy and support the implementation process. To begin with, local implementation of state instructional policies that press intellectually rigorous content for all is dependent in part on altering not only local educators' beliefs about poor students but also their beliefs and knowledge about learning, teaching, and classroom management. Reform initiatives that mobilize opportunities for teachers to learn about teaching, learning, students, and content, as well as the relations among these, are more likely to be successful than those which focus exclusively on challenging prevalent beliefs about poor students and students of color (McDiarmid and Price, 1990).

My analysis of Ms. Banks and Ms. Sosa, suggest that interactions of various sorts are central in teachers' efforts to reconstruct their practice. First, there was the interaction between teachers' knowledge of instruction (subject matter, teaching, and learning) and their beliefs about "disadvantaged" students. Developing new understandings of mathematics and literacy instruction, these two teachers began to teach more challenging academic content and try out new instructional approaches. Observing their students' academic success with this more demanding content, these teachers generated evidence that their "disadvantaged" students were capable of handling more demanding intellectual content. They created the conditions that challenged their own convictions about "disadvantaged" students. Both teachers became

convinced that their disadvantaged students could learn central disciplinary ideas and concepts as a result of the evidence, in the form of students' work and thinking, they generated in their classrooms. As teachers tried out more challenging pedagogy and engaged students in talking about mathematical and literacy ideas, they developed a better appreciation for students' resources for learning. These teachers began to see their students' resources, not just their deficiencies, and to see how these resources enabled them to learn mathematics and literacy. Further, these teachers also generated for themselves convincing evidence that their "disadvantaged" students were interested in, and motivated to, learn. The extent to which students' potentials are recognized, and therefore used by teachers, depends in part on teachers' conceptions of students, which in turn appear to depend on teachers' understandings and conceptions of teaching, learning, and subject matter. Some might see this as a case of belief following action, but the evidence from these teachers suggest that the change process is not linear involving constant interaction between knowledge, beliefs, and practice (Richardson, 1990).

These two teachers' changing understandings of poor students interacted with their motivation to reconstruct their practice. Student success is a primary source of rewards for teachers (Lortie, 1975), and these accounts suggest that it may be a key lever for change. For both teachers, their students' successes with more challenging content and interest in learning were primary sources of support for their efforts to reform. Students' success and interest was a key incentive for continued change because teachers noticed significant improvements in students' learning and interest. Seeing students' interest in, and success with, mathematics and literacy improve, these teachers were motivated to continue to reconstruct their teaching. In these interactions, we see that teachers' will to reform their teaching was fueled by their new understandings and skills, which in turn fueled their efforts to further develop their knowledge.

My account suggests that the decisions teachers make about what content to teach and how to teach it, influence whether and how reformers' aspirations for all Americans get played out locally. But, teacher agency is constrained to some extent by what they know; that is, the alternatives and possibilities they can imagine for the education of poor students and students of color. With new knowledge about subject matter and instruction, teachers can reconstruct their practice in ways that enable them to see that their "disadvantaged" students can master more challenging content while also learning essential basic skills. The social and organizational conditions of teachers' work are important here. Some schools do create organizational supports in the form of classroom coaches or opportunities for teachers to meet and talk with one another about their practice. And research suggests that these supports do appear to enable teachers to revised their practice. In most schools, a scarcity of opportunities for teachers to learn about their practice, especially learning opportunities that are grounded in particular subject areas, and the absence of time and opportunity for most teachers to talk with colleagues about the ins and outs of teaching, influence teachers' enactment of policy.

References

- Anyon, J. "Social class and school knowledge." *Curriculum Inquiry*, 11(1), (1981): 3-42.
- Ball, D. L. and Wilson, S. M. "Helping teachers meet the standards: New challenges for teacher educators." *The Elementary School Journal*, 97(2), (1997): 121-138.
- Barr, R. & Dreeben, R. *How Schools Work*. Chicago: University of Chicago Press, 1983.
- Brophy, J. E. and Good, T. L. "Teacher behavior and student achievement." In *Handbook of Research on Teaching*, edited by M.C. Wittrock. New York: MacMillan, 1986.
- Bryk, A., and Driscoll, M. E. *An empirical investigation of the school as a community*. Chicago: University of Chicago School of Education, 1988.
- Bourdieu, P. "Cultural Reproduction and Social Reproduction." In *Power and Ideology in Education*, edited by Karabel, J., & Halsey, A.
- Clark, C. and Peterson, P. "Research on teacher thinking." In *Handbook of Research on Teaching*, edited by M. C. Wittrock. New York: MacMillan, 1986.
- Cohen, D. K. "Origins." In *The Shopping Mall High School*, edited by A. Powell, E. Farrar, and D. K. Cohen. Boston: Houghton Mifflin, 1985.
- Cohen, D. K. and Ball, D. "Relations between policy and practice: A commentary." *Educational Evaluation and Policy Analysis*, 12(3), 1990: 331-338.
- Cohen, D., Spillane, J., Jennings, N., & Grant, S. *Reading Policy*. Ann Arbor, MI: University of Michigan, 1998.
- Cuban, L. *How teachers taught: Constancy and change in American classrooms, 1890-1990 (2nd. ed.)*. New York: Teachers College Press, 1993.
- Clark, C. and Peterson, P. "Teachers' Thought Processes." In *Handbook of Research on Teaching* edited by M. Wittrock. New York: Macmillan, 1986.
- Cohen, David K. "Teaching practice: Plus ca change. . ." In *Contributing to educational change: Perspectives on research and practice*, edited by Philip W. Jackson. Berkeley: McCutchan, 1988.
- Connell, R., Ashendon, D., Kessler, S., & Dowsett, G. *Making the Difference: Schools, Families, and Social Division*. Sydney: Allen & Unwin, 1982.
- Delpit, L. "The Silenced Dialogue: Power and Pedagogy in Educating Other People's Children." *Harvard Educational Review*, 58(3), (1988): 280-298.

Delpit, L. *Other People's Children: Cultural Conflict in the Classroom*. New York: New Press, 1995.

Educational Evaluation and Policy Analysis. (1990). 12(3).

Fine, M. "Making Controversy." *Journal of Urban and Cultural Studies*, 1(1), (1990): 55-68.

Fine, M. *Chartering Urban School Reform*. New York: Teachers College Press, 1994.

Fuson, K. C., Smith, S. T., and Lo Cicero, A. "Supporting Latino first graders' ten-structured thinking in urban classrooms." *Journal for Research in Mathematics Education*, (in press).

Fuson, K. C. "Latino children's construction of arithmetic understanding in urban classrooms that support thinking." Paper presented at the Annual Meeting of the American Educational Research Association, New York, April 1996.

Gagne, R. *The Conditions of Learning*. New York: Holt, Rinehart, & Winston, 1970.

Gamoran, A. "Instructional and Institutional Effects of Ability Grouping." *Sociology of Education*, 59(4), (1986): 185-198.

Giddens, A. *Central problems in social theory: action, structure, and contradiction in social analysis*. Berkeley: University of California Press, 1979.

Glaser, R. "Education and Thinking: The Role of Knowledge." *American Psychologist*, 39, (1984): 91-104.

Good, T. L., and Brophy, J. E. *Looking in Classrooms*. New York: Harper and Row, 1987.

Grossman, P. "A Tale of Two Teachers: The Role of Subject Matter orientation in Teaching." Paper Presented at the Annual Meeting of the American Educational Research Association, Washington, DC, 1987.

Guskey, T. "Staff development and the Process of Teacher Change." *Educational Researcher*, 15, (1986): 5-12.

Heath, S. B. *Ways with words: Language, life, and work in communities and classrooms*. Cambridge: Cambridge University Press, 1983.

Jennings, N. E. *Teachers Learning From Policy: Cases From the Michigan Reading Reform*. New York: Teachers College Press, 1996.

Jennings, N. E. and Spillane, J. P. "Policy review: South Carolina." *Journal of Education Policy*, 11(5), (1996): 625-631.

- Kenndey, M. "The Connection between Research and Practice." *Educational Researcher*, 26(7), (1997): 4-12.
- Kingdon, J. *Agendas, Alternatives, and Public Policies*. Boston: Little, Brown, 1984.
- Knapp, M. S. and Associates. *Teaching for Meaning in High-Poverty Classrooms*. New York: Teachers College Press, 1995.
- Lareau, A. "Social Class Differences in Family-School Relationships: The Importance of Cultural Capital." *Sociology of Education*, 60, (1987): 73-85.
- Labaree, D. F. "Curriculum, Credentials, and the Middle Class: A Case Study of a Nineteenth Century High School." *Sociology of Education*, (59), (1986): 42-57.
- Labaree, D. F. *The Making of an American High School: The Credentials Market and the Central High School of Philadelphia, 1838-1939*. New Haven, CT: Yale University Press, 1988.
- Ladson-Billings, G. *The Dream Keepers: Successful Teachers of African American Children*. San Francisco: Jossey Bass, 1994.
- Leinhardt, G. "Development of an Expert Explanation: An Analysis of a Sequence of Subtraction Lessons." In *Knowing, Learning, and Instruction*, edited by Resnick, L. Hillsdale, NJ: Erlbaum, 1989.
- Lipsky, M. *Street-level bureaucracy: Dilemmas of the individual in public services*. New York: Russell Sage Foundation, 1980.
- Lortie, D. *School Teacher*. Chicago: University of Chicago Press, 1975.
- McDiarmid, G. W. and Price, J. N. "Prospective teachers' views of diverse learners: A study of the participants in the ABCD Project (Research Report 90-6). East Lansing, MI: National Center for Research on Teacher Learning, 1990.
- McLaughlin, M. W. "Learning from experience: Lessons from policy implementation." *Educational Evaluation and Policy Analysis*, 9, (1987): 171-178.
- Meier, D. *The Power of their ideas: Lessons for America from a small school in Harlem*. Boston: Beacon Press, 1995.
- Miles, M. & Huberman, M. *Qualitative data analysis: A source book of new methods*. Beverly Hills, CA: Sage, 1984.
- Natriello, G. and McDill, E. L. *Schooling Disadvantaged Children: Racing Against Catastrophe*. New York: Teachers College Press, 1990.

- Porter, A., Floden, R., Freeman, D., Schmidt, W., & Schwille, J. "Content determinants in elementary school mathematics." In *Effective mathematics teaching*, edited by D. A. Grouws, T. J. Cooney, & D. Jones. Reston, VA: National Council of Teachers of Mathematics, 1988.
- Price, J. N. and Ball, D. L. "There's Always Another Agenda: Marshalling Resources for Mathematics Reform." *Journal of Curriculum Studies*, (in press).
- Resnick, L. "Learning in school and out." *Educational Researcher*, (16), (1988): 13-20.
- Richardson, V. "Significant and Worthwhile Change in Teaching Practice." *Educational Researcher*, 19(7), (1990): 10-18.
- Rist, R. "Student social class and teacher expectations: The self-fulfilling prophecy in ghetto education." *Harvard Educational Review*, 40(3), (1970): 411-451.
- Schwille, J., Porter, A., Floden, R., Freeman, D., Knappen, L., Kuhs, T., and Schmidt, W. "Teachers as policybrokers in the content of elementary school mathematics." In *Handbook of teaching and policy*, edited by L. Shulman and G. Sykes. New York: Longman, 1983.
- Spillane, J. "Reconstructing Teaching: Exploring Interactions Among Identity, Learning, and Subject Matter Contexts." *Elementary School Journal* (in press).
- Spillane, J., & Jennings, N. "Aligned instructional policy and ambitious pedagogy: Exploring instructional reform from the classroom perspective." *Teachers College Record*, 98(3), (1997): 449-481.
- Spillane, J. P., & Zeuli, J. S. "Reform and mathematics teaching: Exploring patterns of practice in the context of national and state reforms." Paper Presented at the Annual Meeting of the American Educational Research Association, Chicago, 1996.
- Stevenson, H., & Stigler, J. *The Learning Gap*. New York: SUMMIT Books, 1992.
- Thompson, A. "The Relationship of Teachers' Conceptions of Mathematics Teaching to Instructional Practice." *Educational Studies in Mathematics*, 15, (1984): 105-127.
- Wilson, S. M., Peterson, P. L., Ball, D. L., & Cohen, D. K. "Learning By All." *Phi Delta Kappan*, 77(7), (1996): 468-476.
- Wineburg, S. & Wilson, S. "The Subject Matter Knowledge of History Teachers." In *Advances in Research on Teaching*, edited by J. Brophy. Greenwich, CT: JAI, 305-345, 1991.
- Weatherly, R. and Lipsky, M. "Street-level Bureaucrats and Institutional Innovation: Implementing Special education Reform," *Harvard Educational Review*, 47(2), (1977): 171-197.

Weick, K. *The Social Psychology of Organizing*. New York: McGraw-Hill, 1979.

Willis, P. *Learning to Labor*. New York: Columbia University Press, 1977.