ABSTRACT

Title of dissertation: TEACHING AMIDST HIGH-STAKES
                         ACCOUNTABILITY: CASES OF THREE
                         'EXEMPLARY' TEACHERS

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Teachers are regularly acknowledged as the single most important within school factor influencing student achievement. Yet, despite this claim, little is known about how teachers themselves understand high-stakes accountability in relation to their teaching practice. To study that relationship, this study asked how exemplary teachers' constructs of good teaching reside in a high-stakes accountability climate. The study was conducted in Maryland, during the first year of the restructuring of its previously high-stakes accountability system in response to the 2002 ratification of the No Child Left Behind Act. I employed an interpretive/descriptive case study methodology. Cases were developed on three mathematics teachers, two fifth grade teachers and one eighth grade teacher, who were selected by a panel of educational stakeholders within their individual school districts as Maryland Teacher of the Year candidates. Each teacher enacted a new mathematics curriculum, prepared their students for a new state achievement test, and

responded to school based accountability driven structures and directives during the
2002-2003 school year. Data sources include classroom observations over an eight
month period, interviews with the teachers and their principals, and artifacts from
observations and interviews. Results indicated that the teachers' constructs of good
teaching were based primarily on their beliefs about teaching as a moral endeavor with
regard to their relationships with their students, the management of their classroom, and
the way they represented mathematical knowledge and learning. Although each teacher
addressed the well articulated academic achievement goals of Maryland's accountability
policies in their practices, the 'principles' of accountability, the values, beliefs, and
philosophies that underlie educational goals, were poorly expressed by the state making
the teachers' constructs of good teaching sometimes at odds with official messages about
accountable teaching. I concluded that although the teachers generally made significant
efforts to enact accountability driven practices and work within prescribed curricular and
school based structures aimed at improving instruction, the tensions between the
teachers' principles of instructional accountability and the accountability messages they
heard from the state must be mediated if instructional improvement in accordance with
formal accountability goals are to take root.

TEACHING AMIDST HIGH-STAKES ACCOUNTABILITY: CASES OF THREE
'EXEMPLARY' TEACHERS

by

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Dissertation submitted to the Faculty of the Graduate School of the
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DEDICATION

This dissertation is dedicated to the memory of my parents, Fern and Raymond Buese.

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CHAPTER I: INTRODUCTION

Teachers are regularly acknowledged as the single most important within school factor influencing student achievement. Yet, despite this claim, little is known about how teachers themselves understand high-stakes accountability in relation to their teaching practice. In fact, the accountability movement is geared toward teachers developing practices that increase student achievement. Teachers' work in high-stakes accountability systems has been examined through studies of instructional policy implementation and classroom practice tied to instructional change (Cohen & Hill, 1998; Cohen & Spillane, 1992; Firestone, Mayrowetz, & Fairman, 1998; Jennings, 1996; Spillane & Jennings, 1997; Spillane & Zeuli, 1999; Wilson & Floden, 2001), but few studies have focused directly on the practice of teachers who are considered to be successful at the "holistic" act of teaching in a context of high-stakes accountability.

In this study, I investigate teachers who are acknowledged for their 'exemplary' practices within the high-stakes accountability climates of their schools. In doing so, I hope to contribute to a better understanding of how good teachers in Maryland respond not only to the press for accountability and the changing faces of it, but how they sustain teaching practices with consideration to the emotional well-being and intellectual growth of their students.

Directives for improving the work done in classrooms are important components of state and school district accountability plans. Teachers' work is affected, at least to some degree, by policies directed at improving curricula and instructional processes, but because policy outcomes are more easily defined than processes of implementation, it is difficult to clarify how teachers fold policy provisions into their practice. Teachers'

practices are more likely to be influenced by the ways teachers make sense of their work (Spillane, Reiser, & Reimer, 2002) than through formalized implementation procedures. Thus, understanding teaching in relationship to instructional policy implementation in the classroom requires the examination of individual sense making about how to teach as well as formalized implementation processes.

In Maryland, teachers have entered a period of policy change that is having a major impact on the press for instructional improvement in their schools. The key testing mechanism and instructional change lever of Maryland's accountability system, the Maryland State Performance Assessment Program (MSPAP), was discontinued after its 2002 administration due to its failure to satisfy the provisions of the 2002 Elementary and Secondary Education Act (ESEA), No Child Left Behind (NCLB). Ten years prior to the ratification of the 2002 ESEA, the Maryland State Department of Education (MSDE) placed considerable pressure on teachers to adjust their pedagogies to align with MSPAP's assessment of "higher order thinking." However, with the advent of the new federal legislation, teachers became subject to a wave of directives for the implementation of new statewide curricula and new state-wide testing instruments. As the accountability contexts of schools change, and teachers working within schools attempt to adjust their instruction in ways that accommodate policy directives as well as the ever-changing contexts of their classrooms, constructs of 'good' teaching become increasingly multifaceted.

Description of the Study

This study is about teachers who have been acknowledged as good teachers through their receipt of their county's Teacher of the Year (MTY) Award. Yearly, each of Maryland's 24 county school systems selects a Teacher of the Year who then becomes a candidate for the Maryland State Teacher of the Year Award. The MSDE, the Maryland Business Roundtable for Education, and a number of co-sponsors from the business, financial, and media communities in Maryland sponsor the award.

Students, parents, or other interested educational stakeholders nominate teachers within their county to become the MTY candidate. The nominees prepare packets supplied by the MSDE (See Appendix A) to their counties, which are evaluated by panels of stakeholders arranged by the local award administrator. The county MTY candidate's packet is then submitted to the state award administrator at MSDE, and a panel comprised of representatives from MSDE, the Maryland General Assembly, educators, administrators, parents, students, and members of the business community reviews them. Seven teachers are selected as final candidates for the state award and the state panel selects the MTY based on interviews with the finalists and an oral presentation given by them (MSDE, 2001b). The teacher who is selected MTY symbolizes and promotes outstanding teaching in Maryland. He or she is asked to speak at numerous conferences and events and act as an advisor to MSDE[1].

MTY candidates must have five years of teaching experience in Maryland to qualify for the award. In this study, the three teachers I examine have substantial histories of teaching in the state: Christine Walker, a fifth grade teacher with 23 years of

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[1] The Maryland Teacher of the Year also becomes a candidate for the President's National Teacher of the Year Award.

teaching experience in Maryland; Stanley Clark, a fifth grade teacher with 12 years of teaching experience in Maryland; and Annette Blakeway, an eighth grade teacher with nine years of teaching experience in Maryland. Each of these teachers worked under Maryland's accountability system as it evolved over the past decade – a decade in which Maryland clarified its standards for learning and became known for the rigor of its high-stakes accountability system. Additionally, each of the three teachers teaches mathematics, a content area that has been tested since the inception of accountability testing in Maryland.

The stories of MTY candidates are potentially rich sources of information on policy/practice linkages in high-stakes accountability systems for two reasons: first, MTY candidates are considered by the selection committees in their counties to exemplify good teaching and second, their practices satisfy the criteria set by the MSDE panel of educational stakeholders in Maryland. By examining the work and beliefs of teachers who were acknowledged by their school districts as exemplary, we may obtain an understanding of how 'good' teachers understand teaching and construct their practices as they face the challenges of working with persistently shifting policy initiatives. Additionally, we may gain insights into how accountability itself is constructed and practiced by teachers in relation to accountability that is governmentally legislated as a means of instructional improvement.

Research Questions

The data collection for this study was guided by one overarching question: How do MTY candidates understand, construct, and realize their practices in diverse classroom

contexts and a changing and regulated high-stakes accountability system? This question was examined through several subsidiary questions:

1. What formal professional and non-professional experiences influence the way MTY candidates think about their work and construct their practices?

2. What do MTY candidates believe about their roles as teachers in general and as teachers of mathematics?

3. How do MTY candidates interpret curricular, instructional and testing policies and how do they respond to them in practice?

4. How does the context of MTY candidates' schools and classrooms support their beliefs about teaching and influence their enacted practices?

These questions were intended to inform a more elusive but perhaps more significant question with regard to the relationship between teaching policies and teaching practices: How do the MTY candidates' constructs of good teaching reside in a high-stakes accountability climate? It is through this analytic question that I hope to reveal the tensions, compatibilities, and perhaps, paradoxes, that may exist between the teachers' constructs of good and accountable teaching and an externally imposed and regulated version of accountability.

The State Policy Context of Regulated Accountability

The Maryland State Department of Education announced in April of 2002 that it would discontinue the administration of the Maryland School Performance Assessment Program. The MSPAP, the keystone of Maryland's accountability system was, in the words of MSDE, "an assessment or testing program whose primary purpose is to provide

information that can be used to improve instruction in schools." (MSDE, 2002d). School districts dedicated considerable time and resources to prepare teachers to "teach to the test" based on MSDE's assertion that:

> Teachers improve students' performance on MSPAP by teaching students to analyze what they read, apply skills and knowledge to solve problems, integrate knowledge from different content areas and work independently and in groups. In this sense, "teaching to the test" is good instruction, the kind of instruction that results in understanding and not mere rote recall of isolated facts (MSDE, 2002d).

In May of 2001, the MSDE disseminated content standards for the core curriculum areas[2] of language arts, mathematics, science, and social studies – areas tested through the MSPAP. As content standards became a greater focus for school districts and the MSPAP continued to drive instructional policies, Maryland's school principals were subject to a great press from the state to align their schools' curricula to the standards as well as educate and motivate their teachers to "teach to the test." This attention to standards and testing propelled Maryland to its status as the number one state in the nation in standards and accountability (MSDE, 2002c), a highly valued designation that MSDE has held for several years and hopes to retain. But even the best laid plans are bound to change.

MSDE has turned its attention to a revised accountability plan that complies with the new ESEA requirements (MSDE, 2002b). Among its features are:

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[2] The term "content standards" is used to define discipline specific facts and knowledge that students should learn, skills they should master, and conceptual understandings they should develop. The regulatory function of the standards and the desire for uniform learning outcomes is reflected in this statement: "These content standards allow concrete bases for evaluation, whether formal or informal, and enable administrators to know that there is a degree of uniformity despite regional differences across the state" (MSDE, 2002a).

- the development of a new test for grades three, five, and eight (the same grades subject to the MSPAP) which was first administered in the 2002-2003 school year.

- expansion of the new test to grades three through eight by 2004-2005.

- the development of a science assessment to be administered at least once during grade "bands" three to five, six to eight, and eight to twelve.

- the alignment of standards with the new High School Assessments (HSA) that build appropriately from kindergarten through grade 8.[3]

Additionally, the state constructed "voluntary state curricula." The timeline for these changes was short and as a result, teachers were asked to enact new curricula and change their approaches to preparing students for state tests.[4] This restructuring process was and continues to be partially facilitated by increased administrative attention to instruction. Maryland's Visionary Panel for Better Schools, a panel commissioned by Maryland State Superintendent Nancy Grasmick to design plans to *accelerate* student achievement, calls for heightened instructional accountability, greater shared accountability within school communities, and a shift in the focus of principals from administration to instruction. At the time of this study, the 2002-2003 school year, how classroom teachers would make sense of their work as these curricular, instructional, and assessment changes were implemented was a big question mark.

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[3] Eighth grade students taking algebra 1 and geometry were required to take the HSA in those subjects during the 2002-2003 school year. The HSA will become a graduation requirement in the 2006-2007 school year (MSDE, 2001a).

[4] The MSPAP exam, a performance based exam that requires an arguably subjective manual scoring system, was replaced by the Maryland School Assessment. The MSA has a format that is less cumbersome to administer, score, and is less costly. A shift from the MSPAP format has created significant changes in instructional foci.

Why Study Teaching in Relationship to Accountability?

Instruction as understood by those who develop accountability plans and instruction as it is delivered in classrooms represent different images of teaching and learning. Although the state attempts to clarify how teachers should be accountable by defining curricular guidelines, subject specific learning outcomes and testing formats, teachers generally hold a more problematic and abstract view of accountability because they interact daily with students, their parents, and local school communities. For many Maryland students and their families, the primary purpose of schooling is to ensure that young people develop the essential academic and social skills necessary to advance in school and prepare for jobs and careers after high school. Consequently, teachers are faced with the difficult task of constructing their practices in ways that satisfy the educational expectations of the state while addressing the learning needs (social and intellectual) of the individuals that come in and out of their classrooms every day. Students then, create a more urgent (and likely significant) instructional context for teaching than does the pressure of formal instructional mandates or testing requirements. Similarly, the construct of good teaching has a broader definition and is measured by more diverse and less rigid determinants than student achievement on tests. What good teaching means then depends on the position of the stakeholder and is, therefore, difficult to standardize. Some researchers on high-stakes accountability voice the complexity of understanding teaching as a public good:

> …with the current backlash against what was generally seen as high standards
> teaching just a few years ago, it is probably appropriate to spend less time
> thinking about how to design incentive systems and more time thinking about

what constitutes good practice and how to help teachers and the public understand

what it is. (Firestone & Mayrowetz, 2000, p. 746)

Because good teaching means different things to different people, good teaching

as understood by conscientious teachers who view accountability to students as

fundamental to their work is rarely seriously discussed in formal public arenas. Gaining

a more thorough understanding of what good practice is may be aided through the study

of teachers, such as MTY candidates, and because their work is both respected by

numerous stakeholders and open to public view, the examples of their practice may

contribute new perspectives on the nature of accountability as experienced in real

classrooms.

Conceptual Framework

The conceptual framework I use in this study is developed from two broad and

overlapping areas of study. One area of study revolves around aspects of teaching

practice, the other around aspects of educational accountability. I refer to teaching

practice as the elements that comprise the day-to-day work teachers do in their

classrooms with their students. Teachers' practices comprise the pedagogical dimensions

of their work and the moral dimensions of their teaching. These dimensions do not stand

alone but work simultaneously to create learning opportunities and environments that

enable both the intellectual and social growth of students.

The concept of educational accountability is also a significant element in the daily

work of teachers. Good teachers hold themselves accountable for their students' learning

and well-being in a very personal way, but they are also held accountable for student

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learning by reform oriented policies intended to raise student achievement and promote school environments where students can learn.

Accountability systems focus the work of teachers on definable academic and content-based outcomes whether or not policies aimed at that focus are sensitive to the local context of schools. For many dedicated teachers, such as the three teachers in my study, teaching strives to produce high academic outcomes but is also situated as a moral activity with centuries old traditions that strive for the development and empowerment of individuals (Hansen, 2001b). Hansen (2001a) suggested this juxtaposition of teaching as a moral activity against accountability in his book, *Exploring* t*he Moral Heart of Teaching*, when he wrote:

> …the practice of teaching, as it has come down to us through time and human effort, does not constitute a hardened, unchangeable endeavor to which teachers must bend themselves unquestionly. Rather, it is a living practice. It evolves as a result of the initiative and imagination of teachers, part of whose task is to respond (but not to "react") to external pressures and social demands (Hansen, 2001a, p.9).

Although I do not believe Hansen's statement equates external pressures and social demands solely with accountability systems, his statement reflects the essence of the question I ask in this study. It guides me to attempt to understand the endeavor of teaching as it exists under the pressure of instructional policies. Good teachers necessarily take into account the relationship of their work in their classrooms to their work as it is perceived as a publicly evaluated good. Good teaching is context specific and derived from individual teachers' personal backgrounds, beliefs, and understandings

about teaching and is responsive to students as well as to social and political influences. Teachers must interpret and implement standards-based curricula and instructional directives aligned to accountability-driven assessments in ways that are responsive to the students in their classrooms. Ultimately, teachers broker curricular and instructional policies when they decide what and how to teach their students. My study looks at teaching in the light of these complexities and attempts to unpack the tensions that revolve around teaching in a high-stakes accountability system undergoing considerable change.

Dissertation Preview

In Chapter Two, I examine literature on four separate but interconnected aspects of teaching. I begin by examining literature on teaching practice that encompasses pedagogical expertise, the moral dimensions of teaching, and teacher beliefs. This literature serves as a base understanding the three MTY candidates' constructs of good teaching. I then examine literature on the formulation of educational standards and the interpretation and implementation of those standards by school based educators. I expand on the investigation of standards based reform by discussing literature on the relationship between instructional policies and teaching practice. These bodies of literature provide a backdrop for understanding the nature of the instructional policies and the instructional improvement mechanisms faced by the MTY candidates in their schools. I end with an exploration of literature on the meanings of accountability. Meanings of accountability frame my analysis of the MTY candidates' practices in relation to the accountability climates at their schools.

In Chapter Three, I describe the case study methodology I used to conduct the study. I describe the participants in the study, data sources and the data collection instruments I employed. I then describe the processes I employed for the analysis and interpretation of the data. I include how I approached issues of research validity and reliability and address how I met ethical standards in the execution of my study.

Chapters Four, Five, and Six are case studies on the three teachers. In each chapter I examine their beliefs about teaching and their practices. I create vignettes of lessons they taught to explore how their beliefs were portrayed in practice. I also include descriptions of the accountability mechanisms in their schools and describe how each teacher responded to them.

In Chapter Seven, I interpret the three teachers' constructs of good teaching using the common lens of the moral dimensions of their work. Then I return to the concept of accountability and juxtapose the teachers' constructs of good teaching to the accountability climates in their schools.

In Chapter Eight, I reveal how the MTY candidates perceived good teaching to be synonymous with instructional accountability and how their perspectives of accountability resided in the high-stakes accountability climates of their schools. I expose the tensions, compatibilities, and paradoxes that arose as the teachers attempted to realize their constructs of good teaching amidst those accountability climates and reflect on why those relationships may be important for teachers, policy makers, and administrators to mediate, make suggestions for future research, and make implications for teacher learning in schools attempting to accommodate high-stakes accountability policies.

CHAPTER II

DISCUSSION OF LITERATURE ON TEACHING AND STANDARDS &

ACCOUNTABILITY POLICIES

People know good teaching when they see it, many have experienced it, some have accomplished it, but most scholars and researchers agree that it is difficult to define good teaching or develop a theory of it (Floden, 2001). Nonetheless, throughout much of the second half of the twentieth century, policy makers have responded to the societal and political desire for high quality teaching by creating mechanisms, namely accountability systems, that have as one of their functions, the promotion of good teaching.

The standards and accountability movements that began around the beginning of the 1980s produced considerable information for teachers on how and what to teach. Content and learning standards and testing instruments designed to assess students' attainment of those standards are intended to guide teachers' work as much as they are to test student achievement. For example, in the decade before NCLB came into legislation, teaching to the MSPAP was considered good teaching in Maryland. However, good teaching from the perspective of classroom participants often differs from good teaching that is successful in addressing testing designs for accountability systems in a variety of ways. Because my study is about good Maryland teachers and their relationship with the state driven accountability mechanisms they encounter in their schools, I examined literature that captures teaching from differently situated perspectives. Here, I present literature that illustrates teaching as a holistic act and compare it to literature on teaching as an act of formal and regulated accountability. In Maryland, teachers that are 'good' and 'accountable' must negotiate the variations presented in these bodies of literature.

I begin with an overview of some of the research and scholarly literature on teaching as a holistic act that places students as the context for instruction. I use the term holistic to describe teaching that builds upon students' desire to learn and is engaging to students. This literature outlines the multiple demands on teachers and highlights the importance of teachers making decisions about "what to teach" and "how to teach" the students in their classrooms. "What to teach" and "how to teach it" are questions that have driven the standards and accountability movement since its inception. Therefore, in the second section of this discussion of literature I explore the formulation of academic standards and their relationship to the assessments that have risen from them. Finally, I examine literature on accountability systems and their relationship to the work of teachers. The selections I discuss here frame the forces that affect teachers' sense making about teaching and indicate how some teachers respond to and accommodate external pressures and societal demands as they address the learning needs of the students in their classrooms.

Research on Teaching

Researchers and scholars have, over many years, attempted to understand good teaching for a number of purposes, employing a variety of methodologies, and interpreting that research from a number of perspectives (Floden, 2001). Essentially, research on teaching attempts to link teaching to student learning by examining the influence of teachers' behaviors, pedagogies, knowledge, and their own learning about teaching on student learning. Because teaching is complex and dependent on social and historical context, methodologies for research on classroom teaching have shifted from

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highly quantitative designs to find correlations between teacher behavior and student

learning to more descriptive and interpretive ones (Fenstermacher, 2001; Floden, 2001;

Freeman, 1996). Thus, the landscape of literature on teaching is vast. The literature I

selected outlines the dimensions of my view of holistic teaching. It examines dimensions

about teaching and learning that have doggedly appeared in the literature as scholars and

researchers have attempted to understand what good teaching is and what it might be.

The dimensions of teaching I refer to include pedagogical expertise (what teachers should

know and be able to do), the moral dimensions of teaching, and teachers' beliefs.

Pedagogical Expertise

Developing a knowledge base for teachers has been a long ongoing process,

particularly in the last decades of the twentieth century. As goals for education change

and society asks that students be grounded in basic skills, learn higher order thinking

processes, and demonstrate those skills and processes, it becomes increasingly difficult to

pin down what teachers should know and be able to do. Teachers face increasingly

complex classroom contexts, and are expected to become proficient in developing

curriculum, assessing student performance, mentoring other teachers, and working with

families and communities (Darling-Hammond, 2001). Thus, state licensing agencies and

standard setting agencies for teacher certification (e.g., National Board for Professional

Teaching Standards [NBPTS]) and teacher education programs (e.g., National Council

for the Accreditation of Teacher Education) have assembled information from

practitioners and researchers from a variety of fields (psychology, sociology,

anthropology) to attempt to guide the work of teachers (Darling-Hammond, 2001).

Good teaching is defined in subtly different ways by different groups, but the NBPTS's standards have five propositions for high-quality teaching that are representative of the tenor of most teaching standards documents:

1. Teachers are committed to students and their learning.

2. Teachers know the subjects they teach and how to teach those subjects to students.

3. Teachers are responsible for managing and monitoring student learning.

4. Teachers think systematically about their practice and learn from experience.

5. Teachers are members of learning communities.

This list reflects the insights of a number of researchers and scholars on teaching. Shulman's (1987) seminal work on a knowledge base for teachers includes a model of pedagogical reasoning and action that contends that teachers must:

1. thoroughly comprehend their subjects;

2. transform that subject area knowledge into student appropriate learning processes and activities;

3. understand and employ components of instruction including classroom management and delivery of lessons;

4. evaluate student understanding and their own teaching performance;

5. be self reflective about their teaching and their classes' performances; and

6. cultivate new comprehensions about the subject matter, students, and learning by students and themselves.

Lampert (2001) provided a model of mathematics teaching that shows the complexities of the classroom context. Teachers not only have to choose problems and activities that address different student learning styles and determine the best ways to arrange their students and classrooms to engage their students in learning, but they also must make constant decisions in the moment-to-moment action of the classroom. These decisions encompass the interactions of the teacher and students, interactions of students with students, and interactions of teacher, students, and content, often simultaneously. Lampert's model also illustrates the need for teachers to teach their students how to structure their own learning and encourage them to value learning.

The pedagogical models described above highlight the intersection of content area knowledge and knowledge of students. Because teaching is so reliant on classroom context (Cohen, McLaughlin, Talbert, 1993), forging bonds with the "conscripted workers" (Lortie, 1975) of the classroom (the students) in order to engage them in learning becomes as vital as the teachers' content knowledge. Forging bonds with students and helping them develop the skills and dispositions necessary to grow both socially and intellectually is emphasized in the following discussion of literature on the moral dimensions of teaching.

<div align="center">*The Moral Dimensions of Teaching*</div>

Hansen (2001c) asserted that teaching is an inherently moral activity because it is saturated with moral significance in his literature review on teaching as a moral activity. "As typically understood, teaching reflects the intentional effort to influence another human being for the good rather than for the bad….It presumes that students' lives will be better as a result of teaching." (p. 823). Hansen warned that because any action a

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teacher undertakes in the classroom can express moral meaning, teachers may be either beneficial or harmful influences on their students.

It is a mistake, Hansen (2001c) said, to attempt to separate the moral from the intellectual. He considered "the moral," which connotes "a way of perceiving work and its significance" (p. 827), the purpose of education. Hansen's view of teaching encompasses and extends the idea of education as a means to and end. Many educators and the public at large consider certain ends to be the purposes of education: outcomes such as academic learning, socialization, or preparation for work; political ends, e.g., promoting democratic life; cultural ends, e.g., promoting cultural awareness; or religious ends, e.g., promoting a particular set of religious values. Borrowing from Socrates, Kant, and Dewey, Hansen argued that "Teaching is a moral endeavor because its constituent acts have moral meaning in their own right; they do not take their meaning solely from what they supposedly lead to" (p. 831). The moral dimensions of teaching are concerned with the student as a human being. "Teaching is a moral endeavor because it influences directly the quality of the present educational moment, a moment in which, Dewey reminds us, the persons we are becoming hang in the balance" (Hansen, 2001c, p. 831).

The moral dimensions of teaching combine instruction for knowledge with teaching for humanistic development of the individual. Jackson's (1986) mimetic and transformative teaching models represent the confluence of teaching for knowledge acquisition and the moral dimensions of teaching. Taken together, teaching that transmits traditional knowledge (mimetic) and that which attends to dispositions and attitudes that accompany learning academic subject matter (transformative) represents good teaching. Hansen (2001c) concurred that it is impossible to separate the teaching of a subject from

inviting students to adopt meaningful intellectual and moral dispositions toward both the subject matter and their fellows.

Noddings (2001) emphasized the moral dimensions of teaching through her philosophical research on the ethic of care. She reasoned that the ethic of care conflicts with the professionalization of teaching. Noddings made the distinction between "professionalization" which refers to external criteria such as status, salary, specialization, and control, and "professionalism" which refers to the internal workings of a profession and the concern of a profession's members to do the best possible job for their clients. Like Hansen's (2001a, 2001b) view of teaching as a moral activity, Noddings's ethic of a care positions the teacher as one that wants what is best for the individual student. Caring teachers must always ask how the student is being cared-for and establish reciprocally receptive, related and responsive interactions with students (Noddings, 1984). Good teachers, Noddings (2001) explained, strive for competence in both themselves and their students.

Hansen's literature review (2001c) on teaching as a moral activity provides a synthesis of the many ways that philosophers, scholars and researchers situate the act of teaching in the moral realm. He contended that the literature pointed to several conclusions that I summarize as follows:

1. Teaching is inherently a moral endeavor. It is not moral in the sense that it has "an externally defined set of conditions, issues, or actions" rather, teaching is "saturated with moral significance" in ways that "illuminate both the beneficial and the harmful influence teachers can have on students" (p. 286).

2. Teaching is both an intellectual and moral endeavor. "It distorts teachers work to suggest that intellectual and moral matters operate independently of each other…it is also mistaken to assume that teachers' intellectual and moral influence on students materialize independently of each other" (p.286).

3. Any action a teacher undertakes in the classroom may express moral meaning. Even when the teacher is unaware that he or she is sending moral messages, they are conveyed in routine aspects of their work, e.g., the tone of their voice, the curricular choices they make, and who they pay attention to.

4. Terms associated with intellectual or cognitive processes cannot be divorced from moral considerations. The literature suggests that terms like teachers' decision making, teachers' thinking, and teachers' ways of knowing might be reconceived as moral perception, moral judgment, and moral knowledge.

Tom (1984) situated his work around two moral dimensions of teaching: the teacher's position of power in the teacher/student relationship and the moral aspects of the curricular choices teachers make. Bringing the two together, he explained that teaching is a moral activity because it attempts to bring important content to the awareness of the student through analyzing situations in the classroom and using instructional skills that are appropriate to them.

Tom clarified that the power relationship between teacher and students is not always simply a matter of the teacher having authority over the students. It can reveal itself by the teacher giving power back to the students:

…the ultimate test of authority is who decides what the distribution of authority will be, and this decision is the teacher's province….The teachers who delegates

authority to students in order to establish a democratic classroom is exercising

authority just as much as the teacher who creates an authoritarian classroom.

Note also that in both cases the teacher is developing the student in a desirable

direction: toward autonomy or toward dependence on the teacher's competence.

(Tom, 1984, p. 82).

Tom further substantiated the relative power of the teacher in student/teacher

relationships using the argument that there is a necessary paternalistic relationship

between the teacher and the child or youth. He stated that teachers, as moral agents, must

necessarily consider the students' age and his or her capacity for understanding to

determine the proper relationship between teacher and student.

Tom asserted that the curricular choices teachers make have moral meaning

because the choice of one curricular topic or objective over another "explicitly or

implicitly reflects a conception of desirable ends" (1984, p.78). He referred to desirable

ends as "worthwhile learning" (1984, p.94) for the student.

Valli (1990) contributed to the understanding of moral dimensions of teaching in

her description of the ways teachers reflect upon their teaching. The three approaches to

reflection on teaching Valli discussed were the deliberative, the relational and the critical.

Using a deliberative approach, teachers must rely on their personal judgment to "monitor

the rightness of their conduct in relation to students and develop curricula with a

conception of the most worthy end" (p.41). The relational approach mirrors Noddings's

(1984) ethic of care and promotes capacities evidenced by teachers' responses to their

students such as "listening and responding to the cared-for, being engrossed in the other's

reality, identifying individuals' growth needs, helping students find their own reasons for

what they choose to do, and mutually struggling toward competence and ethical ideals"
(p. 45). The critical approach, which is highly influenced by Marxist thought, asks
teachers to reflect on how their teaching promotes social justice by helping students
question conventional knowledge and social structures (while continually requiring
teachers to ask the same of themselves).

The Moral Manner of Teaching

I examined literature that confirms the significance of moral dimensions in the
work of teachers from a theoretical perspective. However, because teaching is a lived
experience, I turn know to literature that examines the moral dimensions of teaching as it
occurs in the practice of teachers. I draw on articles published from the *Manner in
Teaching Project*[5] (MTP) for this discussion. The purpose of the Manner in Teaching
Project was "to gain a better understanding of what is morally salient in the work of
classroom teachers, to locate the moral grounding of what takes place in classrooms and
schools, and to advance our understanding of how teachers foster the moral development
of their students" (University of Michigan, 2000).

Fenstermacher (2001) noted that research on teaching in the 1960s and 1970s
focused on how the teacher behaved in the classroom and what the students learned from
the teacher. Researchers used highly quantitative methodologies using a behaviorist
conception of teaching and learning, resulting in what he termed "a simplified version of
the purposes and practices of teaching" (p. 639). He set out to understand "the more
elusive, yet highly significant, aspects of teaching, such as the cultivation of highly

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[5] The Manner of Teaching Project was funded by the Spencer Foundation, it was directed by Virginia
Richardson and Gary Fenstermacher. The duration of the project was from 1997 to 2000.

regarded intellectual traits (e.g., critical thinking, regard for truth and respect for evidence), as well as the development of moral virtue (e.g., fairness, courage, and caring)" (p.640). He attempted to define a more "robust" conception of teaching that focused not only on the teacher's method (the means used to impart knowledge and subject matters of the school curricula), but his or her "manner" in teaching (the means used to covey virtuous conduct). He and other researchers (Richardson & Fallona, 2001) found that teachers employed a number of ways to instill virtuous conduct in their students and they used these approaches to convey not only virtue but also "to construct classroom settings that function optimally for the participants" (p. 641). Drawing on research produced by the MTP, Fenstermacher described six methods teachers used to foster improved intellectual dispositions and enhanced moral relationships among students:

1. Construction of the classroom community. This includes the conveyance of notions such as mutual respect, sharing, tolerance, orderliness, and productive work. The physical arrangement of the classroom is important in this construct as well because how the room is set up to accommodate student access to supplies and materials signals appropriate and inappropriate conduct.

2. Didactic instruction. This is the direct presentation of what is morally or intellectually desired by the teacher.

3. Design and execution of academic task-structures. How teachers engage their students to gain mastery of a concept, topic, or lesson. Teachers accomplish this by constructing tasks that enable them to analyze and assess student work that

fosters intellectual virtues in students such as thinking deeply and imaginatively about their work. Task structures include whole class instruction and encompass didactic instruction (#2) and permit calling out (#4).

4. Calling out for conduct of a particular kind. Call outs are comments that direct the attention of students within hearing range to conduct that illustrates such virtues as appropriate deportment, attention to cooperative effort, and respect for others. Callouts also express "very genuine interest in helping the student to become a good person" (p.646).

5. Private conversations. These may occur when the teacher pulls a student aside or when the teacher engages a student in talk before or after class. These conversations may be corrective but are often "affirmative and nurturing" (p. 646). Private conversations may also be used to engage a student one-on-one in deeper conversations related to lesson content.

6. Showcasing specific students. This is an important technique because it focuses on the virtues of the student rather than the teacher. It places "students in the role of modelling [sic] …conduct for their peers" (p. 648).

Richardson's and Fallona's (2001) work extended the concept of manner in teaching to classroom management. They addressed what they saw as a disconnect in the literature between classroom management and aspects of teaching such as instructional and interpersonal conduct. Effective classroom management, they asserted, is:

…interwoven with the goals and beliefs of the teacher and with his or her manner. An understanding of a teacher's classroom management is greatly enhanced

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through an understanding of the degree of authenticity – coherence – in which he
or she expresses his or her beliefs, goals, manner and methods (p.724).

A teacher's manner is his or her "virtuous conduct or traits of character" (p.706)
as revealed in the context of the classroom and in his or her relationships with students.
Some of the virtues the teachers in their study expressed, through words and/or actions,
included: friendliness, wit, truthfulness, justice, practical wisdom, magnanimity, and
honor. By expressing these virtues and character traits, the teachers promoted
Fenstermacher's (2001) notions of highly regarded intellectual traits and development of
moral virtue.

Finally, it is important to note the significance of the school context in this
discussion on the manner in teaching. The school context accounts for some of the
different moral dimensions that arise in teachers' work (Chow-Hoy, 2001). Whether the
context is derived from school-level activities or programs or the philosophy of the
principal, there is a potential link between those often-major components of the school
context and teachers' perceptions of their work. Chow-Hoy's research focused on the
congruence between the views of principals and teachers around the school's philosophy
or mission and the organizational structures used in its implementation. He found
support for the notion that "a school philosophy and a principal's commitment to this
philosophy impact the ways in which teachers view their role as members of the larger
school community, and the degree of emphasis to be placed on the development of social
skills and virtues in its students" (p. 676-677).

Teachers' Beliefs

A central component of this study is understanding the MTY candidates' beliefs about teaching. According to Pajares (1992), "teachers' beliefs" is a "messy" construct that is difficult to entangle from teachers' knowledge. In this section I discuss research related to teachers' beliefs. Because it is such a difficult construct to isolate, and it is not my purpose to do that with my study, I include research that examines the relationship between teachers' knowledge, beliefs, and attitudes.

Although researchers cannot reach consensus on the construct of teachers' beliefs, Pajares synthesized 16 findings in his review of research that may be used as assumptions when initiating a study of teachers' beliefs about education. For the purposes of this dissertation, I focus on only two: beliefs "play a critical role in defining behavior and organizing knowledge and information" (p.325); and beliefs must be inferred. "…this inference must take into account the congruence among individual's belief statements, the intentionality to behave in a predisposed manner, and the behavior related to the belief in question" (p.327).

Thompson (1992) documented the connection between teachers' beliefs and their practices in his synthesis of research on mathematics teachers' beliefs and conceptions about mathematics and the teaching of it. He made two major conclusions from his analysis of the research: one, "belief systems are dynamic, permeable mental structures, susceptible to change in light of experience", and two, "the relationship between belief and practice is a dialectic, not a simple cause-and-effect relationship (p. 140). Yet, although beliefs can be influenced it is not always easy for teachers to change their practices even if they say they've altered their beliefs about instruction. Several studies

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on the relationship between the beliefs of mathematics teachers and their actions indicated that teacher's espoused beliefs are not always consistent with their practices (Cohen, 1990; Ernest, 1989; Thompson, 1984).

Ernest (1989) created an analytic model of the knowledge, beliefs, and attitudes of mathematics teachers and their relationship with practice. In Ernest's model, knowledge consisted of six components: (1) knowledge of mathematics, (2) other subject matter, (3) teaching mathematics (i.e., pedagogy and curriculum), (4) classroom organization and management for mathematics teaching, (5) context of teaching mathematics (i.e., school context and students taught), and (6) education (i.e., educational psychology, general education, and mathematics education). Teachers' beliefs about mathematics have three components: their conception of the nature of mathematics, their mental models of teaching and learning mathematics, and principles of education (e.g., beliefs about the aims and purposes of education). Teachers' attitudes about mathematics include their attitude toward mathematics (e.g., enjoyment or interest in it) and their attitude toward teaching mathematics (e.g., enthusiasm for and enjoyment of teaching mathematics). Ernest's model highlights the scope and complexity of the psychological factors that influence teachers' practices. Although I use the broad construct of "teachers' beliefs" in this study, it will become evident that the teachers' attitudes and knowledge about mathematics and mathematics teaching are at play in their practices as well.

Aguirre and Speer (2000) set out to examine the nature of the connection between teachers' beliefs and practices and explore what transpires in the moment-to-moment action of teaching. They argued that beliefs play a central roll in the teachers' prioritization of goals and actions and also, that when there is a shift in the goals of a

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teacher during instruction, the teacher's beliefs are likely to be apparent. Aguirre's and Speer's (2000) research is useful to make distinctions about four dimensions of mathematics teachers' beliefs: their beliefs about affective issues (e.g., it's important for students to like mathematics), their beliefs about the nature of mathematics (e.g., mathematics is comprised mainly of a set of rules), their beliefs about learning (e.g., students learn in different ways), and their beliefs about teaching (e.g., teachers should be respectful of students' needs).

The dimensions of holistic teaching, however difficult to articulate outside of the context of an actual classroom, problematize discussions and decision making on "what to teach" and "how to teach" and are therefore generally overlooked in standards-based accountability plans. In the next two sections of this discussion of literature I examine policy and policy implementation of standards-based curricula and instructional directives and question whether the absence of holistic perspectives in accountability mechanisms influences constructs of good teaching.

Standards and Standards-based Policy Interpretation and Implementation

Over the past twenty years, the idea that teaching that is aligned to high standards will raise student achievement has dominated education reform policies. Standards are the cannon in the arsenal of policy instruments upon which curricula, instructional frameworks, resources, assessments of student performance, oversight of instruction, and teacher education and licensure requirements are constructed in an effort to guide classroom work (Cohen & Spillane,1992). These standards-based policy instruments are viewed as useful guidelines for improving instruction and, conversely, unmanageable

instructional straightjackets. Regardless of their potential or political appeal, many

scholars agree that building an educational system around standards is laced with

complications (Cohen & Spillane, 1992; Furhman, 1993; McLaughlin & Talbert, 1993a,

Sheldon & Biddle, 1998). Yet, 49 states (all states but Iowa) have statewide academic

standards for what students should know and be able to do in core subjects (Education

Week, 2005), and since the passage of NCLB, all states have statewide assessments that

hold schools accountable for student achievement. In this section, I will examine

literature on the formulation of content standards and assessments that stem from them. I

will also review literature on the interpretation and implementation of standards in local

contexts that illustrates difficulties related to the use of standards as guides for

instruction.

Why a Standards-based Educational System?

During the 1970's, many states administered testing programs to measure and

report student performance and as a requirement for high school graduation (Goertz,

2001). The tests focused almost exclusively on the minimum abilities students would

need to function in society. In 1983, a presidential commission produced the report, *A

Nation at Risk,* that indicted schools for producing poor educational outcomes and the

standard-based reform movement was born. This movement redefined both educational

outcomes and accountability systems (Goertz, 2001). Advocates of standards-based

reform argue that standards set clear expectations for students and schools and thus

restrain educators from accepting low expectations that are damaging to student

achievement (Tucker & Codding, 1998). Furthermore, they believe that higher

expectations as fostered by high academic standards provide encouragement and

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motivation for students to take more challenging courses and work harder in school. Because standards represent the foundational knowledge of core subjects in the curriculum, they facilitate conceptual mastery that paves the way for increased learning. (Tucker & Codding, 1998).

Many scholars agree that the reason standards have become a major policy vehicle is that they reflect changes in society's goals about the kind of learning wanted for students and promote changes in teaching and schooling to meet those goals (Darling-Hammond, 1997; O'Day & Smith, 1993). However, when one considers the process of developing and implementing standards, which in turn guides instructional improvement policies and assessment formulation, it is unclear whether standards-based systems are capable of clarifying academic goals or addressing the societal desire for equal outcomes for all students.

Formulation of Standards-based Curricula and Assessments

Standards-based reform surfaced in states' education policies in 1989 when President George Bush and the states' governors established the National Education Goals panel that set goals for American education. This panel charged the U.S. Department of Education, along with a number of national subject-matter organizations, to undertake the creation of academic standards for the various disciplines that would satisfy multiple stakeholders including disciplinary societies, government agencies, and the business community (Tucker & Codding, 1998).

The arduous process of standards formulation is described in a number of professional standards documents[6] (Moss & Schutz, 2001). The process is one in which disciplinary agencies form numerous committees of practitioners and stakeholders from communities, government, and businesses to create initial drafts of the standards. The draft documents are based on combinations of past efforts to create standards, curriculum frameworks, personal experience and values of committee members, and existing research. The drafts are distributed for review to hundreds (and sometimes thousands) of individuals, groups, and organizations whose comments are collated and reviewed by the central committee and yet other groups. The draft is revised to reflect concerns of particular groups, more review ensues, and the committee moves toward consensus. Even after this laborious process, most standards documents caution that they are "temporary achievements" and open to future revision.

Standards intended to guide instruction become even murkier during the implementation process. Because teaching in the United States is considered by some scholars to be a bureaucratic rather than a professional enterprise, teachers often get information about standards from the wrong sources and "implicit and unexamined standards exist by default" (Darling-Hammond, 1997, p.213). These implicit standards do not come from the thorny consensus process described above, but are composites designed by textbook makers, individual state agencies, legislatures and school boards.

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[6] An example of this process is outlined in the Curriculum and Evaluation Standards for School Mathematics document (1983) by the National Council of Teachers of Mathematics. After a draft of the standards was developed by four Working Groups, each representing a cross section of mathematics educators, including classroom teachers, supervisors, educational researchers, teacher educators, and university mathematicians, revisions were made based on "copious" reactions to the working draft. The document lists 60 organizations that endorse and support the document. See also Interstate New Teacher Assessment and Support Consortium, 1992; National Board for Professional Teaching Standards, 1996; National Council of Teachers of English/International Reading Association, 1996; National Council of Teachers of Mathematics, 1989,1991. (Moss & Schutz, 2001)

The integrity of standards-based reform becomes dubious as an ever-growing list of

standards is developed by an expanding number of stakeholders.

"The standards" have taken on a monolithic quality due to their sheer volume.

School district personnel often claim that the curricula they develop are aligned with the

standards but these curricula are rarely organized into forms that teachers can practically

use. Marzano (1999) questioned how long it would take for an American student from

virtually any classroom in America to acquire the knowledge that is deemed essential by

organizations that produce standards. According to his research:

> .…a high school diploma would require as much classroom time as has
>
> historically resulted in a master's or professional degree. Even the brightest
>
> students would need nine additional years of schooling to master the nearly 4,000
>
> benchmarks experts have set in 14 subject areas.…The sheer volume of the
>
> standards is so overwhelming as to be virtually impossible to implement
>
> (par. 2-3).

Despite the seemingly illusory consensus about standards, 'aligned' assessments

are used as accountability vehicles in most states.   Moss and Schutz (2001) contended

that the states and test producers have not produced assessments that reflect the standards

as carefully crafted amalgams of far-reaching concerns. They argued that standards-based

assessments are removed from the contexts in which they were created, effectively

ignoring the contentious histories that led to consensus on the standards.

Furthermore, as the basis for accountability systems, schools and school

districts invest considerable time and resources to create curricula and

instructional guidelines that adhere to standards and their accompanying

assessments. Local interpretation then becomes another filter that standards must

pass through on their way to the classroom.

Barriers to the Interpretation and Implementation of Standards-based Policies

Some teachers claim that curricula, as designed by their local agencies, provide

clarity about what and how to teach, and certain accountability systems based on

standards provide a catalyst for stimulating more reasoned practice because teachers have

rationales and support for what they teach and when they teach it (Wilson & Floden,

2001). However, this is not to say that these locally constructed curricula are truly

aligned to the intent of the standards as assembled by policy makers. Hill (2001) found

that when local school districts tried to align their curricula with state standards, local

contexts and teachers' prior understandings of professional language did not match the

meanings communicated by the state. The reasons for this mismatch, she concluded are

threefold: first, local policy actors' pre-existing ideas about the subject area (in the case

of Hill's study, mathematics) and how to teach it diluted the "novel guidance" of the

state; second, honest differences in interpretation of policies as they trickle down from

the state handicap their implementation; and third, the language of standards is often too

abstract. With a poverty of concrete examples from the state about what it means by its

own abstractions of the language of standards, teachers have difficulty transferring the

state's intent to their personal experiences.

Spillane, Reiser, and Reimer (2002) looked at over 100 studies and documented

more than 300 variables that effect implementation of curricular and instructional

policies. They found that local actors (teachers, district and school level curriculum

specialists, and principals) generally work very hard at implementing state and federal

policies, yet implementation of policies true to their intent is rare. One reason for this incongruity is that school principals are often unable to formulate clear policy outcomes or adequately supervise implementation. Principals are often stymied by policy ambiguity and/or overly ambitious demands on teachers to make extreme behavioral or instructional changes. Additionally, structures to support implementation, particularly between principals and teachers tend to be weak. Responsibilities are poorly defined and there is overlapping policy jurisdiction, often on the same issue. Because responsibility and jurisdiction becomes overly segmented, mixed and often competing signals are sent to agents, diluting or confusing policy signals. Finally, teachers are historically autonomous agents and are either unwilling or unable to change their behavior. They filter policy directives according to their extant practices and interests, base what they implement on its ability to work within the unpredictable social context of their classrooms, or they lack the capacity (knowledge, skills, or resources) to work in ways that are consistent with policy directives.

The good news for policy makers is that purposeful sabotage of policies is rare in schools among principals or teachers (Spillane, Reiser, & Reimer, 2002). However, instructional policies are often severely altered by the time they reach classrooms or unable to affect practice because of the beliefs and/or capacities of teachers. The next part of this literature review will examine research that provides examples of how instructional policies are realized in practice. I give particular attention to the relationships between instructional policy and the ways that teachers view their responsibilities to students, and the effect of classroom context on policy enactment.

Policy and Practice Relationships in Teaching

In Maryland, the primary purpose of the former state assessment, the MSPAP, was to provide information to improve instruction in schools and the MSDE endorsed teaching to the test as good teaching (MSDE, 2000). For more than a decade there has been considerable pressure on Maryland's teachers to make changes in their practices to address testing demands because these changes represented good teaching and were believed to increase student learning. However, in Maryland, as in other states that adopted standards-based accountability policies, it is difficult to determine whether or not those policies really have much effect on teaching. Many studies on the linkages between accountability policies and teaching and learning present dubious conclusions. The lack of conclusive evidence raises the question as to whether or not policies that aim for standardization of curricula and uniformity of practice contribute to or restrict other constructs of good teaching such as the holistic view I presented earlier. The purpose of this section of my examination of the literature is to provide insights on the relationship between accountability policies and teachers' practices, i.e., do accountability policies motivate teachers to change instruction and if they do, in what ways and to what benefit for student learning? I begin by presenting literature on instructional policy as a means to create uniformity of practice and the barriers to that goal. Next, I examine related studies that reveal the numerous ways that teachers respond to instructional reform policies in their classrooms. Because instructional reform is closely related to high-stakes testing, I then present studies on the relationship between testing and instructional improvement.

Uniformity of Practice

One way of looking at instructional policy enactment is to view it as a mechanism to create uniform practices. From this perspective, it is policy makers that attempt to teach teachers about instructional practices. Thus, policy "ambassadors" meet with the same tensions that teachers do when teaching diverse student populations. They must accommodate diversity in students' (the teachers') dispositions, learning schemas, and pre-existing beliefs and experiences (Jennings, 1996). It is not surprising then that "policy coherence as intended by reformers and policymakers ultimately is achieved or denied in the subjective responses of teachers" (McLaughlin & Talbert, 1993, p.247).

Teachers address the work of educating students from fundamentally different perspectives than policy makers and the public at large. Policy makers, business leaders, and many citizens view students as outputs or products of schools whereas teachers view their students as the context for making decisions about virtually every aspect of classroom life. This impasse is responsible for a great deal of autonomous enactment of instructional policy by teachers.

Teachers make "subjective interpretations of students' objective circumstances" (McLaughlin & Talbert, 1993, p. 223), meaning they view students as either drains on the system, individuals of value with unmet needs, or students with emerging potentials and malleable abilities. These interpretations are based on students' language and culture, racial background, family circumstances (including parents' economic and educational status), and academic ability and background. "These different constructions by teachers within and between schools ultimately challenge the coherence of education policy in terms of its expected or hoped-for consequences for students" (McLaughlin and Talbert,

1993, p. 223). How teachers view their students, therefore, also has a powerful impact on their efforts to enact instructional policies uniformly.

Teachers Responses to Instructional Reform Policies

Many researchers who study the effects of instructional policy agree that, "traditional teaching is a sturdy practice that has weathered many reforms without significant change" (Wilson & Floden, 2001, p.214). As I noted earlier, part of this resistance to change is the result of policy dilution, translation, or refocusing during the implementation process. Policies undergo further transformation when teachers enact instructional policies based on yet another host of influences: their extant practices, their understanding of the policy or reform directive, their own education, and the support they receive in efforts to change their practices (Cohen, McLaughlin, & Talbert, 1993; Darling-Hammond, 1997; Grant, 1998).

Grant's (1998) study of teachers attempting to incorporate instructional reforms in Michigan found that even when teachers were given the same or similar information about the reform and were given common instructions on the use of instructional materials that were adopted by their school districts, their classroom implementations were quite different. In his study and others (Cohen, 1990; Spillane & Jennings, 1997) some teachers did not see reforms as a challenge to their past practices, i.e., they believed they were not being introduced to anything new and, therefore, did not see a need to learn new methods or change extant practices.

Often, when teachers didn't respond to instructional change efforts, it was because they inaccurately assessed their existing practices in light of the reforms (Cohen, 1990; Grant, 1998; Spillane and Zeuli, 1999). Their understanding of pedagogies

targeting instructional improvement was not sufficient for them to acknowledge that their attempts to incorporate new techniques (e.g., use of manipulatives for teaching mathematics) were not the same as using varied materials, sources of information, or patterns of discourse (Spillane & Jennings, 1997; Spillane and Zeuli, 1999) for teaching that develops the higher order thinking skills that state instructional policies initiate.

Teaching, Testing, and Accountability Systems

Accountability systems require that teachers prepare students for tests that are rarely well aligned with curricular and instructional standards and simultaneously incorporate instructional reforms which are endorsed and propagated by school districts that do not necessarily translate into improved achievement on assessments (Supovitz, 2001). Thus, even when teachers teach according to curricular and instructional directives related to accountability-driven tests, it is difficult to determine how their teaching has influenced student learning. Nonetheless, researchers attest that testing has a powerful effect on teaching (Cohen and Spillane, 1992). Competency testing drives teachers to focus on basic skills (Darling-Hammond and Wise, 1985) and often results in mechanical, simplistic instruction. Focus on test scores has resulted in "teaching to the test" and de-emphasis of other areas viewed by teachers to be important, particularly in high-poverty schools (O'Day and Smith, 1993; Olsen, 2001).

In highly rigid systems, like that in Texas, McNeil (2000) reported that teachers there abandoned more comprehensive and progressive teaching practices and began to teach "defensively" to satisfy institutional requirements as efficiently as possible. They controlled content so it could be memorized and repeated on tests and eliminated experiences that might inspire questioning or discussion by students, omitted

controversial or contemporary topics, and maintained a controlling environment in their classrooms. As a result, the curriculum was decontextualized from the lives and understandings of students and teachers alike, and important ideas were reduced to lists of facts rather than being used to develop conceptual understandings.

High-stakes performance-based assessments impact teaching as surely as traditional testing formats. In Maryland, teaching to the test, the former MSPAP, was considered good teaching and was encouraged by the state department of education (MSDE, 2000). Maryland teachers reported making changes in their instruction and in the content of their lessons for the sake of the test (Firestone & Mayrowetz, 2000). In poorly performing schools that were under the threat of reconstitution, efforts to change instruction through pre-packaged instructional programs resulted in a considerable amount of "scripted" teaching that left little room for differences between and within individual classroom contexts (Mintrop &Buese, 2001). Even when teachers attempted independently to modify their lessons into performance-based ones like those appearing on the MSPAP, the instructional activities remained highly structured and the goals of conceptual exploration and communication of results and processes were not realized (Firestone, Mayrowetz, & Fairman, 1998; Mintrop & Buese, 2001).

Other research on school systems using performance-based assessments shows that teachers turned innovative features of assessments, such as scoring rubrics, into steps to be mastered (Wilson & Floden, 2001). Here, the complex processes that the rubrics were intended to score became procedural routines for test preparation. This transformation of the complex into the routine is a result of teachers attempting to reconcile policy with their traditional practices. Wilson and Floden (2001) told us that

"This bifocal vision – with one eye on policy and one eye on the student – echoes the findings of other researchers and may explain teachers' consistent and insistent push toward some balance of old and new" (p. 211). The teachers Wilson and Floden studied deliberately employed elements of new practices if they believed they would stimulate their students' interest or help them gain understanding, however, tried and true practices for the mastery of basic skills did not lose their place in teachers' pedagogical repertories.

Research on the relationship between high-stakes and teaching in Maryland revealed that some teachers and administrators felt compelled to focus more on testing than other aspects of instruction (Firestone, Mayrowetz, & Fairman, 1998, Mintrop & Buese, 2001). As a result, many teachers reported that they resented the pressure of testing because they didn't believe it served the best interests of their students.

The policy/practice literature I examined above illustrates how formalized accountability systems relate to the work of teachers. Most studies on how accountability testing impacts teachers' practices situate educational accountability as a means to an end. In the following section, I examine several scholars' thinking about the meanings of accountability. They deconstruct accountability into its more theoretical dimensions, which was useful for my purposes to shed light on the tensions that appear in teachers' responses to formalized accountability mechanisms.

<center>Meanings of Accountability</center>

Understanding the concept of accountability is a key component of this study. Maryland has a high-stakes accountability system, i.e., there are rewards for high performing schools and sanctions for schools that do not achieve adequate yearly

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progress on the MSA. Accountability as such has a clearly articulated meaning from the state, but teachers have trouble reconciling their personal constructs of accountability with district and state imposed constructs of accountability. Given the pervasiveness of increasingly high-stakes accountability policies since the inception of Maryland's accountability system, Maryland teachers have become quite adept at juggling these institutionalized and personal accountability perspectives. In this study, I found that the three teachers' personal perspectives and the institutionalized perspectives are constantly at play with each other, sometimes harmoniously and sometimes discordantly.

Within policy studies literature there is a range of meanings about accountability. These meanings are influenced by disciplinary perspectives of policy and practice and are difficult to disentangle. Currently, some scholars frame the "accountability warrant" in education as "a set of 'reasonable grounds' for action based on outcomes, results, and outputs" (Cochran-Smith & Fries, 2001, p.7). Cochran-Smith and Fries framed the arguments around accountability in terms of outcomes versus inputs and viewed the "sides" of the debate in terms of "deregulation" and "professionalism." Those who favor the deregulization model of accountability contend that outcomes of education must be definable and measurable and the state has the imperative to expect specific results of teachers' work. Those who endorse the professionalization model of accountability assert that outcomes of education are not easily defined, that teaching is purposeful and tailored to the individual (and is thus socially responsible) and that such outcomes are not realized in formularized ways or solely assessable by standardized measures of achievement. Additionally, because education where it occurs (in schools) is context

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specific, it is useful, if not crucial, to include information about local contexts in accountability warrants.

Abelmann's and Elmore's (1999) study examined meanings of accountability at the school level. Their theory of school-site accountability attempted to explain how people in schools think about accountability in their daily work. Because of their focus on school context and the individuals that create those contexts, I was able to use components of their theory to help me unwind how the teachers in my study thought about and responded to accountability in their daily work.

Ablemann and Elmore framed their theory of school-site accountability using the relationship of three conceptions of accountability: "individual conceptions of responsibility, shared expectations among school participants and stakeholders, and internal and external accountability mechanisms" (Ablemann and Elmore, 1999, p. 3). A teacher's concept of responsibility is distinctly individual, derived from his or her personal values and beliefs. Expectations are collective norms and values of the participants in the school setting that are used to "get the work of the school done" (Abelmann and Elmore, 1999, p. 4). Finally, accountability structures, both external and internal, provide ways for teachers to give an account of their work to authorities inside or outside of the school.

Shipps and Firestone (2003) pointed out a number of different areas of accountability that must be attended to by school leaders. They included bureaucratic accountability to agencies that regulate schools, professional accountability as it is related to decision-making, market accountability that occurs because schools compete for students and funding, and moral accountability because schools foster society's deepest

values. They argued that the rise of external accountability weakens the ability of schools to reach internal consensus about local obligations.

Biesta (2004) identified similar dimensions of accountability in her article on education, accountability, and ethical demand. She described accountability in its general sense, meaning, "being answerable to," and in what she considered to be the current predominant version of accountability, the "technical-managerial" version. Biesta described the technical-managerial version as parallel to financial accountability. She concurred with Poulson (1996) that prior to the technical-managerial accountability that rose in the late 1970s and early 1980s, a professional interpretation of accountability existed in which teachers, considering themselves professionals, held themselves responsible for their professional conduct and their relationships with their colleagues, parents, students, and society at large. The professional approach, Biesta stated, fostered a democratic approach to accountability in which the school community and wider citizenry supported the democratization of education.

Goodlad (1979) contended that western societies employ a "scientific" approach to accountability in which common goals are set, the goals are translated into specific objectives, assessments of student progress determine change mechanisms, local efforts aim to improve weaknesses revealed by the assessments, local evaluation capability is developed for continuous self appraisal and improvement, and finally, information is sent to the state to fulfill its leadership role as it sees fit. Educational accountability, as such, is a means to an end and in doing so the "experience" or "educative process" of education is lost.

Goodlad elaborated that by relating means to ends, educators are asked to "misunderstand" the nature of the "humanistic" educative process. By associating accountability as a means to achieve narrowly enunciated goals (e.g., high scores on achievement tests) other important educational goals related to a broader meaning of educational purposes are marginalized; goals such as "human qualities of compassion, happiness, appreciation of others, good work habits, integrity and the rest almost always embedded in the social, vocational and personal goals set by states for our schools" (Goodlad, 1979, p. 310).

In response to Goodlad, Fenstermacher (1979) presented a version of educational accountability that considered several of the dimensions of accountability I have discussed so far. His version is useful for my purposes because he attempted to uncover the philosophical dimensions of educational accountability and relate them to the work of teachers. Fenstermacher argued that, regardless of the desirability of Goodlad's ecological model, it is not a model of educational accountability but a model of schooling. Fenstermacher stated that Goodlad's argument does little to focus on the functional nature of measurable accountability that state driven systems strive for. He submitted that when attempting to understand what policy makers mean when they ask that schools be accountable, it may be more useful to consider accountability as a relationship more akin to that used in the contexts of governmental and corporate affairs.

Fenstermacher presented a version of "generic" accountability with four features. First, accountability is as relational term. It implies that one party is held accountable by an identifiable second party. Second, the relationship exists between persons, not institutions. For example, stockholders hold corporate executives accountable, not the

corporation. Third, the relationship requires some standard of performance, i.e., the one held accountable is accountable for specific performances that meet stated or implicit standards. Fourth, the parties in an accountability relation are obligated to provide or receive information. The party being held accountable is obligated to provide information to the party expecting accountability just as the party expecting accountability must provide information in return.

Fenstermacher acknowledged the complexities of his four features of accountability. There are many areas in each of the four features that are potentially ambiguous and/or contentious. Also, as in any relationship between persons, the relational aspect of accountability can break down. However, regardless of the difficulties in establishing a generic system, Fenstermacher maintained that this perspective of accountability holds as a model for educational accountability.

However, Fenstermacher pointed out that this generic accountability is a weak form of accountability. A strong version of accountability has the features of generic accountability, but also has the features of trust, responsibility, and discretionary authority. Trust must exist between the partners in the accountability relationship, responsibility must be exercised regarding the tasks undertaken in the relationship, and discretionary authority must be conferred to the one held accountable.

Finally, Fenstermacher asserted that the reality of accountability systems, particularly ones that incorporate high-stakes into the equation through punitive actions for poor performance or rewards for high performance, such as that in Maryland, deteriorate the integrity of strong systems by becoming overly prescriptive. The system weakens when instructional decision-making that is specific to local contexts is removed

from the jurisdiction of those who are asked to be accountable, i.e., local school administrators and teachers.

The authors cited above all affirm that it is good teaching, in any sense of accountability, that really matters for raising student achievement, but it is the conception of what good teaching is that makes the distinction between perspectives.

Conclusion

This discussion of literature presents an overview of the terrain of teaching in today's classrooms and research about policy, practice, and accountability. I have yet to encounter a thoughtful teacher who is not in a quandary over finding harmony between the dimensions of teaching directed at helping students improve their lives (as Hansen suggested) and teaching as a societal good that is governmentally regulated. This dilemma is noted by the bulk of studies showing why instructional policies rarely succeed on the level hoped for by policy makers (Spillane, Reiser, & Reimer, 2002).

Many committed teachers continue to struggle for a balance between accommodating instructional reforms and teaching in ways that nurture authentic learning in students. The three teachers in my study represent a convergence of practical knowledge about teaching and formalized social ideals about what teaching might be able to accomplish. They are individuals who navigate the terrain outlined in this examination of literature because they are dedicated to the tradition of teaching and participate to some degree in institutionalizing instructional reform measures.

CHAPTER III

CASE STUDY METHODOLOGY

The aim of my dissertation is to explore how teachers, who are acknowledged by their school districts as exemplary, understand, construct, and realize their practices in a regulated and changing high-stakes accountability system. Understanding the teachers' practices and the perspectives they have about their work requires an in depth examination of their teaching in the school setting, particularly in the classroom. In the classroom, the teachers' beliefs, knowledge, and experiences are important factors that shape their interactions with students and the content and pedagogical choices they make in their day-to-day work.   However, work in the classroom is also influenced by such factors as the school climate, the instructional expectations of the schools' administration, and state policies. Taken together, the multiple factors that contribute to the teachers' processes of making sense about what they do creates a multi-textured context that I believe is best understood using a qualitative research methodology (Bogdan & Biklen, 1998; Merriam, 2001).

Qualitative methodologies aim to understand meaning that subjects ascribe to components of their lives and reveal the processes through which that meaning is negotiated (Bodgen & Biklen, 1998). Because I am interested in how the MTY candidates made sense of their practices and understood their work as teachers during a time of significant change, I employed a case study methodology. The focus of the cases, the MTY candidates, represents bounded systems (Merriam, 2001). Bounded systems permit in depth focus on the object of the study. Miles and Huberman (1994) illustrated a bounded case as a circle with a heart in the center. The heart of the circle represents the

focus or object of the study, giving the researcher a reference point – a representation or embodiment of the source of the research questions. The circumference of the circle provides a boundary for the investigation. This boundary highlights the potential of case studies to attempt to encompass too much or expand to the point that the focus becomes blurred. The circumference provides structure by setting predetermined limits for the investigation in order that the researcher begins the research endeavor with conceptual clarity and well conceived procedures and tools for exploring the circle's area.

The heart of each case I produced is the MTY candidate. I aimed to examine how each teacher understood his or her work as it was situated in place and time. I focused on the teaching practice of MTY candidates, which included the instructional choices they made, how they organized their classrooms, how they interacted with students, how they understood and enacted the curriculum, and how they responded to instructional directives. I inquired how their histories, beliefs, experiences, and situations compelled them to construct their practices in certain ways.

The surrounding area of the circle of each case represented the multiple contexts in which the teachers' work occurred. Here I considered how the school site, its culture, the nature of the collegiality within the school, and instructional leadership influenced the MTY candidates' classroom practices and the decisions they made for teaching. Outside of the circle – what was not studied – were the changing statewide instructional policies that the teachers encountered. Although the policies around curriculum and testing were certainly influential on the teachers and I investigated them to the degree that was necessary to understand the kinds of policies the teachers responded to at the school level, the focus of data collection and analysis was the teacher his or herself. I did not do

in-depth analyses of the provisions of Maryland's responses to NCLB, for example, because my goal was to understand the practice of the teachers, not policy implementation per se.

Yin (1994) suggested that case studies have a distinct advantage for answering "how" and "why" questions about "contemporary events over which the investigator has little or no control" (p. 9). In the case of the teachers in my study, who were teaching in a high-stakes accountability system that was undergoing considerable change during the 2002-2003 school year, it was impossible to predict the influence of instructional improvement policies a priori. Because this influence could only be surmised at the onset of the study, the case study methodology accommodated that unpredictability as well as the distinctions between the context variables (school site, class schedules, etc.) that surrounded the teachers' lives at school (Merriam, 2001).

Understanding the teachers' enacted practices required numerous classroom observations. One of the strengths of case study methodology is that it enables the construction of rich or "thick" descriptions of the phenomena being investigated (Merriam, 2001). By creating thick descriptions of all or part of some of the teachers' lessons and including vivid material such as quotes and diagrams in the case studies, I was able to clearly illustrate the teachers' practices and show the nature of their interactions with students.

I was not only interested in understanding the nature of the teachers' practices but also in understanding how the teachers' different constructs of good teaching resided in the high-stakes accountability climate that is present in Maryland. Getting at their notions of good teaching required an interpretive approach. Teaching practice is a lived

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experience. Because each teacher's construct of good teaching is unique to his or her beliefs, experiences, and situation, and is portrayed by what they do in the classroom, my representations of their constructs resulted from my inductive approach to data analysis (Merriam, 2001).

In summary, this dissertation used a descriptive/interpretive case study methodology in which each case was bound by investigating the teachers' teaching practices and beliefs within their local contexts. Before explicitly outlining the design of the study, I present the research questions that guided it.

Research Questions

The overriding question that guided data collection in this study is: How do MTY candidates understand, construct, and realize their practices in diverse classroom contexts and a changing and regulated high-stakes accountability system? By asking this question, I was able to respond to the analytic question: How do the teachers' constructs of good teaching reside in a high-stakes accountability climate? These questions were designed to gain an understanding of the degree to which the practice of teachers whose work is accepted and endorsed as good practice by multiple educational stakeholders in their school districts was compatible to Maryland's instructional accountability policies. What follows are sub-questions that guided my research. I clarify the intent of these questions and explain how they contributed to answering the primary research question. Subsidiary questions:

1. What formal professional and non-professional experiences influence the way the MTY candidates think about their work and construct their practices?

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I attempted to uncover the internal and external sources through which the teachers learned about teaching because I believe the nature and impact of their personal learning experiences influenced how their teaching practices developed. Formal experiences include college or university pre-service programs, graduate programs, and professional development offered within or outside of the school district. Informal learning experiences consist of life experiences related to teaching or learning, prior work experience, and exposure to other sources of information such as educational literature or professional journals. Because learning about teaching is socially situated, I attempted to uncover what the teachers learned about teaching as a result of their daily work with students and relationships with other teachers. This sub question was intended to provide an understanding of how the teachers used the educational, experiential, and contextual aspects of their own lives to direct their approaches to teaching. This course of questioning led me to an understanding of the teachers' rationales for making decisions on what and how to teach and about their understanding of the nature of learning in their students.

2. What do MTY candidates believe about their roles as teachers in general and as teachers of mathematics?

People come to teaching with definite ideas about what it means to teach. Most are committed to an educational ideal or philosophy around which they construct perspectives about their roles as teachers. They may believe their role is to be a caregiver, a role model, an enforcer of behavior, a conveyor of knowledge, a guide or partner in learning with their students, or any number of other roles. As teachers of mathematics, they have beliefs about how students learn mathematics and what counts as

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important learning in mathematics. These beliefs guided the teachers in my study in the instructional and classroom management decisions they made.

3. How do MTY candidates interpret curricular, instructional and testing policies and how do they respond to them in practice?

The MTY candidates were expected to accommodate a number of policy changes during the 2002-2003 school year, namely: the termination of the MSPAP, the introduction of the MSA, and the adoption of new math curricula. As teachers in a high-stakes accountability climate, I correctly assumed there would be a certain degree of pressure on the teachers to follow the various policy directives. Because policies are enacted in ways that are dependent on the teacher's interpretation and acceptance of them, this question reminded me to look for nuances in their teaching manner and practices that indicated how they thought about the different policies and how they responded to them in their teaching.

4. How does the context of MTY candidates' schools and classrooms support their beliefs about teaching and influence their enacted practices?

The context of the schools and classrooms was very different between the three teachers. They had different teaching assignments, different class schedules, different grade levels, and of course, different students. The climate of the schools was unique to each and influenced by the leadership at the school and common school values. In particular, the teachers negotiated the expectations of the school principal as related to instructional accountability when they considered how to teach and their responsibilities as teachers. This question also

sought to understand the degree of autonomy the teachers realized in constructing

and enacting their instructional practices.

Data Collection

Participant Selection

This study does not attempt to define good teaching. I used the MTY Award as

selection criteria for this study not because its criteria defines good teaching, but because

it acknowledges individuals whose teaching is *viewed* as exemplary by members of his or

her communities and school districts. I approached this study with the perspective that

good teaching means different things to different people. Therefore, I wanted to enlist

teachers who were identified as good teachers by more than one or two individuals,

making the use of personal recommendations of good teachers too subjective and

idiosyncratic. I also wanted to address the reality that there are many educational

stakeholders who have an interest in good teaching and they may have varying opinions

about what good teaching looks like. I decided that the receipt of a teaching award would

be an appropriate selection criterion because an award would represent a stronger

generalized acknowledgement of good teaching than personal recommendations. As I

researched teaching awards that were presented in the state of Maryland, I came across

the MTY Award. The MTY Award required the acknowledgement of good teaching by a

consensus of educational stakeholders and employed relatively rigorous criteria beyond

only recommendations and/or testimonials. Additionally, the MTY Award was endorsed

by the state and, in fact, held the MTY up publicly as an exemplar for good teaching

around the state. When I decided to study MTY *candidates*, as I shall explain further

below, I did so under the assumption that the county committees selected their MTY candidates with the state award in mind.

Because I framed my examination of good teaching in the accountability context of Maryland, my study required teachers who taught in a subject area and at grade levels tested by the MSA. This limited my selection to third, fifth, or eighth grade reading/language arts teachers or math teachers. Because my personal teaching experience was in mathematics, I chose to study mathematics teaching because I believed my knowledge of mathematical standards and pedagogy would aid in my observations. I would know what I was looking *at* in the classroom, even if I wasn't always sure what I was looking *for* (from an analytic standpoint) while conducting observations.

Because the MTY Award is given annually and I wanted to study mathematics teachers, the pool of possible participants was very shallow. I was concerned about protecting the participants' identities and so I decided to deepen the pool by considering all of the MTY candidates from Maryland's 24 counties over a period of five years as potential participants. I reasoned that it was possible to find three mathematics teachers in grades five or eight in that pool of 120 candidates. My preference was to study eighth grade teachers because of the relative scarcity of studies about teaching in the middle grades, but the limitations of the selection pool necessitated that I include fifth grade teachers as well.

I contacted the administrator of the MTY Award at the MSDE and she supplied me with lists of all the candidates over the years since 1997. Fifteen teachers met my requirements and I set out to find three who would be willing to participate in my study.

I contacted the schools of the fifteen teachers. Many of the teachers moved on to

administrative positions, but fortunately I was able to find three who were willing to participate. I spoke to the teachers' principals to explain my proposal and enlist their consent, as they too would be participants in the study. Having found willing participants, I submitted my research proposals to the teachers' respective school districts for approval. I received approval from all three counties in October of 2002 and began data collection in November 2002.

Participants

Monument Elementary School Participants

Christine Walker is a fifth grade teacher at Monument Elementary School. At the time of the study, she had 33 years of teaching experience, 22 of them at Monument. She teaches under a general elementary teaching certificate and teaches only mathematics at Monument. Her sorority, Alpha Kappa Alpha, nominated her as the MTY for her county. She served Alpha Kappa Alpha as the chairperson for their math and science academy. Representatives from Alpha Kappa Alpha, along with a committee from T.C. Martin, submitted Mrs. Walker's nomination to the county for the MTY award.

Leonard Braniff, the principal at Monument, had known Mrs. Walker for "about 25 years" at the time of the study. He met her when he was a teacher at Monument, left the school for 13 years, and later returned as its principal.

Clear Water Elementary School Participants

Stanley Clark is a fifth grade teacher at Clear Water Elementary School. He teaches under a general elementary certificate and teaches all subjects at Clear Water. His favorite subject to teach is science, followed by mathematics. He taught for two

years at a county middle school before coming to Clear Water where taught for 10 years at the time of this study.

Louise Schribner, the principal at Monument, had been the principal at the school for two years at the time of the study. She was a former high school teacher but spent most of her teaching career as a reading specialist before becoming a principal. She knew Mr. Clark from the time he began teaching.

Stone Valley Middle School Participants

Annette Blakeway is an eighth grade teacher at Stone Valley Middle School. She teaches under a secondary mathematics teaching certificate and teaches general math and two advanced placement courses at Stone Valley, algebra 1 and geometry. At the time of the study she taught at Stone Valley over the nine years of her teaching career.

Frank Kellet was in his second year as principal at Stone Valley at the time of the study. He was a teacher and then an administrator in another Maryland county before coming to Stone Valley. He met Ms. Blakeway when he became principal there.

<center>*Data Sources*</center>

Classroom Observations

I conducted classroom observations of the three teachers from October 2002 through June 2003. I observed 26 lessons presented by Mrs. Walker, 14 lessons by Mr. Clark, and 21 lessons by Ms. Blakeway. Because Mrs. Walker and Ms. Blakeway taught only mathematics, I sometimes spent entire days with them at their schools observing all of their classes in sequence. By spending the entire day at the school site, I was able to get a feel for the school climate, observe the teachers prepare for classes, and have many informal conversations with them. I made separate trips to observe Mr. Clark's classes as he taught only one class of mathematics per day. However, I often came to the school

early and was able to observe the activity in the fifth grade "wing" of the school and observe Mr. Clark's interactions with other fifth grade teachers.

Scheduling was difficult as each county was on a somewhat different schedule and severe winter weather closed the schools regularly over the winter months. I attempted to spread the observations out over the seven months of data collection as much as possible in order to observe the teachers' practices before and after the administration of the MSA. I wanted to see what, if any, test preparation activities the teachers engaged in with their students. I listened carefully for any references the teachers made to testing, either explicitly or in passing. By observing the teachers after the MSA, I was able to see if their practices or the school climate changed after the MSA was no longer on the horizon.

I took handwritten field notes during the observations using an observation protocol (See Appendix B) on which I noted the number of students in the class, the gender and racial distribution of students, the activities presented, the concepts studied, resources used, and the teacher/student discourse and interactions. Throughout the observations I noted the time of day, particularly when there was a transition between activities. Lampert's model of teaching practice reveals how many of the elements on my protocol work together:

> Whatever the teacher or a student does or says to another individual can be observed by others, and so is also an occasion for them to learn something….The time over which teachers relate to students and to content adds more complications to the basic model [of teaching practice], and more resources and constraints to practice….She must provide tools for students to use to connect

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ideas from one lesson to another in ways that are appropriate to the subject matter

under study. In this way, time can be used as a resource to connect students with

content (Lampert, 2001, p. 425).

Lampert also noted that the way that teachers structure their interactions with

students contributes to their learning: "The work of teaching is to structure those

interactions to be productive of academic learning" (Lampert, 2001, p. 426). Because I

was interested in the moral dimensions of the teachers' work, observations of their

interactions with their students and how they structured student-to-student interactions

was imperative (Fenstermacher, 2001; Richardson & Fallona, 2001). I paid careful

attention to how the teachers interacted with their students so I could describe and

interpret how interactions contributed to the intellectual and moral development of their

students. The teachers' classroom management processes and techniques unrelated to

their mathematics lessons were also recorded on the observation protocol.

In addition to keeping a running record of the lesson on the observation protocol,

I used several other devices to record information about my observations. I kept a

notebook with me at all times in order to write down thoughts or impressions I had while

I conducted observations or in the few minutes I had as students were transitioning from

one class to another. I drew sketches of the arrangement of the room noting how the

students' desks were arranged. As I got to know the teachers better, they allowed me to

photograph their classrooms, which was useful for recalling details and helping me

visualize their classrooms when writing their case studies. As soon as I left the teachers'

schools, I narrated anecdotes, thoughts, and ideas about what I observed on audiotapes

that I latter transcribed. Keeping audio journals allowed me compile rich contextual

descriptions of the teachers' work environments, their interactions with their students, and striking features of their lessons. I also recorded questions to ask the teachers about their lessons, their interactions with students and other ideas that emerged from observing them in their classrooms.

Artifacts from Observations

I collected as many classroom artifacts as possible from each of the teachers. They supplied me with copies of the handouts they gave their students and copies of their curriculum guides. Although I was unable to get copies of student work, the teachers often allowed me to look at their students' papers after class and, in the case of Ms. Blakeway, she showed me student projects she displayed around her classroom and discussed their quality (and their creators) with me.

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Interviews

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Interviews with Teachers

Interviews with the teachers were vital for connecting teachers' understandings and beliefs about teaching, curricula, and instructional directives to their practices. I conducted formal interviews with each of the teachers spread out in intervals over the months I collected data. At the onset of my study, my goal was to conduct four audio taped interviews with each teacher. As I got to know the teachers I adjusted this goal according to the availability of the teacher and the amount of time I was able to spend with them in informal conversations. Because I didn't have as much time to speak with Mr. Clark between classes or during breaks in his schedule as I did with the other two teachers, he agreed to meet for all four interviews. I conducted three audio taped interviews with Mrs. Walker and two with Ms. Blakeway. I attempted to interview Ms.

Blakeway a third time, but she underwent unexpected major surgery toward the end of May and was absent for the remainder of the school year and unavailable over the summer.

I prepared interview protocols (See Appendix C) for each interview. In the first interview I asked general questions about the teachers' teaching histories, their beliefs about teaching, their students, lesson planning, and the mathematics curriculum. In subsequent interviews I asked some common questions to all the teachers and also questions that were specific to each based on what I observed in their classrooms. Although I devised protocols for each interview, the interviews were loosely structured. I believed interviews with a conversational tone encouraged more natural responses from the teachers than I would have achieved using a more structured format. I did, however, guide the conversation to get responses to the prepared questions. Each interview was between forty-five minutes and one hour long.

Interviews with Principals

I conducted two interviews with each of the principals at the three schools. I attempted to schedule the first as close to the beginning of my data collection as possible. I was able to schedule an interview with Mr. Braniff, the principal at Monument, in November 2002, and interviews with Mrs. Schribner (Clear Water Elementary) and Mr. Kellet (Stone Valley Middle School) in January 2003. I conducted the second interview with each principal in June 2003. My strategy for conducting interviews with the principals was much like that of my strategy for teacher interviews. I used the first interview to mine information about the school organization, the principal's beliefs about good teaching, the curriculum, and some of the processes the principal used to promote

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instructional improvement and professional development. I asked questions about the

MSA and the principals' perspectives about accountability in the second interview. As

with the teacher interviews, I devised interview protocols (See Appendix D) but tried to

keep the interviews as conversational as possible.

Artifacts from principal interviews

The principals openly shared information about their schools. Mrs. Schribner

provided me with a copy of Clear Water's School Improvement Plan; Mr. Kellet gave me

a copy of the observation protocol he used for teacher evaluation and Mr. Braniff shared

documents related to Project Target, a school climate initiative at Monument. Although I

was not permitted to take copies of them, the principals showed me the math curriculum

at their schools and permitted me to look through them while at the school.

Data Management and Analysis

Data Management

I used NVivo (version 2.0), a computer software program for qualitative data

analysis, to manage and analyze the data I collected. Preparing the data for entry into

NVivo required that I transcribe each interview, the audio journals, the field notes and my

handwritten notes. I transcribed the field notes as soon as possible after the observations,

in most cases within 24 hours, and transcribed the interviews personally. I considered the

transcription of the interviews to be a preliminary step in data analysis. I was able to be

an observer of the interview, so to speak, and begin to see emerging coding categories

through the transcription process.

Data Analysis

I entered the transcribed documents into the NVivo program and began open

coding. As the texts open up through coding, concepts or categories began to emerge and

their properties became specified (Strauss & Corbin, 1998). During the first round of

open coding of the classroom observation field notes, I tried to make sense of the

sequential structure of the teachers' lessons, the mathematical concepts they taught, how

they arranged students for instruction, and the nature of the dialogue they had with their

students. The "parent tree nodes," i.e., the major coding categories related to the lessons,

illustrate my coding structure: lesson sequencing, math concepts, math vocabulary,

problem solving strategies, student behaviors, means of student engagement, student

grouping during instruction, teacher expectations (of behavior and learning), teacher

modeling, teacher/student dialogue, and teacher's understanding of students. These

parent nodes had a number of "child nodes" or sub categories.

After the first round of coding it became evident that the general beliefs the

teachers held about teaching and their beliefs about teaching and learning mathematics

was demonstrated in their teaching practices. I began a second round of coding, similar

to what Strauss and Corbin (1998) called axial coding, to code the observations with my

eye on how the teachers' beliefs about teaching and mathematics revealed themselves in

practice.

I based the axial coding of the observation field notes on the conceptual

framework of a study conducted by Aguirre and Speer (2000) in which they examined the

nature of the connection between teachers' beliefs and practices in the moment-to-

moment actions of teaching. Nodes I created for this second round of coding included:

affective beliefs (e.g., why it is important to learn mathematics), beliefs about the nature of mathematics, beliefs about teaching, beliefs about learning, socialization beliefs, goals for lessons, and teaching focus (conceptual vs. procedural understanding or linkages between them).

Transcripts of the interviews and my audio journals were also open coded. Much of the data was subsumed under the existing nodes, but a number of free nodes emerged that related to the teachers' and principals' educational and professional histories, their understanding of the curriculum and the MSA, school wide initiatives, school climate, interpretations of accountability, philosophies of education, and perspectives about good teaching.

By the time I completed coding, I developed a framework for writing the cases. My goal was to develop rich descriptions of the teachers' instructional practices and highlight how their histories, beliefs and experiences were evident in their teaching. I also aimed to describe and interpret how the teachers' responded to their school climate, particularly with regard to accountability.

The case studies I developed about the teachers revealed a number of tensions between their constructs of good teaching and the accountability climates of their schools. Relying on the literature around the moral dimensions of teaching and meanings of accountability as a conceptual framework, I completed my analysis of how good teaching resides with high-stakes accountability and was able to reflect on the significance of the relationship between the two concepts.

Research Reliability

Yin (1994) stated that if a case study is reliable, a different researcher would be able to perform the same case study over again and come to similar conclusions. He maintained that prerequisites for re-conducting a study are documenting the procedures followed in the original case and making the steps of conducting research as operational as possible. If another researcher would undertake to do redo my study, he or she would be supplied with tools to reconstruct it, i.e., interview and observation protocols. However, as Merriam (2001) noted, "human behavior is never static" (p.205). Reliability, in the case of my research, refers to the specification of methods that could be reproduced in other observations and interviews with the same teachers. Replication of the events that occurred in the period of time of my study could not be duplicated, nor could replication of interpretation be assumed.

Despite the impossibility of the exact replication of a qualitative study, Merriam (2001) confirmed that reliability is a realistic goal for qualitative research. She described three techniques that researchers can use to ensure that the results of research are consistent with the data collected: the investigator's position, triangulation, and audit trail. How I employed each of these techniques is outlined in the following sections.

Investigator's Position

The investigator's position refers to his or her position with regard to the group being studied, the basis for selecting informants and descriptions of them, and the social context of the site (Merriam, 2001). I addressed the informant and context components in previous sections of this document. Here I discuss my personal position with regard to the teachers I studied.

My fifteen years as a middle school mathematics teacher created the possibility that I would bring my own biases about teaching to my collection and interpretation of the data. However, that same experience provided me with several strengths that I believe was more beneficial than detrimental to my investigation. I am well versed in the planning and execution of topical lesson units and teaching in a system that requires adherence to statewide accountability directives for instruction and testing. For two years I was my school's representative on the mathematics curriculum revision committee and several years later, served on a similar committee to review and refine that curriculum. I believe my observations and interviews were made stronger because I am aware that the issues surrounding curriculum interpretation and implementation are multifaceted and unpredictable. My participation on the curriculum committees came at a time when the state I was working in first developed standards for teaching and learning and the committee was also charged with disseminating information on the standards and testing. As with the curriculum implementation guidelines, disseminated information on standards and testing was met by the teachers in my school with mixed reactions. Given the change that Maryland's accountability system underwent during the 2002-2003 school year, I believe my experiences with district policy dissemination and implementation supported my ability to be aware of nuances in the political context at the school sites.

My experience working in schools also taught me that there is more than one good way of teaching and that teachers are usually quite passionate about their perspectives surrounding teaching. I worked closely with many teachers whose beliefs about, approaches to, and styles of teaching varied considerably from my own. I am

acutely aware that despite our differences, many of our mutual students responded positively to each of our individual teaching styles and pedagogies. I learned to be open to other teachers' perspectives about good teaching because their methods sometimes succeeded where mine faltered.

Although I guarded against interpreting the MTY candidates' work through the lens of my own experience and beliefs, I used the extensive literature about teaching to challenge my understandings and interpretations. I grounded my data collection, analysis and interpretation in my conceptual framework, and returned to the literature to gain deeper insights into situations the teachers encountered in their work rather than relying solely on my own knowledge and experience.

Triangulation and Audit Trail

Triangulation in qualitative research refers to the rationale for using multiple sources of evidence (Merriam, 2001; Yin, 1994). My study includes multiple interviews of multiple informants, classroom observations, audio journals, and document analysis. Taken together, I believe these sources allowed sufficient opportunities for me to cross-reference themes that I induced from the data and justifiably describe and interpret them.

Through keeping a detailed data base and record of my research process, I am able to produce the necessary components of an audit trail. These components include descriptions of data collection, the accumulated raw data, rationales for categorical designations in data analysis, and descriptions of my decisions throughout the research and analysis process (Merriam, 2001).

Research Validity

Validity in qualitative research is a highly disputed concept. Nonetheless, scholars who accept the concept as possible in qualitative research define it as the ability of the study to be true to reality (Maxwell, 1996; Merriam, 2001). In interpretive research, "What is being observed are people's constructions of reality – how they understand the world" (Merriam, 2001, p. 203). Research as such requires validity to be viewed as a goal rather than a product. Validity must be assessed in relationship to the purposes and circumstances of the research and can only be made implausible by evidence (Maxwell, 1996). Maxwell (1996) stated that the key concept for validity is the validity threat, "a way you might be wrong" (p. 88). To guard against threats presented by alternative explanations or conclusions, the researcher must include strategies to rule them out.

Merriam (2001) suggests several procedures to ensure validity that I employed in my research. I conducted numerous classroom observations, reaching data saturation (Bogdan and Biklen, 1998), to ensure that I attained an accurate representation of the teachers' practices. Through informal conversations with the teachers and formal interviews, I attempted to clarify my understanding of why they made the instructional decisions they did and why they believed those decisions were in the best interests of their students. The teachers were supplied with drafts of their case studies and encouraged to discuss them with me. Also, as I addressed in the section on reliability, I addressed my biases throughout the research process through structured data analysis and grounding my interpretations in a research based conceptual framework.

Maxwell (1996) asserted that researchers must be attentive to the accuracy and richness of their descriptions of the data, the authenticity of their interpretations, and the presence of discrepant data to ensure validity. My data collection strategies were intended to help me create rich descriptions and accuracy in my case studies. Authenticity of interpretation and addressing discrepant data were addressed by my careful attention to the data itself. Throughout the entire process, I repeatedly returned to the data to substantiate my claims and check my interpretations.

Ethical Standards

Ethical standards in qualitative research require that the subjects understand the nature of the study, their obligations for involvement, and the possible consequences of their participation. They must not be exposed to risks greater than the gains they might derive from participation (Bogdan & Bilken, 1998). A high ethical standard was particularly vital for my study. Because MTY candidates are a select group, a savvy investigator could conceivably determine the identity of the participants despite my attempts at ensuring their anonymity.

Each participant (principals and teachers) signed written agreements (human subjects release forms) that explained my study and promised that I would make every attempt to conceal their identities and the locations of their schools. I clarified that they could remove themselves from the study at any time and encouraged them to inform me if my presence in any way detracted from their ability to do their work. I also assured them that my study was not a critique of their practices, but an attempt to understand how they think about their work and how they construct their practices. They understood that

I was also interested in learning about their perspectives on instructional accountability. In my interviews and conversations with them, I assured them that any comments they made but didn't want revealed would not be included in the research report. Therefore, when writing the cases, I excluded any information that I believed could be damaging to the participants in their relationships with their colleagues or administrators if a reader of the dissertation, journal articles or presentations I make using this data deduced their identities.

Significance of the Study

MTY candidates represent a unique set of teachers. They are acknowledged as good teachers by a diverse group of educational stakeholders. Therefore, their status as exemplary teachers lends credibility to their views about teaching in a high-stakes accountability climate. My descriptions and interpretations of the teachers' responses to the accountability climates in their schools offer a human portrait of the relationship of teaching to policy initiatives aimed at increasing instructional capacity and student achievement. This relationship is suggested, but rarely carefully studied in policy/practice research. Furthermore, the 2002-2003 school year was a time of considerable change for Maryland teachers. With the upset in Maryland's accountability system prompted by NCLB, I believe this study provides a useful account of teachers' responses to changes during this period of educational reform.

CHAPTER IV

A VETERAN TEACHER CONFRONTS CHANGE – AGAIN

Teachers who have been in the profession over long careers experience numerous change cycles. As curricular movements come and go and accountability structures develop and are phased out, many teachers are guided through these changes by their personal beliefs about the purposes of education and their roles as teachers. Christine Walker, the subject of the following case, persevered in teaching for over thirty years. Guiding her in the work of teaching was her commitment to helping her students develop as 'capable' individuals and contributing members to a larger community.

Mrs. Walker exemplified stability, and most of all, a particular form of compassion and care for her students. Beyond her desire to ensure that her students developed the foundational skills she believed were necessary for them to demonstrate her definition of mathematical mastery, she focused her teaching on building the self-esteem and social development of her students. She was highly acknowledged in her school and general community largely for her caring traits.

Developing community among her fifth grade students was a predominant feature of Mrs. Walker's practice. Not only was the idea of building community an extension of her ethic of care, but her practices also indicated that building a community of learners helped her conceptualize her enactment of the new mathematics curriculum within complex classroom contexts.

Mrs. Walker could be described as a 'conventional teacher.' Her pedagogical practices were student centered but often routine and largely focused on the development of basic mathematical skills and procedures. These practices equipped her students with

the capabilities to perform comparatively well on formal measures of student achievement. This combination of providing care to her students, establishing community, and bringing students to a level of demonstrable mathematical competence were the factors for which she was acknowledged as an exemplary teacher. In the following case, I examine how her ethic of care was realized in her relationships with students, her school community, and the teaching of mathematics to fifth grade students during a school year that presented unusual challenges and significant change.

CHRISTINE WALKER: FIFTH GRADE TEACHER

Christine Walker, an African American teacher in her early sixties, had been a teacher for thirty-five years at the time of this study. She appeared comfortable with children and provided a balance of reassurance and authority in her classroom that students responded to almost instinctively. At Monument Elementary, the school in which she taught for 27 years, her presence created a sense of stability. Beginning teachers sought her counsel about the delivery of certain mathematics lessons, the performance of their students during those lessons, and about common school practices. Many teachers I encountered in the school, with whom she worked for a number of years, valued her friendship and admired her as a teacher. Mrs. Walker was well known in the county by administrators, teachers, and parents. She taught the brothers and sisters of many of her current students as well as the children, nieces, and nephews of her former students. Many community members revered her, including a state senator whose children she taught and who wrote a letter that contributed to her receipt of the MTY candidate award for her county. Mrs. Walker accumulated a number of other teaching awards and formal recognitions from educational societies. Prior students and their parents visited her regularly. It was easy to see that she had touched many lives in very positive ways.

Monument Elementary School's student population was comprised of students from a variety of ethnic and economic backgrounds as a result of the urban sprawl from the nearby metropolitan area. Gas stations and convenience stores intruded on the "mom and pop" businesses in the town closest to the school and a major highway deposited drivers onto a pleasant two-lane road about a half a mile before the school entrance. This

access to the city permitted upper-middle class families to commute to work from the rural community and children from those families attended Monument with poor children, some of who lived in homeless shelters, and children from families who lived in the once sleepy farming area for generations.

Although Mrs. Walker was not a large woman she seemed to wield an impressive presence, appearing physically fit and dressing professionally. Her manner was dignified, confident, and indicated that she was "all business." This business-like demeanor was reflected in the behavior of her students that I observed on my first day of observations. The students who were leaving their homeroom to go to other classrooms quietly picked up their books and bags before exiting; those entering went quickly to their seats and several admonished their noisier peers with "Shhh" in the minutes before class began. There was little question that most of the students knew the rules and the expectations for behavior and preparedness for class.

During that first observation, I was struck at how orderly and respectful Mrs. Walker's students behaved even before the class began. My first impression was that Mrs. Walker must be one 'tough' teacher. I observed her teach 27 classes and I eventually came to realize that being tough had nothing to do with her classroom management style. Her students were 'typical' fifth graders, having good days and bad, but whether they were excited or subdued, boisterous or passive, I did not observe Mrs. Walker raise her voice (except for one very brief instance in February) or make threats to her students to elicit the orderly behavior that was clearly expected in her classroom. Mrs. Walker's rapport with her students was kind, forthright, and consistent, likely contributing to the overall sense of ease I observed between teacher and students on a

daily basis. I found it interesting that when a student misbehaved in one of the classrooms of the other fifth grade teachers the student was sent to do his or her work in Mrs. Walker's classroom. On some days there were up to five or six 'extra' students in Mrs. Walker's room. However, in the many hours I spent in her classroom I observed her send one of her students to another teacher on only one occasion. Over the months that I collected data in Mrs. Walker room I observed students who appeared to be happy to be in her class, students who worked hard, students who wanted to participate, and students who valued Mrs. Walker's admiration and attention. One day when the students were excited to go out to recess, Mrs. Walker took her time dismissing them according to who was the most quiet and in control. After dismissing about five students, she said to those who were left, "Mrs. Walker is mean isn't she?" The students responded, "no" in unison and one student added aloud, "She's just being a good teacher" (Observation, 11/20/02). As students became accustomed to my presence in the classroom, it was not unusual for one to tell me how much he or she liked Mrs. Walker's class because "it was fun." Although these unsolicited assessments of Mrs. Walker may have been for my benefit rather than completely honest convictions, I was impressed that the students seemed to want me to believe that they respected and were perhaps even fond of their teacher. I was more convinced of the students' respect for her by those who were repeat 'outcasts' from other classrooms. On one occasion late in the school year, I overheard one boy, who was often deported to Mrs. Walker's room, tell the boy sitting next to him not to bother him because he wanted to do his work and get a good grade (Audio Journal, 5/21/03).

Mrs. Walker's practices revealed that she believed that building a caring rapport with students was a key quality of teaching that elicited the engagement and success of all students. In the next section, I will examine why she held this belief so strongly and how it was realized in her instructional practices.

Mrs. Walker's Beliefs as Reflected in Her Teaching Practice

The Practice of Care and the Importance of Community

The acknowledgement Mrs. Walker received from so many individuals about how important she was in their lives at school and the subsequent reputation she attained in the community as a caring teacher may have encouraged the almost familial relationships she maintained with her students. I noted that Mrs. Walker received a number of teaching awards over her years of teaching. She showed me a portfolio she kept on the 'outstanding teaching awards' she won including the MTY candidate award from her county and a prestigious award from a major newspaper of the nearby metropolitan area. The portfolio, a three inch three ring binder, was full of letters that parents and students wrote praising her as a teacher. Mrs. Walker understood that as a teacher she impacted her students' lives, a belief she clearly stated to me: "…when you look at it we are with children longer than they are with their parents, when you think about the time we have them. So hopefully we are shaping their lives so they can deal with all the events of the real world. Hopefully." (Walker, Interview 1).

Mrs. Walker believed that her responsibility as a teacher extended beyond the academic and that "formal education [is] supplemental to day-to-day socialization." She tried to support students emotionally and academically because of the trials they faced in

today's world acknowledging, "students are part of the real world too." (Statements taken from documents written by Mrs. Walker in her awards portfolio.)

Mrs. Walker frequently had conversations with her students about social issues. She conveyed genuine worry to me about children's exposure to and/or experiences with issues such as sexuality and drug use and related several stories to me about discussions her students prompted about such issues. Although it was sometimes uncomfortable for her to talk about these social issues with her students because it was not in her own upbringing to speak openly about them, she was saddened by the idea that fifth graders were faced with adult matters at such a young age, and so she saw it as her responsibility to permit her classroom to be a forum for discussion.

Mrs. Walker's care for her students resounded with many of their families and her personal relationships with both her students and their parents continued even after the students left Monument. For example, while I conducted observations, a student who was now in middle school visited Mrs. Walker to tell her of about life at her new school, and a parent of a former student dropped by just to "say hello." Mrs. Walker was clearly proud of these extended relationships and they fortified her belief in her role as a caregiver.

Mrs. Walker's care for her students also included concern with the quality and kind of learning they received in school. She believed that many children didn't get the instructional attention necessary for their success in their schoolwork. She alleged that too many children with learning deficits were not eligible for any kind of special services and it was painful for her to watch them struggle academically. She explained:

It seems as though that if you are gifted you get special services, if you are special ed you get special services, and then the ones who don't, or the more or less average students and the ones who are below average, those two groups of children just don't get it (special services). (Walker, Interview 3)

Showing Care Through Instructional Practices

Many of Mrs. Walker's practices exemplified her concern that some students missed out on services necessary to support their learning. Generally, she geared her instruction to those middle or lower achieving students she spoke about. Additionally, she believed that children learn best in a caring community of their peers and was deliberate in providing opportunities for students to learn from each other. The pace of her instruction, particularly in the classes other than her "enrichment" class (a group of higher ability students), was slow and deliberate. She often presented two or three simple problems to introduce or review what she referred to as "skills" and carefully demonstrated the procedure to solve algorithms during whole class instruction. Then, two or three similar problems were presented for the students to work on independently. After enough time was given for all students to complete their seatwork, individuals were called to the chalkboard to demonstrate and explain how they solved the problems. The students appeared to enjoy coming to the board to show their work, even when they were unsure about their answers. At these times Mrs. Walker took the opportunity to work one on one with students, while the other children listened, asking them questions about the processes they used to solve the problems and helping them look for places where they made mistakes. During such posting of student work, Mrs. Walker also developed a sense of community among her students. Often during these demonstrations of student

work at the chalkboard, she allowed students to call on a "life-line," another student, for help when they got stuck on a problem. When a life-line was called upon, he or she would point out where the first student at the board made an error and that student would change his or her answer. With prompting from Mrs. Walker, the lifeline would explain the procedure as he or she wrote it on the board and Mrs. Walker would encourage discussion between the students. This combination of teacher and peer coaching was a regular practice in all of Mrs. Walker's classes. It permitted her to assess students' mastery of skills and procedures as well as teaching students how to talk together about their work.

Mrs. Walker believed it was important for her students to build self-esteem and confidence in their work. She nurtured these attributes by giving students a degree of choice about the grading of their work. Routinely, after several practice problems were done at the board, students were given several more similar problems to work on independently at their seats. Mrs. Walker would circulate around the room checking students' work and sometimes spent up to five minutes with an individual student working through a procedure. The remaining students worked independently, sometimes checking answers with each other. This seatwork was often entered as a grade. The students were responsible for recording their grades on a grade sheet in their notebooks. Mrs. Walker used the grading of seatwork as a way to reward and motivate students as well as to give them a record of their work that they could share with their parents. Students had a part in determining what seatwork was graded. Often, if they were solving practice problems correctly, the students would ask that the assignment be a graded one and Mrs. Walker would decide based on how the class as a whole was doing.

She told me, "Sometimes if something is taught and something is half and half, like half passed and half failed, then I don't record [grades] that day because I try to give all the children the benefit of the doubt that they will have good grades on their grade sheet" (Walker, Interview 2). The problems used for the grading episodes I observed were generally on a level that all the students could be successful at solving by the end of the class period.

The combination of practices: demonstrating procedures at the board, using life-lines, individual guided practice, and recording work when students were able to demonstrate they had solved problems correctly seemed to serve several purposes. Using life-lines, I believe, contributed to the sense of community I observed in Mrs. Walker's classes. Students were encouraged to applaud each other when they were successful at solving a difficult problem, and when a student who everyone knew had trouble in math was able to correctly demonstrate a procedure at the board, his or her peers sincerely congratulated him or her. Student input into the seatwork grading process served as a reward because the students could see a number of high grades on their grade sheets and it motivated them to concentrate on learning procedures and completing the practice problems assigned in class.

Learning Mathematics as Related to Mrs. Walker's Version of Care
and Community Building

Mrs. Walker's practices enabled students to demonstrate a basic level of mastery in mathematics and it was my perception that she associated this level of mastery with learning mathematics. By demonstrating correct procedures, the middle and lower ability students who received no special services could feel capable in attaining skills and Mrs. Walker interpreted this skill attainment as authentic mathematical understanding. She

told me that what she loved about teaching was the good feeling it gave her when she could see that her students were learning. She said:

> I love teaching and I love taking children as far as they can go and when you know that you've done a good job and you can look at a child and you can tell when a child is confused. And when you look at a child's face and all of a sudden it looks like a light bulb has gone off, I mean that is a good feeling. (Walker, Interview 1)

Mrs. Walker wanted her students to share her own good feelings about their learning. During a class in which the students were practicing the multiplication of fractions, one of the students, Danika, who I eventually learned was a special education student, got all five of the practice problems the class was assigned correct. When Mrs. Walker corrected Danika's paper, she announced to the class, "Danika wants you to give her a long clap because she did so good." Danika beamed as she hugged Mrs. Walker and all the students clapped (Observation, Inclusion class, 11/18/02). Later Mrs. Walker told me that Danika rarely scored above 40% on her daily work but on that day her score was 100%. For Mrs. Walker, and very possibly for Danika, that moment defined teaching and learning in Mrs. Walker's classroom. Achievement was accessible to all and when it occurred it was shared and celebrated by everyone.

Mrs. Walker's rapport with her students and her belief that all of her students were capable certainly influenced how her students conducted themselves in her classroom and it was evident that they enjoyed being in her math class. Attention to these psychological and behavioral factors was important to students and their parents, but an important question to ask is how well students achieved in mathematics according

to formal measures. When it came to formal criteria of student achievement, i.e., state test scores and county measures, Monument was the highest scoring school in the county in mathematics on the MSPAP several years ago and the fourth and fifth grade students Mrs. Walker worked with for the county math competition won first place in a recent year. In 2003, over 65% of Monument's students, all of whom were taught mathematics by Mrs. Walker, scored at or above the proficient level in mathematics on the first administration of the MSA compared to the state's average of 55% of students scoring at or above the proficient level[7]. Mrs. Walker's students also beat the county's average by more than 10 percentage points on this scale (MSDE, 2004a). Mrs. Walker's instruction seemed to be working for her students in terms of their motivation to do well in her classroom on a day-to-day basis and they were holding their own on formal achievement measures as compared to other students in the county and state.

Understanding how MTY candidates understand and realize their practices on a personal level is only part of this study. The other is to make sense of how these teachers understand and realize their practices in a changing and regulated accountability system. Thus far, I have shown the values of care and promotion of positive self worth Mrs. Walker emphasized in her classroom. The kind of mathematical experiences she created were ones at which all children, for the most part, could be successful. Although the mathematical learning did not seem sophisticated (doing well in mathematics in Mrs. Walker's classes meant getting the right answers, primarily on basic number problems), the students did well on standardized tests as compared to state and county averages. Despite her primary concern for the self-esteem of her students and their social

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[7] These scores represent scores of the general population of students at Monument. They do not include scores of students who received accommodations during testing or reveal the disaggregation of scores according to FARMS, ethnicity, special education, or gender.

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development, teaching a curriculum aimed at the state's learning outcomes as tested by the MSA was a constant concern for her as well. In order to better understand her perspective of mathematics teaching and learning in a changing and regulated accountability system, I now turn to the curriculum as she enacted it.

I begin by explaining the difficult challenges Mrs. Walker faced in planning instruction. First, I describe the manner in which her students were grouped and the way her classes were scheduled because these factors presented difficult planning challenges, which represent important considerations in curriculum enactment. I then describe how she managed these contextual problems given the new curriculum of the 2002-2003 school year. Understanding the way that Mrs. Walker enacted the curriculum juxtaposed to her class schedule also highlights the relationship of local context and county curricular expectations.

Responding to Instructional Directives in Challenging Classroom Contexts

Student Grouping and Class Scheduling

Revealing how Mrs. Walker's students were grouped and the way her classes were scheduled provides important background information for understanding Mrs. Walker's enactment of the curriculum. In this section, I describe the composition of each of her classes and describe how students were grouped. I also examine how her class schedule, which combined with the student grouping, may have influenced decisions Mrs. Walker made about planning and delivering instruction.

Mrs. Walker taught only mathematics at Monument Elementary School and she taught four classes per day. During the time I collected data, there was a certain degree

of ability grouping, i.e., there were "enrichment" classes in which higher ability students were grouped together and an "inclusion" class in which all the fifth grade special education students were placed together. Otherwise, student grouping was heterogeneous. However, at times throughout the week, students from her various classes were combined.

Mrs. Walker's daily class schedule began with a planning period followed by a fifth grade inclusion class that consisted of about 25 students, about half of whom were identified as eligible for special services. Of these students two thirds were boys, six students were African American and the rest Caucasian. The total number of students changed throughout the year due to regrouping that was done about every nine weeks after end of quarter testing, however, the classroom composition I describe here represents what I typically observed.

The inclusion class was followed by a fifth grade enrichment class that had an average of 27 students over the course of the year. This group of students had nearly equal numbers of boys and girls and anywhere from two to four children of color. After lunch, Mrs. Walker taught a fourth grade enrichment class that had about the same gender and racial composition as the fifth grade enrichment class[8].

The last class of the day was a fifth grade general math class. In this class about two thirds of the students were male and on any given day I observed there to be up to 10 African American students. This class was the homeroom class of one of the fifth grade team teachers and was therefore quite heterogeneous, having a noticeable variance in ability. During this class period, students were regularly called out mid way through the

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[8] I mention the fourth grade class here to present Mrs. Walker's entire schedule, however, I will not include any other references to it as this study focuses on Mrs. Walker's teaching in her fifth grade classes because of its relationship to state testing.

period for club meetings, band or chorus. This class was not subject to the remixing of students that I describe below.

Students from the inclusion class and students from the enrichment class were combinations of two homeroom classes and were mixed together one day a week. On these days, Mrs. Walker met with her own homeroom class for math during the time the inclusion class usually met. On the same day, during the fifth grade enrichment time slot, she met with another fifth grade homeroom class. This was scheduled so the students were able to meet as a homeroom for special events, meetings, or programs. These homeroom groupings made for heterogeneous classes in which inclusion, middle level, and enrichment students had the opportunity to work together.

I asked Mrs. Walker about the challenges that the regular rearrangement of students must have presented for planning and differentiating instruction. I wondered if she viewed it as an obstacle. She responded:

> Well on one hand it's difficult and all, and on the other hand, it's not because, being that it's with the homeroom and I have the, quote unquote, highly able students with the inclusion students, I pair them up or we do something so that they [inclusion students] will get a chance to do other things that they normally wouldn't get a chance to do. Like the activity we did yesterday with the money. That is something that the inclusion group has not done. So, um, that helps them. (Walker, Interview 3)

The "activity with the money" was a worksheet, *Checking Your Change*, which required students (with calculators) to compute the price of items they would buy in a store and determine the amount of change they would receive back given a specific

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payment amount. The activity seemed challenging enough for the more advanced students and systematic and familiar enough for the inclusion students to become engaged with.

The problems involved using basic operations with fractions and decimals. For example, if $10.00 were paid for 2 ½ pints of blueberries at $1.49 per pint, how much change would be given back? Mrs. Walker purposefully paired the students from the enrichment class with students from the inclusion class. In about half of these pairings students divided the labor equitably and there were several pairs in which I observed the students discussing the mathematics in the problems. In the other pairings, there was a dominant student who did most of the work. I heard few complaints from the students about working with a partner that was chosen for them (Homeroom, 5/20/03).

Mrs. Walker stated that the pairing of inclusion students with enrichment students permitted inclusion students to do work they normally wouldn't get to do. I rarely observed activities in the inclusion class that required students to perform calculations within the context of a real life situation. In this activity, it was evident that the inclusion students were indeed being exposed to higher-level conceptual problems than they normally encountered. However, there was no whole class discussion of the activity during the class period and it was not evident to me that the inclusion students were doing much more than following the lead of the enrichment students. During the regular inclusion classes, more time was spent discussing the process for solving algorithms or the definitions of mathematical terms. On this day, Mrs. Walker's interactions with the students consisted primarily of checking for correct answers and providing encouragement.

The stated objective for the class was to "solve word problems." However, with this exceptionally heterogeneous group, I perceived that problem solving was a secondary objective. The primary objective seemed to be for students to work together. Mrs. Walker regularly inculcated the practice of students working together and helping each other. I surmise that Mrs. Walker believed that one of the greatest benefits of heterogeneous grouping was its ability to promote her belief that students of all levels could be partners in learning. She stated that she believed socialization was a primary purpose of formal education and many of her regular classroom practices[9] indicated her belief that school should be a place where all students were perceived as capable. Mrs. Walker emphasized this belief when she told me that she didn't like the stigma associated with students being identified as "special ed." She asserted to me that her expectations for all of her students were the same because, "We don't like people to be able to come into the classroom and be able to tell who is special ed and who is not" (Walker, Interview 2). Although her students were likely aware which of their peers were special education students, the heterogeneous groupings may have served the purpose of downplaying this distinction and building community among the fifth grade students.

Mrs. Walker asserted that she differentiated instruction in her classes although in the classes I observed, all the students were given the same problems to solve over the course of a class period. I believe Mrs. Walker associated differentiation with her ability to 'read' her students' performance and adjust her instruction accordingly over the course of a class period. When a topic was introduced or reviewed, the amount of direct

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[9] Mrs. Walker often created competitions between classes. Once a week, the same homework problems were given to each of her classes and awards were given to the classes who got most problems correct or had the greatest completion rate. I believe the competitions were a way to create a kind of academic equity between the classes. She also often described the quality of work students were doing from class to class, I believe with similar intentions.

instruction and whole class discussion varied according to how well students seemed to be able to perform the skill being practiced. For example, discussions around how students solved word problems were longer and richer and concepts, rather than procedures, were developed to a greater degree in the enrichment classes than in the other math classes. Also, the number and difficulty of the problems she presented corresponded to students' ability to solve the problems correctly over the course of the class period. These decisions were made during the class, and Mrs. Walker often made problems up or took problems from her teacher's manual as add-ons to original assignments if the majority of students finished the work she previously planned.

I believe Mrs. Walker's practice of parsing out problems as she did helped her stay on her weekly lesson plan. With up to 27 students in a class, the regrouping of students during the week, and the loss of instructional time in her last period class due to pull outs for activities, keeping the students together with work they could finish during a class period enabled her to keep track of where she was on the curriculum pacing schedules. The pacing schedules, which I describe in the next section, were organizational plans adopted by the county for the delivery of the curriculum. Staying on the schedules was required according to Mrs. Walker. However, as I will explain, staying on schedule was nearly impossible given Mrs. Walker's class schedule and the expectation that she simultaneously implement two new mathematics curricula in the fifth grade (enrichment and general math).

The Stated Curriculum vs. the Enacted Curriculum

The county's math curriculum during the 2002-2003 school year was referred to as "paced" and in its first year of implementation in the county. Pacing meant that curricular topics were to be taught according to a well-defined schedule in all fifth grade classrooms in the county. Teachers were supplied with "pacing guides" that directed them to teach certain topics and skills during each week of a nine week quarter. There were separate guides for fifth grade general math (Mrs. Walker's inclusion and last period general math classes) and fifth grade enrichment. Mrs. Walker's pacing guides listed the topics to be covered during each week of each quarter, but left the delivery of the lessons to the discretion of the teachers. Mrs. Walker showed me the guides she was working with during the third quarter, from January to March of 2003 (See Appendix D). Each guide showed the topics the students were to work on for the week and had a place for teachers to make notes. Nothing else was given – no lesson plans or suggested activities. The county had selected a textbook series for the fifth grade, but beyond that, Mrs. Walker told me she had complete discretion over the instructional materials and activities she used.

Although this freedom to design lessons and choose instructional materials was nothing new to Mrs. Walker, it must have been a difficult task to adhere to the guides and plan instruction considering the weekly mixing of the enrichment and general math classes and the loss of instructional time in her afternoon class. Over the course of the nine-week quarter, there was some overlap of topics between the two guides, but they did

not align well, and the topics and concepts in the enrichment guides were more advanced than those in the general math guides.

The topics in the nine-week pacing guide for general math changed, sometimes dramatically, from week to week over the third quarter. For example, in week one, students were to study measures of central tendency, in week two they were to study measurement, and in week three pattern exploration and elapsed time. It wasn't until week four that a more comprehensive 'unit' on geometry was called for. Pretests were to be given at the beginning of each week and a quiz was called for at the end of each week up until the beginning of the geometry unit, when the rate of pretests and quizzes decreased to every other week. During week nine, students were to apply the skills they studied during the quarter and a quarterly assessment was given at the end of that week. Additionally, over the course of the nine-week period, the guide stated that using mathematical properties to solve problems was to be included recursively in weekly instruction, and the construction and interpretation of graphical representations of data (bar graphs, stem and leaf plots) and the review of multiplication and division facts were to appear in lessons at least four times over the quarter.

The guide for the enrichment class had significantly more continuity than the general math guide. For example, the third quarter was devoted entirely to the study of geometry, but unlike the general math guide in which the topics in the geometry unit consisted mostly of the identification and classification of two-dimensional figures, the enrichment guide topics included identification and classification of three-dimensional figures, finding their volume, and the construction and measurement of angles. Six pretests and quizzes were to be given in the eight weeks leading to the week in which the

skills taught were to be "applied" in preparation for the third quarter assessment. Topics

for recursive instruction were similar to the general math topics. For example, the study

of mathematical properties was to be incorporated into the lessons, but the list of review

topics that were to appear four times over the quarter involved measurement rather than

data analysis. And, although measurement appeared in the general math guide during

week two of the third quarter, the measurement topics in the enrichment guide were more

advanced.

The county's expectation was that teachers were to adhere to the pacing guides,

moving from topic to topic regardless of the level of student mastery of the concepts and

skills covered. Mrs. Walker told me, "… a lot of the skills, I don't think the children

really learn them. What we are doing is really hitting them and they're exposed to them,

but I don't think they're really learning. Because we don't have enough time, you know

to dwell on a particular skill" (Walker, Interview 3).

Mrs. Walker stressed that she planned her instruction according to the pacing

guides and understood the expectation to adhere to them. However, she apparently

believed she had the discretion, or circumstances required her, to make adjustments in the

sequence in which she presented curricular topics. When I checked the pacing guides

against the lessons I observed Mrs. Walker teach, I noted that she did not closely adhere

to the schedules in either the enrichment class or the general math classes. To illustrate

her enactment of the curriculum in relationship to the two pacing guides, in the following

section I examine the lessons she taught during one week in February. I must note that in

addition to the challenges Mrs. Walker faced in delivering the curriculum given the two

separate guides and an unusual class schedule, the winter of 2002-2003 was not

conducive to staying on a schedule of any kind. By the end of the third quarter, at least

nine days of school were cancelled due to snow, and late starts and early dismissals due

to the weather had become common events.

Addressing Pacing Challenges

Some of the factors that influenced Mrs. Walker's enactment of the new curricula

included her class scheduling, working with two pacing guides that were not well aligned

with each other, the press to prepare students for an early administration of the MSA, and

the inevitable and unforeseeable interruptions in the school week. During a week of

classes that I observed in February, I was able to observe the confluence of these factors

and began to understand that taken together, they had a significant effect on how Mrs.

Walker enacted the curriculum. In this section, I will look at the topics in the lessons I

observed that week and how they aligned with the third quarter pacing schedule (See

Appendix E).

The topics listed on the general math pacing guide for the week of 2/3/03 were all

related to measurement. Students were to select appropriate measuring tools to solve

problems, use metric and customary units to measure objects, and determine equivalent

units within the same system. However, as will become evident, the general math classes

during that week did not address any of those topics.

The fifth grade enrichment guide called for students to identify parallelism and

perpendicularity of geometric figures, identify and describe similar and congruent

figures, and identify transformations. On Monday and Thursday of that second week of

the third quarter, the enrichment classes examined and classified plane figures and

measured and constructed angles, but these activities more closely aligned to the topics that appeared in the enrichment guide for weeks one and five.

Mrs. Walker's presentation of topics during that week appeared to be more of a homogenization of topics that appeared over the nine weeks of the third quarter than a sequential delivery of the topics as indicated in the curriculum guides. There are several possible explanations for this. It is very possible that Mrs. Walker felt pressed to make up for the loss of instructional time due to weather cancellations of school. Several days and half days had already been lost to snow, and during this particular week there was a county planned early dismissal on Wednesday, canceling the non-inclusion general math class. The inclusion class was cancelled for an unplanned fourth and fifth grade assembly on Thursday and school was cancelled all together on Friday due to snow. I got the impression that, for Mrs. Walker, staying on the pacing schedule became impossible, so she re-orchestrated the pacing schedule as best she could in order to "cover" what she could.

Further influencing this curricular homogenization was Mrs. Walker's apparent desire to keep her classes 'together.' Using basically the same instructional materials and covering the same topics across the classes, she was better able to coordinate the two pacing schedules with the realities of her class schedule, student grouping, and lost time. Mrs. Walker implied that the new curriculum made it difficult to differentiate instruction as she had in the past. She was proud of the way she had differentiated instruction for students in previous years, but this year that didn't seem possible. Mrs. Walker lamented, "Well in the past I have set different goals [for individual students], but this year with the pacing it has been very difficult…. With my fifth grade enrichment students, they

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basically all work on the same level even though they're not at the same level and that's

really because of the pacing" (Walker, Interview 3). By noting the difficulty in

addressing the range of abilities in her enrichment class, Mrs. Walker further justified her

rationale for homogenizing the content and delivery of her lessons. If differentiation was

difficult in a homogeneously grouped class in which students were more likely to have

the ability to work independently, managing differentiation in classes with greater

variation with students who were more reliant on their teacher's individual attention was

even a greater challenge. So, keeping students together, as I describe below, seemed a

reasonable solution to the pacing dilemma Mrs. Walker faced.

Keeping Up, Catching Up, Staying Together

During the week I observed Mrs. Walker's classes in February, the second week

of the quarter, the topics she taught most closely matched the stated topics for week three

from the general fifth grade guide. In each class she assigned the same problems to the

whole class, limited the variety of activities that took place in any given class period, and

kept the instructional pace of each class at a level in which most of the students were able

to achieve the work goals for the day. The content of the third quarter curriculum was

broad and the perceived need to move quickly between topics made managing instruction

for multiple ability levels using varied activities within and across classes unwieldy. The

regular mixing of the enrichment students with the inclusion class students, and the

regular coming and going of students to activities in her last period class, created

additional challenges for staying on either pacing schedule or differentiating instruction.

In response, Mrs. Walker had the students work on similar activities across classes. For

example, during this second week of the quarter, Mrs. Walker employed worksheets in

which students had to use logical reasoning as a problem solving strategy. The worksheets were used in the "homeroom" classes on Monday (the mixed inclusion and enrichment classes) and with the regular general math class on Thursday. The same worksheet, which was directed at developing the strategy to make an organized list to solve problems, was used in the enrichment class and general math classes, also on Thursday. All of the students were exposed to the same problem solving strategies, but the methods of instruction (e.g., the amount of whole class discussion, group versus individual work, students demonstrating their process for approaching the problem at the board) and the number and assignment of problems on the worksheets depended on the student grouping. So, there was some degree of differentiation based on student ability within each class, but ultimately, keeping classes together by using the same instructional materials and having them work on similar assignments throughout the week, seemed to be the basis for Mrs. Walker's instructional selections.

Mrs. Walker's re-orchestration of the pacing guides was also possibly influenced by the pressure to cover the content of the third quarter in time for the first administration of the MSA that was looming on the horizon. Consequently, she moved from topic to topic quickly, rearranging topics to make up for instructional time lost to cancelled classes. And, although in past years Mrs. Walker could take more time to review and practice skills with students over time, the repeated practice of similar problems during a single class period may have been a response to the pressure to prepare students for the MSA given her view that there was little time to work on skills she believed were required for the test. She explained why the timing of the MSA was problematic for her:

We don't spend as much time on a skill as we did five or ten years ago. (She

referred me the pacing guide.) Looking at this, this is what is expected week

one…so you can see that it's real fast paced. Five or ten years ago we spent more

time on a skill. Now it's like two days…but that's the way it is because we have

to cover all these things because the test (the MSA) is in March. (Walker,

Interview 2)

Preparing students for the MSA involved more than covering the content of the

curriculum. Helping students become familiar with test taking procedures and helping

them understand what acceptable answers on the test look like were also components of

Mrs. Walker's instruction as the March test drew nearer. In the next section, I will

describe an activity Mrs. Walker presented to her students during the same week in

February that I examined above, to show how Mrs. Walker incorporated test preparation

into her lessons.

Preparing Students for the MSA

According to Mr. Braniff, Monument's principal, the teachers at Monument had

not received much specific information on the format of questions students would

encounter on the MSA until January of 2003. They knew there would be multiple choice

questions and they knew there would be short answer questions, but details on the nature

of the short answer questions were not known until shortly before the MSA was given.

By February, the teachers were aware that the MSA would require students to give brief

responses explaining how they solved problems and why they chose to solve the

problems as they did. These "brief constructed response" test items required students to

have both a procedural and conceptual understanding of mathematical topics and be able

to succinctly relate "how" they solved the problem and "why" their solution was reasonable or appropriate.

Generally, Mrs. Walker's instruction focused on learning mathematical procedures. However, when she taught directly for preparation for the MSA, I observed a distinct difference in her instruction. Concepts were examined more thoroughly and connections between concepts and procedures were made more explicit. Below, I describe a test preparation activity that I observed in February (2/4/03) in all of Mrs. Walker's fifth grade classes – a month before the MSA. I found the contrast between Mrs. Walker's presentation of this test preparation activity and the teaching I had previously observed to be notable. In the practice problem, the students were required to link a procedure to a concept, and articulate their thinking, in writing, about that linkage. Until this time I had not observed Mrs. Walker present problems that highlighted conceptual/procedural linkages, nor had I observed her present writing prompts.

"Warm up" problems were a regular part of Mrs. Walker's classroom routine. Generally warm ups reviewed a computational procedure or a strategy for problem solving; for example, the rules of divisibility were recited and tested on given numbers. However, the warm up Mrs. Walker gave her class in preparation for the MSA combined procedural practice with a high level of conceptual understanding. Also, rather than being a five minute review, the problem became a significant part of the lesson.

The warm up problem, which was developed by the county, was presented in each fifth grade class on a day when the classes met as homerooms. The problem was printed on a single sheet of paper showing a 9m by 15m rectangle and two questions. Part A asked: "What is the perimeter for the rectangle above?" Part B asked: "What if the

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width of the rectangle increased from 9m to 10m? Use what you know about perimeter

to explain how your answer would change. Be sure to use words and/or numbers in your

explanation." Six lines for the brief response were drawn on the paper. In each class the

students were given about seven minutes to answer the questions. Then for another 12 to

16 minutes, depending on the class, the students read their responses to the rest of the

class. The answers were critiqued for computational accuracy, proper use of

terminology, clarity of expression, and whether the response answered the "how" and

"why" features of acceptable "brief constructed responses."

Many of the students, about half in each class, wrote paragraphs for part B that

had complete opening and closing sentences with supporting sentences in between. Mrs.

Walker complimented these students on their attention to good writing, but clarified that

on the new test, unlike the MSPAP, these long paragraphs were not acceptable as brief

constructed responses. She told them they could use phrases or bullets if that helped

them cut their answers down to essential information about "how" and "why" they

answered the question as they did.

With the new information that Mrs. Walker gave her students about answering the

questions appropriately, the students in each class critiqued each other's work. Many of

the students easily answered part A, "What is the perimeter of the rectangle?" so most of

the classes' discussions revolved around part B. Through the discussions the students

were able to hear a number of approaches to finding the perimeter of a rectangle (the

"how" part of the response), as well as different explanations for "why" some students

added 2 to the original rectangle's perimeter or others added 1 to the width and re-added

the measures of the four sides. The students also critiqued each other's use of

terminology and some were quick to state when an answer was "too long," especially

when the long answer did not really answer the question or explain "how" or "why."

Throughout most of the discussions, the majority of students in each class were

engaged, either through contributing answers or comments or through attentive listening.

Although one or two students flinched at reading their responses (or having them read by

Mrs. Walker), there was not one instance in which the other students laughed at or put

down another's answers. I believe that the caring environment that Mrs. Walker created

in her classroom enabled the high quality of student-to-student interaction I observed

during the whole class discussions. Moreover, many of her students were able to link the

procedure of finding perimeter to the *concept* of perimeter. This was particularly evident

when students 'thought out loud' about the problem. This thinking aloud enabled

students to refine their thinking about the meaning of perimeter and it clearly enhanced

students' understanding of how to answer a brief constructed response test item.

As I observed this test preparation activity, I began to consider a paradox Mrs.

Walker must have faced in implementing the new curriculum and addressing the new

state test. On one hand, she was pressed to cover content quickly – to the point that her

lessons often focused primarily on developing foundational skills and procedures – and

on the other, the press for preparing students for the MSA compelled her to include time

consuming activities that promoted the understanding of the concepts behind the

procedures. I surmised, therefore, that Mrs. Walker presented lessons that were strongly

procedural because the required skills could be introduced and practiced in short chunks.

As time for the MSA drew nearer, and she learned more about the test, she added practice

problems that were designed to mirror test problems. In the case of the perimeter

problem, the test preparation activity motivated Mrs. Walker and justified the dedication of time necessary for her to investigate the concept of perimeter more deeply with her students.

Mrs. Walker seemed to be mindful of the instructional planning paradox that I noted. She worried about staying on the pacing schedule and balancing the assimilation of basic skills in her students with the development of their conceptual understanding. She was well aware that such balance was not easily achieved with a content heavy curriculum and what she perceived as a shortened amount of time in which to teach it. She told me in November 2002, before she had much information about the MSA, that she planned on omitting the projects and extension activities she did in previous years because she had to stay on the paced curriculum. She believed there was simply not enough time to cover the curricular content required by the March administration of the MSA and so she waited until after the test to return to topics she wanted to reinforce. In May she told me, "…I'm more or less using this time, since testing, to go over some things that we didn't do.…during the school year (before the MSA) we do not do 'hands on' so now is the time (after the MSA) that we're doing it" (Walker, Interview 3).

It was not evident to me how Mrs. Walker perceived the perimeter problem described above. Although it was given before the MSA, was it an extension activity to reinforce a concept previously learned, a tool for test preparation in and of itself, or a combination of both? Mrs. Walker had a lot to make sense of during the 2002-2003 school year and it is likely that she had not yet reconciled the relationship between the pacing of the new fifth grade curricula and the teaching expectations required by the new testing formats. Just as it had taken years for teachers to learn to teach to the MSPAP,

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there would be a significant teacher learning curve associated with learning to teach to the MSA through the new curriculum.

Mrs. Walker enacted the curriculum and approached the MSA in ways that were congruent with the cultural and instructional context at Monument. Her beliefs about teaching and the purposes of education had much in common with those of her principal, Mr. Braniff. Both believed that the socialization of students was a primary objective in the elementary grades and both believed that social and academic learning happened best in a caring and nurturing environment. Because of her long history at the school, her reputation as an exemplary teacher and her close association with most of the school staff, Mrs. Walker was viewed by every teacher I spoke to as an asset to Monument and a teacher worthy of emulation. In the next section, I examine some of the shared values at Monument and to illustrate how these shared values may have supported Mrs. Walker's approach to the many changes she addressed during the 2002-2003 school year.

<div align="center">The School Context at Monument</div>

<div align="center">*Shared Values*</div>

The instructional approach of individual teachers can be supported or constrained by the context of the schools in which they work. Shared values can set the instructional and social contexts of the school. If shared values are made explicit and consistently attended to within the school community they have the capability of acknowledging, and therefore supporting, a teacher's practices. At Monument Elementary School Mrs. Walker's ethic of care was mirrored in the belief system of her principal and a school-wide initiative that appeared to be highly sanctioned by the teachers and staff at the

school. In the following sections I describe the school community at Monument and how I perceived the principal's ethic of care as complimentary to Mrs. Walker's. I also explain a school-wide initiative that reinforced her classroom practices of promoting students' self-esteem and building community.

The sense of community that Mrs. Walker nurtured among her fifth graders reflected the community atmosphere at Monument. The majority of the faculty at the school had been there for at least ten years, as was the principal, Mr. Braniff. As Mrs. Walker tried to establish bonds between her students, the bonds between the teachers were strong and supportive. Teachers consulted each other regularly about students, school events, etc. through weekly team meetings, and from what I observed, through informal gatherings around the lunch table or during "specials" periods (music and art class periods that classroom teachers used for planning). Teachers also interacted with each other's students in the cafeteria, on the playground, and in pre-arranged ball games that were sometimes used as a break from the routine of school.

In the classroom, high quality interactions with students were key attributes of teaching that Mr. Braniff looked for when he observed and evaluated teachers. He equated teachers' interactions with students as evidence that teachers cared for them. Mr. Braniff told me that when he observed a teacher, he specifically looked for:

> …mostly interaction. How you position yourself with the kids, you know you're walking around you're looking over somebody's shoulder, patting them on the back, saying good job. You know just making sure they're checking constantly that students do understand. The pacing of the lesson. Making sure they don't

rush through everything and you leave every other student [who] doesn't have a

clue what you were talking about [behind]. (Braniff, Interview 1)

How teachers enacted the curriculum was less important to Mr. Braniff during his

observations than were their interactions with their students. He had confidence that the

structure of the new math curriculum enabled teachers to satisfactorily teach the content.

Because the curriculum was paced, it "told [teachers] what to teach, how long to stay on

certain topics, what to do the first nine weeks, second nine weeks, third nine weeks,

fourth nine weeks." He added that because the curriculum was so specific with regard to

content and the order in which it was to be taught, "When you do an observation, you

expect the content to be there" (Braniff, Interview 1).

This is not to say that Mr. Braniff was unconcerned with teachers' pedagogical

practices or choices of instructional materials. On the contrary, he encouraged teachers,

especially new teachers, to take risks in their teaching by trying out their own

instructional ideas or lessons they borrowed from other teachers. But foremost in his

personal evaluation of teaching was the ability of the teacher to learn about his or her

students and respond to them as individuals. He explained to me that every now and then

he had a teacher who thought he or she must treat all children the same. Mr. Braniff

objected to this view and was adamant in his belief that because students come to school

with their own unique "baggage," treating them "differently" was imperative. For him,

seeing teachers respond authentically to their students superseded how well the content of

a lesson was taught. He told me:

I don't want [a teacher] to be a robot. You can't be. We have too many robots in

classrooms and kids, it goes right back to interactions, kids don't interact well

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with a robot. So I try to encourage [teachers] to try their own thing, and again

going back to new teachers, I've gone in before and I've done observations, and

things just didn't go well and we're sitting here discussing it and they say, "Well,

I didn't think this would happen and it happened and that happened." And I [tell

them], "That's okay and just throw it away and we'll try it again." (Braniff,

Interview 1).

Mr. Braniff acknowledged in his statements about teacher observations that he

was aware that teachers had flexibility in how they enacted the paced curriculum, despite

it's explicitness in when to teach what. But what was most telling to me through our

conversations was his ethic of care – care for teachers as well as for students. In addition

to explaining how he personally tried to help teachers understand the importance of

establishing caring relationships with students, he spoke to me with great pride about a

school wide initiative that began at Monument during the 2002-2003 school year. It

promoted his belief that building a caring school of community supported the

development of students' self-esteem. Although this initiative was state driven, it was a

good match for the staff at Monument. The staff was able to use it as a catalyst to

establish common practices aligned with an ethic of care and community building.

Monument's Initiative of Care and Community Building

"Project Target," the state-driven school initiative, was in its pilot year at

Monument. As tailored to Monument and implemented by the staff, it revealed a school-

wide value that emphasized building self-esteem in students. The program acknowledged

students' efforts to improve their grades and work habits, but primarily it attempted to

reinforce in them the importance of respecting each other and the school. It supported the idea that students' social development was as vital as their academic development.

Mr. Braniff explained to me why he believed the social development of the children was so important. He emphasized that the socio-economic status of the students at Monument ranged from those who lived in homeless shelters to those who lived in homes worth nearly a million dollars. With such a variation in backgrounds, it was important to establish common codes of conduct in all aspects of schooling (i.e., respecting each other, being prepared to learn, establishing good work habits, improving skills). Mr. Braniff explained that too often people wanted children to think and act like adults, however, learning to take responsibility for their actions and learning was something that had to be nurtured in children. He said, "With some kids responsibility comes easy, some kids – they have to work a little harder on it – [with] some kids *we* have to work a little harder on it" (Braniff, Interview 1).

The goals for students through Project Target were stated in the school pledge: "As a Monument Lion I will be respectful, responsible, and ready to learn" (Braniff, Interview 1). Mr. Braniff admitted that the pledge seemed unoriginal and perhaps a little corny, however, the staff chose it for the school because its simplicity encompassed many aspects of behavior that the staff valued. Students were awarded with prizes, certificates, and public acknowledgement at awards assemblies held by the Parent-Teacher Organization for showing achievement in both academics (not necessarily grade based) and behavior (personal responsibility). Mr. Braniff related anecdotal evidence that confirmed to him that the majority of students responded very well to the program, and at the end of the school year, when I asked him what he believed Monument excelled in

over the course of the year, the first thing he mentioned was the school's success with

Project Target.

Mr. Braniff believed that by helping students feel good about themselves and

making school a "happy" place to be (because "happy students learn") the work of

teachers was simplified. Mrs. Walker's interactions with her students resounded with the

philosophy of Project Target. The goals of the program were closely aligned to her own

long standing beliefs and instructional style, thus confirming her practices that focused on

the social development of her students in a learning environment that celebrated students'

working together and acknowledging each other's achievements.

I have established that Mrs. Walker's beliefs about care and community were

shared by the other adults at her school. Her practice was a model of this belief and

likely contributed to the confidence she had in her own efficacy as a teacher. An

interesting feature at Monument was how these shared beliefs were revealed in the

school's approach to high-stakes accountability as led by Mr. Braniff. In the next section

I examine the climate of accountability at Monument and relate it to Mrs. Walker's

practice.

Accountability at Monument

Although the climate at Monument was attuned to building community and

students' sense of well-being, attention to formal academic accountability was also a

tangible part of the school climate. Mr. Braniff spoke to me at length about the changes

in state testing and his expectation that the teachers, not the parents or students, were

responsible for shouldering the primary responsibility for student achievement on state

assessments. Mr. Braniff seemed to understand the power that the adults in the school had in influencing students' readiness for formal testing and acceptance of their responsibility to do their best on the assessments. He told me about an experience he had as a new principal, when the MSPAP was in its early years, which helped him understand just how much impact the press for high test scores by educators had on students. The incident helped him balance his view that stressing the importance of testing to students paled in comparison to stressing the importance of preparing students for testing to teachers. This is his story of how he came to this sense of balance:

> You know I made a couple of mistakes in my past when MSPAP first came out and how we had to improve each year or it would look bad on my evaluation. So one year I really pushed hard and I learned a lesson when a parent called me and asked me to talk to her daughter when she got off the bus because she didn't sleep at all last night and cried all night because of this test. Because it was her impression that if she didn't do well on the test that I, Mr. Braniff, would lose his job. And it kind of struck me that, "Is it that important to have kids do that? There has to be another way of getting one hundred percent out of them."
>
> (Braniff, Interview 2)

Mr. Braniff was mortified that something he might have said to the student body in a pre-MSPAP pep rally caused such a troubled reaction in one of his students. He told me that the incident brought him the realization that test preparation was not something the school could do through motivational talks and activities but should be an ongoing component of instruction. If the teachers taught test taking skills along with content, he was confident that students would be prepared for and less anxious about testing.

Monument's staff had received considerable training on the question and answer formats of the MSPAP, and after 10 years of developing these practices, Mr. Braniff believed his experienced teaching staff was quite capable of preparing students for the MSA. The MSPAP required students to write extended answers about the thinking they used to arrive at solutions to problems. Their answers had to be grammatically correct and show the students could use the conventions of good writing. Mr. Braniff saw the easing of the writing expectation on the MSA as a boon to his teaching staff. He said:

As far as classrooms are concerned, I don't think it's [instruction is] going to change a whole lot because I have an older teaching staff and they have expectations that the students will be able to write and its been especially ingrained over the last ten year period. (Braniff, Interview 2)

Because the mathematics sections on the MSA were to be evaluated with less attention to writing, Mr. Braniff believed the math portion of the MSA was "easier" for students who were not strong in reading and writing. The writing required by the brief constructed responses was not graded on grammar and punctuation. What mattered more, Mr. Braniff said, was the students' ability to fit their answers into the space provided on the test. As well as being easier for students he saw answering these briefer responses as easier for teachers to teach. He explained:

The longer papers – you know you don't have to [be grammatically correct] anymore. Because like I said, the brief constructed responses, they are brief. It's not the MSPAP where you had three pages (laughs) and they're writing a letter to persuade the president that smoking is bad and we shouldn't smoke in church or whatever. And you know with some of the kids, they would fill out three whole

pages of an answer, where right now they have four lines, I think that's all they

have. Now you can squeeze it in, but they had to fit it all in this box, because of

the way they scan the sheets and send it out to be scored, everything had to fit in a

box. So there's enough room for three sentences instead of three pages. (Braniff,

Interview 2)

Although I believe Mr. Braniff underestimated the difficulty of writing brief constructed

responses, he was confident that his teachers would easily transition into teaching

students to construct them.

Mrs. Walker was the math liaison between Monument and the county. As

information about the testing formats emerged, Mrs. Walker assisted in teaching teachers

about the MSA expectations. She seemed reluctant to discuss her responsibilities in this

role with me other than to say that she attended monthly meetings held by the county and

was expected to disseminate information about the MSA provided by the county. I got

the impression that she was unsure about how to approach teaching the changes. When I

pressed her on this issue she replied simply that the county had supplied very little direct

information on them; a view supported by Mr. Braniff. However, Mrs. Walker was

faithful in her responsibility to teach students what she did understand about the MSA

format as evidenced in her use of the brief constructed response warm up activity

presented a month before the test. Interestingly, the manner in which she taught that

activity revealed more than an attempt to accommodate a mandate. In that example of

the perimeter problem, Mrs. Walker's manner and tone in exploring the problem with her

students showed concern for their psychological well-being with regard to the highly

publicized test. As so common in her practice, she wanted the students to feel good about

their abilities to answer the questions. Mrs. Walker seemed to try to alleviate any anxiety that some students might have about taking the test, just as Mr. Braniff was concerned that students did not "fear" it.

Other than practicing test-style problems, I asked Mr. Braniff whether he expected instruction to change due to the MSA. He explained that the state learning indicators remained the same and even though curricula in math and reading were being reworked, he continued to elaborate that the greatest instructional changes would be directed at teaching the MSA format.

> We're not going to have the kids practice something that they're not going to see [on the MSA] and not be accountable for. And that's common sense. If my jobs are on the line whether these scores go up 8% this year, I'm going to make sure they feel comfortable the first day of testing when they sit there and have to answer the questions. That they're prepared and they know the format. So…you're question about instruction – I see that's where it's going to change. More or less the making sure that the format [of instruction] fits the test. (Braniff, Interview 2)

As Mr. Braniff talked to me about the new testing and it's relationship to the curricula, he said that he believed the MSA would be a better assessment of what students knew and were able to do because it more explicitly tested skills in content areas and because it provided data on individual students that could be used to guide instruction. The school was already using unit test data to look for areas of student weaknesses as required by the county, and teachers were encouraged to review skills that the data indicated needed more attention. However, I didn't note a tone of urgency in Mr.

Braniff's approach to the data driven instructional accountability model that was so strongly emphasized by the state[10]. And, if he felt pressure from the county, he very successfully concealed it from me. He had been an educator for many years, saw instructional mandates come and go and had experienced the evolution of formal accountability since its inception in Maryland. His conversations with me about instructional accountability focused on a very pragmatic ethic of care – for his teachers as much as for his students. He, like Christine Walker, cared that their students were literate and numerate, and in their view, ensuring this had always been the work of schools, even before high-stakes testing emerged as a motivator for instructional accountability. He told me, very candidly that:

> You know it's not like all of a sudden we're really concerned [that] we want kids to read. We've wanted kids to read. I've been in the business 30 years. Thirty years ago we wanted those kids to leave the classroom reading. We did everything we could to get them there. (Braniff, Interview 2)

Mr. Braniff referenced literacy to make his point, but his statement referred to his philosophy of education. He clearly understood that attention to formal accountability mechanisms are perceived as a necessary element of teaching in today's schools. Both he and Mrs. Walker admitted that formal accountability clarified the state's educational goals. However, neither believed that high stakes accountability mechanisms could inspire the quality of interaction between teacher and student that they believed was necessary for students to learn in school.

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[10] See the MSDE website (MSDE, 1997) for instruction provided to schools to use data to inform instruction.

Christine Walker: Summary

Mrs. Walker was acknowledged as an exemplary teacher through her receipt of her county's MTY candidate award and several other prestigious awards. She was endorsed by members of her local community for those awards because of the rapport she built with and among her students and her reputation as a teacher whose students performed comparatively well on state assessments and in county math competitions. Her personal sense of responsibility to her students encompassed their social growth in equal measure to their academic progress. She empathized with students who struggled with developing basic skills in mathematics and set the pace and tone of her instruction in ways that allowed nearly all of them to experience success in their daily work. Her long established classroom practices that centered on enhancing students' self-esteem and the building of community fit well with the culture at Monument. Her principal endorsed her practices and other teachers promoted them as worthy of emulation.

Mrs. Walker exhibited a sense of personal responsibility for her students' academic and social growth that was highly valued by her principal, her students' parents, and the other teachers in her school. The respect she inspired from her colleagues and principal made her a natural choice as the math liaison for her school. However, she didn't indicate that this position was particularly advantageous for her own learning about enacting the county curriculum or state testing formats. Also, because she was the only fifth grade math teacher at the school, and perhaps because many of the other teachers deferred to her experience and reputation, it appeared that she did not have the kind of collaboration that might have been useful for her in developing lessons or

strategies to enact the paced curriculum as expected by the county, particularly given the manner in which her students were grouped and her unusual class schedule.

Instructional planning appeared to be Mrs. Walker's greatest challenge. She fully supported a taxing schedule because she believed it was advantageous for administrative purposes to tolerate the regular regrouping of students, and because she believed that the heterogeneous grouping it provided benefited her students. However, the regrouping of students within the week made planning instruction extremely complex. The pacing guides for the two levels of fifth grade mathematics curriculum were not congruent with regard to content, so the weekly mixing of the inclusion and enrichment math students presented an added dimension of difficulty to instructional planning. It is reasonable to assume that the scheduling/pacing demands added to the often-procedural nature of her instruction.

The climate at Monument seemed less concerned with any state or county press for accountability than with attention to the social development of students. Initiatives regarding monitoring student achievement and adjusting instruction according to county and state test data were in an early state of development at Monument. This absence of urgency to implement data driven organizational procedures and instructional practices may have been a product of timing as 2003 was the inaugural year for the MSA and the roll out of the math curricula. Newness created a 'wait and see' effect, so business as usual seemed to prevail with regard to instructional change.

Teaching students MSA testing formats seemed to be the most obvious instructional change movement at Monument. However, because knowledge about the test was sparse and Mr. Braniff had faith in the residual effects of teaching to the

MSPAP, Mrs. Walker did not feel pressured to make significant changes in the ways she presented instruction. She did her best to cover a content laden curriculum, stayed on the pacing schedule as much as she could given the inevitable and numerous interruptions of the school year, and focused her instruction on the development of basic mathematical skills and procedures.

In sum, the relationship of Mrs. Walker's teaching practice to a changing and regulated accountability climate during the year of change centered on sustaining a caring climate that nurtured students' social development and their willingness to learn while teaching students the content and skills she believed demonstrated her definition of mathematical mastery. Additionally, it meant teaching students the processes for answering test items so they would not be discouraged by unfamiliar formats when they encountered them on the MSA. Ultimately, Mrs. Walker's practices enabled her students to show proficiency in mathematics on a higher level than the majority of students in the county or the state. For her, however, she seemed more satisfied and motivated by her belief that her practices provided her students with the competencies and confidence to stay engaged with mathematics while in her charge and possibly in years to come.

CHAPTER V

STAYING THE COURSE

Teachers come to teaching through a number of avenues. There are those who happen upon it serendipitously; it takes hold of them and becomes their calling. Stanley Clark, the subject of the next case, is one of those teachers. Mr. Clark came to love teaching because of his love of learning coupled with his love of children. He appreciated children's authenticity and believed they would flourish given a learning environment that cultivated their imaginations. As a man who himself found wonder in learning, the idea that he could encourage children to find learning fascinating was irresistible to him.

As a teacher of children, forming strong bonds with his students was the foundation of his practice. He equated teaching with nurturing – nurturing not only children's curiosity, but also their potential to become, in his words, "good people." As a teacher of mathematics, Mr. Clark's goal for his students was to develop good number sense. He tried to help his students understand that mathematical understanding was accessible to all of them and he did his best to teach conceptual as well as procedural understanding of curricular topics.

Mr. Clark was a teacher who enjoyed his autonomy. He followed the county curriculum closely and addressed instructional directives to a degree, but preferred to work as independently as possible. However, the climate of teaching at his school was changing. The expectations of his school principal were shifting according to the version of accountability that resulted from NCLB. Planning instruction with other teachers, getting to know students through data sources, and teacher learning through research

based educational literature were becoming the protocols for professional development and instructional improvement at the school. Processes that seemed antithetical to Mr. Clark's personal construction of how teachers should work.

To Mr. Clark, reforms related to instructional improvement were cyclical. They came and went and rarely offered teachers new insights about teaching and learning. Worse, he considered them to be overly political and not in the best interest of the development of children's intellectual or moral growth. Consequently, Mr. Clark tried to steer his own teaching course as best as he could despite the storms of reform that blew through education, always watchful and caring for his students, the passengers in the ship he called his classroom.

STANLEY CLARK: FIFTH GRADE TEACHER

Stanley Clark, a white teacher in his mid thirties, had been teaching for 12 years by the 2002-2003 school year. At that time he was in his tenth year at Clear Water Elementary School, an affluent school in rural Maryland that served a predominantly white and stable population. Mr. Clark's class was one of five fifth grade classrooms at Clear Water. The approximately 125 fifth grade students in the school were ability grouped for math and Mr. Clark had the second to "lowest" group. Students changed from group to group throughout the year as teachers of the fifth grade team assessed their achievement in mathematics, and generally, Mr. Clark's group consisted of about 27 students.

Mr. Clark's classroom resembled a small museum. It was full of color and light and wonderful things to look at.   There was a taxidermic fox on the prowl, the skin of a python hung from the ceiling, and specimen bottles containing preserved natural wonders inhabited a ceiling-high shelf behind his desk. There were two terrariums, one containing a large snake and the other several turtles, including a Maryland terrapin. Mr. Clark was a devotee of the natural world. His first career as park ranger was interrupted when he discovered that the teaching he did in that role outshone his other responsibilities:

 I fell in love with teaching basically – teaching the junior ranger program, and I thought, "Well this is for me." And there were other reasons. I love teaching but I love being a park ranger too but I was starting to get, oh what's the word, the public was starting to bother me at the park….And you get cynical.   That's the word I was looking for…. and I saw that and I thought, " I don't want to be cynical about life, so I'll go and teach children," because they're always open and

they're always trying their best for you if you have a good relationship with them. And they can be stinky now and then. But they're kids, they're not adults. So there's a different expectation for me for children and adults. (Clark, Interview 1)

Mr. Clark seemed to view teaching children as a career that was personally enriching and as a vehicle in which he, as an individual, could make a contribution to others. He built his teaching practice around his belief that children will try their best for a caring adult who is able to build a good relationship with them. Teaching curricular content was important to him, but above all else, he was concerned with engaging his students in learning to become thinkers and responsible members of a community. The most important qualities that a teacher must possess were, in his perspective, primarily connected to the socialization of and caring for children:

Patience, flexibility, compassion. I think those are the most [important qualities of a teacher]. You need to be knowledgeable about what you're teaching. You can't fool kids. They know when you know and when you don't know…. But the biggest thing is you have to be flexible. There's a lot of demands put on teachers. A whole lot. We're psychologists, and we're surrogate parents, and we're teachers, and we're problem solvers, and we're policemen, and we're all those things all rolled in one every day. (Clark, Interview 1)

Mr. Clark's goals for his students with regard to learning were very much linked to his beliefs about teaching. In the next two sections I will further explore Mr. Clark's beliefs about teaching and show how they appeared in the context of his mathematics teaching.

Mr. Clark's Beliefs About Teaching

"I think I have a way to connect to kids. And I think that is given by God."

I made 14 visits to Mr. Clark's fifth grade mathematics class from January to June of 2003. During those observations, I observed a teacher whose goals for his students extended beyond his often-repeated wish for them to be successful in mathematics. I observed a teacher who deeply wanted his students to appreciate the wonder and power of learning, certainly in mathematics, but more so, as goals in and of themselves. He was decidedly humanistic in his approach to teaching, believing that his role was to nurture students. He hoped that through his nurturing he could instill qualities of self-reliance and the understanding that success in school and in life came at the price of hard work and perseverance. At one point in our second interview, he elaborated on his conception of his role as a teacher:

> I think my most important role as a teacher is to be a nurturer. It really is, it's to nurture children and to help them to grow. And to allow, to allow them to be children. I think that's an important role as a teacher that I think is getting lost now a days. I recognize that children are children…and it's so important for adults to remember that a ten year old is not an adult. And as a nurturer I'm allowing them to make mistakes and to learn from their mistakes, and to help them to be successful. And I think that really the most important job as a teacher is to help kids recognize that being successful feels good. And it takes work, but the end result is that you feel good instead of feeling bad, and that's important as you grow to recognize that the extra work to be successful in the end will make you feel good. And I'm not talking about monetarily; I'm talking about just

feeling good about yourself. And when you feel good about yourself then you'll

take the further step to become even more successful in whatever you do. So I

would say it's to be a nurturer. To nurture them and help them learn from their

mistakes, allow them to make mistakes and to help them see that being successful

feels good. And you can be successful in the classroom, and you can be

successful on the athletic field, you can be successful in all the things you do, but

it takes work and it takes practice. But that's worth it. That's really – the end

result is worth it. I think that they see that from me. It's okay to mess up, cause

we're human. And they know that too, it's okay to mess up. Water under the

bridge, I say that all the time, "That's water under the bridge, we're going on

from right here." And I think they respect me for that. (Clark, Interview 2)

Mr. Clark's belief that you cannot treat children as little adults was fundamental

to the way he taught and related to his students. His nurturing exhibited itself in his

fairness, firmness and consistency. There was no nonsense in his classroom. He was

intolerant of students being unprepared for class or 'playing around' during instruction

and he was very clear and succinct about his behavioral expectations. He had one simple

rule that he told his students on the first day of class, "Treat others as you would like to

be treated." This dictum was presented on the first day of school and its meaning and

practice were a regular part of Mr. Clark's dialogue and interaction with his students

during the classes I observed. In most of those classes he made at least one reference to

the importance of students helping and respecting each other. He explained to them that

they would be in school together for the long haul to twelfth grade and that they were

always to exhibit their best Clear Water Citizenship.

Except for an occasional aside comment that provided a little comic relief from the intensity of the work at hand, Mr. Clark's classes were all business. Not much got by his gaze, so when students were fiddling with gadgets they brought from home or clandestinely constructing origami under their desks, Mr. Clark was quick to remind them that they were in school to do the job of learning and nothing but the tools of their job were acceptable equipment for the classroom. When he observed inappropriate behaviors, he swooped down on them and stopped them in their tracks. He had no qualms about singling out anyone who allowed his or her mind to wander during instruction and was precise in voicing his displeasure about distractions to the work they were to be engaged with. Mr. Clark believed that focusing on the outcome of what you tried to do during a lesson and not allowing yourself to become distracted from that was the essence of learning. He explained:

> I know that this might sound strange, but I'm most focused when I'm thinking about the outcome, the end result of a lesson, and I have that going into the lesson and throughout the lesson I'm most focused and I stay on track. And I hope to share that with the students that if you understand the point where you need to be at the end of the lesson, your thoughts can guide you through to the end and help you to be successful. And that you can only really think about one thing at a time. And you can't be distracted. (Clark, Interview 2)

During one of my observations, Mr. Clark noticed that his students were not focusing on the lesson. He stopped what he was doing and engaged the students in a twenty minute long exercise to teach students about metacognition and how to use it to enhance their ability to concentrate. He told them that metacognition meant "Thinking

about what you're thinking about. Cognition is about thinking. Meta is one step up from just thinking" (Observation 1/15/03). "Thinking about what you're thinking about" became a common prompt to engage students in subsequent classes.

Mr. Clark's classroom demeanor seemed quite serious. However, his unrelenting gravity about working hard was often belied by his sense of humor and open delight with the children in his class as interesting people and promising students. This sense of humor and display of pride in, and caring about, his students manifested itself in a number of ways. He peppered his dialogue with endearments such as "honey," "buddy," or "grasshopper" regardless of whether he was directing behavior ("Please stop with the drums honey you're driving me crazy.") or correcting a mistake ("It's gotta be a rectangle honey."). His students were comfortable with these familiarities, and although I observed an occasional snicker from some of the boys from time to time, even they accepted the nicknames and often displayed a look of privilege when they heard themselves referred to as "buddy." I sensed a reason for these endearments beyond establishing a good rapport with students. Because Mr. Clark believed the mathematics he was asking them to do was often difficult and frustrating for this group of ten-year-old children, the affection he showed them created a calm and safe atmosphere. If a student was struggling during a discussion on prime numbers, for example, Mr. Clark's technique quickly erased the fear of mistaking 21 for a prime number or admitting that they didn't understand what a factor was. Mr. Clark's instruction generally consisted of a considerable amount of whole class dialogue and I never observed a student who hesitated to attempt an answer to a direct prompt, even when it was clear that Mr. Clark called on someone who was obviously unsure about what he or she was doing.

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Mr. Clark nurtured engagement through repeatedly prompting his students about their responsibility for their own learning. When a question was posed during a discussion, Mr. Clark's goal was for everyone to have his or her hand up because that showed that the students were focusing on the lesson. During a lesson in which the class was examining prime and composite numbers by constructing rectangles of various dimensions (Observation 1/8/03), Mr. Clark commented, "It looks like we're a little weak in our multiplication facts. Why isn't 4 prime? What does 4 have that 3 and 5 does not?" As he looked around the room at the students, only about half of the students' responded to the prompt. Mr. Clark admonished them calmly but firmly that he expected everyone to have a response whether that response was the correct answer or a question that would help them figure it out. In every class I observed, the students were reminded that math is often difficult and understanding it required dedicated concentration and focus.

Mr. Clark understood that in order for students to respond to his direction they must believe that he valued them as individuals. He showed his students how important they were to him by learning about them and letting them know that he saw them as individuals with distinct likes and dislikes who also had busy lives outside of school. I heard him ask a student about her new baby sister and another about how her swimming team was doing. In the few spare minutes after math class, as his students moved to other rooms, it was common to see students run up to him to tell them about an event in their lives or relate a story that had something to do with the day's activities in math. He explained why he made the extra effort to talk to his students about their lives:

> You have to spend a lot of time listening to their stories too. Some people might say, "Well that takes away from instruction," but it's not taking away from

instruction because they're teaching you about them and the more you know about them the better teacher you can be to tailor your lessons towards their needs. So you have to spend a lot of time listening. And that's tough because there's a lot of curriculum to cover and they all have stories they want to share so it's a balancing act between them listening to you and you listening to them. (Clark, Interview 1)

Establishing the high quality rapport that Mr. Clark had with his students took effort, but his relationships with his students were the product of his personality and his belief in his role as a nurturer. In his response to my question asking about his teaching style, he indicated that his rapport with students was one that he was very proud of and one that he was acknowledged for by the parents of his students:

I think I have a way to connect to kids. And I think that is given by God. I don't think there is any other way to explain it….I think my teaching style encourages children to think and encourages children to want to be successful. Because I want them to be successful. I think there's a lot of mutual respect there between the students and myself as far as what I want for them, and that's to be successful. So my teaching style is unique. I could get letters and things out about what other people have said, but that's what other people have said. (Clark, Interview 2)

Understanding Mr. Clark's connection with students is fundamental to how he constructed his practice. His pedagogy in mathematics hinged on his beliefs that as a teacher he must nurture his students through the mathematical explorations in which they were engaged. In the next section on Mr. Clark's practice, I focus on this nurturing aspect of his teaching of mathematics.

Mr. Clark's Beliefs About Teaching Mathematics

Math is Tricky

The 2002-2003 school year was the first year Mr. Clark taught one of the "lower level" math groups and he realized that his students did not look forward to math class because of their previous struggles with the subject. His approach to teaching them math, therefore, was one of accessibility. He wanted his students to understand that math was something within their grasp and they already had most of the knowledge they needed to be successful in his class that year. He explained his approach in our first interview:

> I spend a lot of time at the beginning of the year reinforcing that this year in math
> we're only going to use ten digits, 0 through 9. Everything we do is going to be
> with 0 through 9 so don't get all wigged out because everything we do is 0
> through 9. And all we're going to do with those is add, subtract, multiply, or
> divide. Because that's all there is. And when they see that and they see that
> math is kind of a language in itself, they can start to understand that.
>
> (Clark, Interview 1)

I asked Mr. Clark how he approached teaching this lower level group compared to how he taught the higher level groups he taught in previous years. He believed the biggest difference between his former higher performing students and the students in his current class was the level of development of their number sense. So, for Mr. Clark, developing number sense was a significant goal for his instruction and something he attended to in all of his lessons.

> I've taught the top math class for many years. This is my first opportunity to
> teach a lower paced math class. And I find that my teaching methods are the

same, my pacing is a little slower. I found that what works with top kids works

with bottom kids. But you just have to slow it down and give them more time to

internalize it. And I do more, I try to do more with visualization for the slower

paced kids and more manipulatives. Because it seems that the higher paced kids

have more number sense. They understand more how numbers work together, the

lower kids do not. (Clark, Interview 3)

Mr. Clark recognized that his students needed time to understand and assimilate the

concepts and skills he was teaching them. Each day I observed him, he clarified the

objective for the day by discussing the meaning of mathematical terminology with the

students. He often did this by comparing it to vocabulary the students encountered in

their daily lives. He took time to draw diagrams to illustrate concepts and explained the

properties of numbers and how these properties influenced how he approached

computational procedures. This was time consuming, but he believed his slower pace

was necessary to build the foundational understandings and skills that prepared students

for the more advanced topics in the curriculum.

Mr. Clark nurtured his students' number sense by acknowledging that math was

"tricky" and he often pointed out instances of this. For example, he described the number

1 as a "trick number" because it was neither prime nor composite (Observation, 1/15/03),

showed them a "secret" for finding the multiples of 12 (adding 1 to the number in the

tens place and 2 to the number in the ones place) (Observation, 1/24/03) and warned them

that sometimes the tests they were given deliberately tried to "trick" them to test their

number sense (Observation, 1/9/03). When he handed back a quiz on decimals it was

evident that his students had trouble figuring out where the decimal point belonged in

multiplication problems. A problem from the second page of the test was 4.2 x 6.5. Mr.

Clark told them, "Page 2 was deliberately designed to trick you to check your number

sense." He proceeded to stress that they must estimate the answer before solving the

problem in order to get an idea of the value of the correct answer. From here they could

reasonably decide where the decimal should be placed. He showed them how to round

4.2 to 4 and 6.5 to 7 to get the product of 28 as an estimated answer. He then asked,

"Where does the decimal point have to be placed in this problem so it makes sense?"

When a student responded correctly, Mr. Clark reinforced the correctness of the student's

answer and conducted a quick check of the student's conceptual understanding by asking

him to explain why (Observation, 1/9/03). In this short exchange, Mr. Clark reviewed

rounding, basic multiplication, and developing the concept that the placement of the

decimal changes the value of the answer. He emphasized that estimation was a tool to

develop number sense and on several occasions pointed out that estimation was a

technique that "any educated mathematician does before they do anything" (Observation,

3/27/03). Mr. Clark's goal of helping his students develop number sense was evident in

every class I observed through his prompting of students to assess the reasonableness of

their answers.

        Mr. Clark's teaching emphasized a combination of procedural and conceptual

learning. He presented procedures and developed concepts slowly and deliberately, often

repeating a procedure several times and discussing how to think about the numbers and

their relationship. In this way, he spiraled the teaching of basic mathematical concepts

between curricular topics. The discussions were predominately teacher led, and this was

where his belief that his role as nurturer was most evident. Although he believed that

students learned from their mistakes, Mr. Clark was reluctant to allow his students to feel the discomfort of "not knowing." He often used examples of student work that showed mistakes in computation, for example, to clarify a procedure or as a hook to review a concept. An example of his nurturing teaching style is revealed in the next section that describes a class that ended with the students taking a quiz. It is also another example of his teaching to his goal of helping his students develop number sense.

The Quiz

It was the end of January 2003 and Mr. Clark's class was beginning a unit on fractions (Observation, 1/23/03). In previous weeks, the students investigated prime and composite numbers, prime factorization, and most recently, comparing fractions. The objective of this day's lesson was to change unlike fractions to like fractions. This was not the first day on this topic so the class began with a review of it. Mr. Clark's approach to the review was to encourage the students to think about fractions holistically, as parts of a whole. He began the lesson with a drill. He listed the fractions 1/6, 3/7, 7/10, 5/8, and 7/8 on the board and asked the students to organize them into groups: closer to 0, closer to 1/2, or closer to 1. Although this was a review of fractions, Mr. Clark showed the relationship of the fractions to percents. Under "closer to 0" he wrote 0%, under "closer to 1/2" he wrote 50%, and under "closer to 1," 100%. Mr. Clark presented the problems in the context of a situation they may encounter in their lives. He asked his students to think of the fractions as test scores by asking them if they got one out of six problems on a test correct, would their score be closer to 0%, closer to 50%, or closer to 100%. They had discussed simple percents before and Mr. Clark referred to them regularly on this day and others.

After allowing the students to work independently for about five minutes, Mr. Clark began to discuss the drill with the class. He did not take them through a mathematical process of changing unlike fractions into like fractions to determine their relational values, but tried to develop their number sense by asking them how they knew that 7/8 was closer to 1. He also showed how 7/10 could be thought of as 0.7 and reminded them that if they were rounding 0.7 to a whole number, they should round it to 1 rather than 1/2, justifying the placement of 7/10 into the group that was closer to 1. In this five minute warm up drill he reviewed the relationship of fractions to percents and decimals and used rounding as a means to establish reasonable answers. Such scaffolding of concepts was common to Mr. Clark's teaching. On any given day that I observed his class, Mr. Clark linked concepts previously explored to new concepts.

Eight minutes into the lesson Mr. Clark moved on to a review of the homework that was assigned for the day. The day before, the students were given six unlike fractions that they were to order from least to greatest. When he made the assignment Mr. Clark told them:

> I'm only giving you a tiny bit of homework tonight. If you have trouble come
> and see me during homeroom tomorrow. Don't show up tomorrow at 10:30 (the
> math class period) and tell me you didn't understand and then not come see me.
> If you're comfortable with this, put your hand up. If you're not put it up like this.
> (Observation, 1/22/03)

Mr. Clark demonstrated that if they didn't understand they were to raise their hand with their elbow bent at a 45-degree angle. He talked to the students about the importance of self-assessment and honest reporting. The students who were struggling,

almost half of the class, were comfortable raising their hands with arms bent because Mr.

Clark regularly confirmed that the work they were doing was difficult and that it was

their responsibility to let him know when they didn't understand something. Now that it

was time to correct the homework, he commended the students who came to him

independently for extra help by saying, "Last night you had some homework. I was very

pleased that some of you came in today during homeroom for help." Mr. Clark

consistently reinforced the theme of student responsibility for his or her own learning and

made it very clear to the class that coming to him for tutoring outside of class was one

way they could take responsibility. When the students responded to his expectations, he

never missed an opportunity to show his approval of their efforts.

When reviewing the homework, Mr. Clark acknowledged that he had done most

of the talking in class the day before and it was now the students' turn to explain how

they handled the ordering of fractions. The fractions to be ordered were: 5/10, 2/4, 3/8,

1/6, 7/8, and 3/4. Mr. Clark broke the list of fractions into pairs and invited three

students to the board, one at a time, to explain how they compared 5/10 to 2/4, 3/8 to 1/6,

and 7/8 to 3/4. The first student, Lisa, erred by stating that 5/10 was greater than 2/4 and

Mr. Clark simply corrected her by stating that they were equivalent. He was, as always,

careful to use appropriate vocabulary. Vocabulary was purposefully investigated when

introduced and regularly reviewed in class discussions. The second student, John, wrote

3/8 = 9/24 and 1/6 = 4/24 on the board but did not explain what he did to get those

results. Mr. Clark interrupted him and showed the class how to list the multiples of 8 and

6 until the least common multiple was found and how to change the numerators of the

fractions appropriately. Finally, Sarah went to the board and eloquently explained and

accurately demonstrated how to compare 7/8 to 3/4. Mr. Clark allowed her to proceed

uninterrupted, which was unusual as students usually veered in one way or another from

the procedures he had shown them and he was always standing by to show students

where they made mistakes.

Twenty-five minutes into the class, Mr. Clark announced, "We have a quiz we're

going to take today. Who are my shakies?" "Shakies" referred to students who were still

unsure about the concepts on the quiz. Nine students raised their hands and Mr. Clark

instructed them to go out into the "pod," the common area between the fifth grade

classrooms. Sixteen students remained in the room and were told to move to the other

side of the room where they were farthest away from the door leading to the pod. There

were five problems on the quiz. The first asked students to find the least common

multiple of 8 and 12. Question 2 asked students to show or explain which day two

workers would have off together if one had every sixth day off and one had every fourth

day off. The third question listed the numbers 2, 3, 6, 9, 12, 18 and asked which two

numbers had the least common multiple of 18 and the greatest common factor of 3.

Question 4 involved explaining how to change two unlike fractions into like fractions,

and question 5 asked students to find the least common multiple of three pairs of

numbers: 2 and 3, 3 and 4, and 9 and 4.

Mr. Clark went out into the pod to help the shakies. I could hear his coaching,

"What does a multiple mean? Let's list the multiples of 8. I'm not going to do all the

work." As students supplied the answers, he wrote them on the board in the pod. After a

few minutes he left the students to work on their own and came back into the classroom

where the other students had been working silently and independently. He walked

around the room checking the students' work and told some to make corrections when he saw incorrect answers. He stopped to work with students who were clearly having trouble.

While Mr. Clark monitored their work, I eavesdropped on two girls who began to help each other. One girl was having trouble finding two numbers with the least common multiple of 18 out of the list of 2, 3, 6, 9, 12, and 18. She was working very hard with the help of the girl beside her to find the answer. Her partner did not reveal the answer but coached her friend in much the same way Mr. Clark coached his students. Mr. Clark did not intervene, he believed quizzes were as much a learning exercise as they were an assessment and he allowed this opportunity for students to teach each other. The students took the quiz seriously and the student 'teacher' was successful at helping her friend figure out the answer without giving it away.

Mr. Clark moved back and forth between the pod and the classroom. The students continued to work diligently on the quiz and one of the "non-shakies" asked if he could just show his work on problem four rather than explain it. Mr. Clark told him he must give an explanation and added, "That's part of the nastiness of the test." It was not unusual for Mr. Clark to admit to students that there were certain expectations on the way test answers were to be given and, like it or not, the format of an answer mattered as much as a problem's solution.

As students finished the quiz, Mr. Clark checked a few papers but time ran out and he was unable to look at more than one or two. He told the class, "We're not going to have time for instant feedback because we still have people still trying." I believe he used this language purposefully. "Trying" meant that one was engaged, thinking, and

motivated and it connoted the importance of effort. As he collected the papers he told the

students, "I'm giving you a break from homework. What could you be doing to

specifically strengthen your skills [in place of homework]?" After a few suggestions

from the students such as "Make up your own problems," or "Have your parents make up

problems for you," Mr. Clark told them that studying their multiplication facts would be

useful. It was easy to see that he saw a number of mistakes on the quiz that were the

product of weaknesses with multiplication facts.

I interviewed Mr. Clark the day after the quiz. I was curious about the process he

used in administering it. I asked him why he helped students as much as he did and how

he used the assessment. He responded:

> The quizzes I see are more of a teaching tool for me. The quiz is more for me
>
> than it is for the kids. I need to see if they're getting the concept. That's why
>
> these quizzes do not have a letter grade on them. Because I do not want a child
>
> who does not understand to get discouraged on the quiz and then be afraid when
>
> the unit assessment is coming up. So the quiz is more for me so that I can see if
>
> I'm doing my job and the information is sinking in. The unit test is more for the
>
> grade for the math class. (Clark, Interview 2)

I prodded Mr. Clark about the amount of help he gave students on the quiz. He

reiterated his goal of helping students find success in math. He told me on more than one

occasion that his math students had little success in math before they came to him. One

of the biggest impediments to student learning in Mr. Clark's eyes was for students to

become discouraged. Compassion for students, as Mr. Clark explained to me earlier, was

a quality that teachers must possess if they are to help their students learn. "You have to

understand that there's a lot of times the kids are not going to get it the first time and it's your job to build them up even if they're getting the wrong answer" (Clark, Interview 1). Building his students up by helping them be successful on the quiz seemed to be a primary purpose behind his quiz administration process. By making the quiz nearly fail-safe for the students, he believed he was building confidence that would serve them well on more formal and grade-bearing unit tests. He elaborated:

> More help will be given on the quiz than will be given on the unit test. Because I believe if you perform well on each of the quizzes, which are like the small steps up to the test, hopefully you've retained that information and you can be more independent on the unit test. I do help them on the unit test, to guide them to a successful answer, but not as thoroughly as I do on the quiz where we'll really walk it through step by step, where *I'm trying to draw it from them*. (emphasis mine) On the unit test you're more on your own. It's a test – an assessment. (Clark, Interview 2)

When Mr. Clark stated that, "I'm trying to draw it from them," he indicated his concern that the students were often unable to show what they knew and were able to do on tests. As their teacher, he knew his students were able to perform procedural skills well in isolation; he had seen them correctly find the least common multiple of numbers and their greatest common factors in class. However, showing conceptual understanding in application problems, such as the quiz problem that asked students to figure out when two workers have a day off together, was difficult for them. In that problem, it was necessary for the students conceptually to understand factors and multiples in the context of a situation. In other problems, reading the problem and trying to understand what it

was asking was the hardest part of the problem. In my observations of the lessons preceding the quiz, Mr. Clark regularly presented the procedures for finding common multiples in factors in the context of real life situations and then examined several procedures to find them, just as he did in the warm-up drill before the test when he asked them to think of the fractions they were to group as test scores. However, when several concepts were mixed together and the students had to choose their own approach to a problem, the quiz became something of a 'procedural/conceptual soup.' Although Mr. Clark did a considerable amount of procedural practice in his daily work with the students and emphasized the development of number sense, it appeared that the students did not understand that the procedures they were learning were tools to help them create solutions to real situational problems. Such understanding takes time and multiple opportunities to engage in experiences in which procedures are employed rather than merely practiced. But Mr. Clark was on a schedule. The new curriculum required that mathematical topics be taught in a certain sequence in a prescribed period of time. When teaching students who had difficulty understanding basic concepts, the county's new paced curriculum provided challenges for Mr. Clark to achieve the level of mastery he wished for his students. How Mr. Clark addressed the new curriculum is the focus of the following section.

Mr. Clark and the Paced Curriculum

"You can rob Peter to Pay Paul."

The county implemented a new mathematics curriculum in the 2002-2003 school year that was paced so that all students, regardless of ability level, were studying the same content at the same time. Each teacher had a pacing guide that outlined the

curricular outcomes and topics the students were to cover on any given day and suggested

activities and resources the teachers could use in their classrooms. Although regimented,

Mr. Clark described the curricular pacing as sufficiently flexible to permit him to make

his own decisions on how best to teach his students:

> We're fairly well scripted on the pacing of the units…it's all broken down, three
>
> weeks on this unit, two weeks on that unit, an assessment at the end. So it's pretty
>
> cut and dry as to when you're going to teach and what you're going to teach.
>
> Now how you teach it is up to you for the most part. The fractions unit – we have
>
> a prepared unit that's been given to us that we use that will teach towards the
>
> outcomes that are measured on the assessment. But other units that's not – we're
>
> not just handed a unit, you're handed the outcomes and then it's up to you to plan
>
> to meet those outcomes based on your students' needs. There is some flexibility.
>
> (Clark, Interview 1)

Mr. Clark told me that the members of the fifth grade team discussed where their

classes were in relationship to one another on the pacing schedule. When I interviewed

him in March 2003 he had recently given his students the district unit assessment on

fractions and told me that he was a little off schedule but within a week of the other

classes. He also informed me, "on the last assessment, which was understanding

fractions, my 'quote' lower paced group performed better than two of the groups that are

above them" (Clark, Interview 3). This comparison notwithstanding, when the time came

to move out of the fractions unit and into a geometry unit, Mr. Clark was not personally

satisfied with some of his students' performances on the unit test. He planned to move

on to the geometry unit as the pacing guide instructed, but had no intention of

discontinuing the teaching of fractions with his students who were still struggling. He

explained:

> I think that the pacing, we do have to follow the pacing schedule because we do
>
> have to cover the material by the end of the year. But you can rob Peter to pay
>
> Paul….But I can't short change them because these are important concepts that
>
> they have to have to move on in a lesson. So really it's a balancing act. (Clark,
>
> Interview 2)

Mr. Clark believed it was his responsibility to make sure that all of his students

met the learning outcomes of the curriculum and this is where his approach was most

different from the philosophy of the paced curriculum. Mrs. Schribner, the principal at

Clear Water, explained to me that because concepts were spiraled across grade levels, it

was necessary for teachers to have confidence that most students would eventually

achieve mastery of concepts:

> And of course math is such a spiraling curriculum that if they don't get 'elapsed
>
> time' [for example] in second grade, move on, move on, move on, we can't stay
>
> in that unit forever. So getting that across to teachers who are very traditional in
>
> an outlook and feel so responsible for, "But if they don't know how to tell time
>
> and they don't know how to count money, how can I go on to multiplication?"
>
> And sometimes it's so hard to let go of some of that and realize you're going to
>
> revisit it…But they do have this compelling need to have mastery before
>
> moving on. (Schribner, Interview 1)

Mr. Clark stated that after the fractions unit he lagged behind the pacing schedule

by about a week, but he was obliged to move to the next unit even though he knew a

number of his students had not achieved the understanding he hoped for. For some of

those students, Mr. Clark was unable to abandon the need to have mastery so he

developed his own strategy to provide opportunities to review concepts and procedures

with students who were struggling. In the instance of the fractions unit, he individualized

instruction with one eye on the curriculum pacing:

> The geometry unit right now is a good place where I can separate children; take
>
> the ones that need additional help adding and subtracting fractions. All the other
>
> kids are working on geometry. The beginning of geometry, they can catch up
>
> with the basics and I'll get them all back together again. But I can separate them
>
> and make sure that my ones who struggle on the adding and subtracting of
>
> fractions have an understanding of that before I send them on.
>
> (Clark, Interview 3)

Mr. Clark stated earlier that he tried to keep his instruction at a slower pace for

this group of students than he would for a higher-level group. Even though he was within

a few days of staying on the pacing guide, I perceived that he sometimes felt pressured to

shorten an activity or quicken the pace of his instruction to stay on schedule. In January I

observed him cut short the activity of creating rectangles to explore the concept of prime

and composite numbers (Observation, 1/9/03). This activity was a hands-on activity that

addressed multiple learning styles. Nearly all the students were engaged as they worked

in groups, quite independently of Mr. Clark, and I observed numerous instances of

students directing each other and finding and correcting each other's errors. Mr. Clark

allotted two days to the activity but time didn't allow him to continue it the next day. As

he hurried his students through it he told them, "This can't become a three day thing."

During my observations in March I noticed a definite quickening of the instructional pace during daily lessons. Mr. Clark told me this quickening was purposeful because the many disruptions of the school year were an impediment to staying on schedule and he had no choice but to speed things up. He described how circumstances beyond his control influenced his instructional pacing and employment of the pacing schedule:

> We missed February due to snow. February was just trying to keep their head above water so they didn't forget everything they had learned. So now I have to quicken it up because…the fifth graders are going to spend the week camping at Camp Casey, and the teachers are going to teach their homerooms math. So we all have to be at a certain point when I leave on April the 22nd. So there's a deadline to get this geometry unit covered and get some other things taken care of before our math classes are put into their homeroom groups. So really I'm making up time for the loss of February. And even though they add days to the end of the year, four extra days in June does not make up for the lost month of February due to snow….So I'm making up. I'm quickening the pace a little bit just to make up for time that was lost this year. (Clark, Interview 3)

I was fortunate to observe Mr. Clark teach several classes where, despite the pacing schedule, he took time to appeal to his students' imaginations in exploring a concept. For example, in a lesson on ratio and proportion he used a model of the solar system to help his students visualize the concepts and put them in a situational context. Several of the students became quite animated during the discussion and eagerly engaged in doing mental calculations around how long it would take a beam of light from the sun

to reach the planets. Mr. Clark admitted that this was not a planned part of the day's lesson. He also noted that he was aware that some of students did not understand the concept or did not have the skills to do the mental math he was suggesting they try. The spontaneous activity had the potential to be transformed into a more thorough investigation the next day, particularly because several students began to raise their own questions not only about the mathematical concepts they were exploring but also questions about the nature of rays of light; however, there was no time to return to it. Also, although I didn't witness them, Mr. Clark told me that he employed projects of his own design to engage students in conceptual understanding. These projects usually expanded on concepts in which the students had more experience and confidence, thus being somewhat more predictable in the amount of time they required. He described a few of the projects:

> We make menus for the decimals unit. We make a menu, it's real life menu and then we add, subtract, multiply, and divide decimals using money, because money is near and dear to the kids' heart and that helps them to build an understanding of decimals. In the measurement unit we launch rockets in the classroom. Balloon rockets and measure the distances because that's more exciting than measuring a line that's drawn on some worksheet. We make a competition out of it. I try to do a lot of real life connections to math especially. (Clark, Interview 1)

I did not witness exploratory activities of the kind described above in classes pertaining to fractions. The fractions unit was the only curricular unit that was pre-prepared for teachers and perhaps when it came to teaching more advanced and

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unfamiliar concepts, such as adding and subtracting fractions with unlike denominators, there was insufficient time to enter investigations that promoted the understanding of fractions in contexts other than in basic problem solving. When I observed a review class for the district-made unit test on fractions, the review questions concerning the application of fractions required students to write a "story" using fractions. The example problem Mr. Clark gave his students was $1/2 + 1/3 = 5/6$. He asked them, "What could you describe using these numbers that makes sense?" He waited a moment and said, "I'll give you an example. On Friday evening it rained a half an inch at my house. On Saturday morning it rained a third of and inch at my house. How many total inches did it rain at my house?" (Observation 3/24/03).

As the students tried to come up with similar stories, they tripped over using language that properly represented the problem, e.g., one used "left over" to imply addition, and when students tried to make statements that used anything but commonly portrayed images of fractional parts (e.g., slices in a pizza) the students became confused. Mr. Clark addressed this by doing a quick demonstration of the process of adding fractions with unlike denominators and stressing that the students should keep their statements simple and make sure their statements made sense. There was little evidence that the students had achieved more than procedural competence with adding and subtracting fractions and I wondered whether the curriculum offered sufficient time or promoted activities that enabled investigations for developing understanding of fractions in context such as those Mr. Clark employed for decimals and measurement.

I have examined Mr. Clark's personal beliefs about teaching, teaching mathematics, and how he understood and enacted the curriculum in relationship to those

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beliefs. In the months I collected data at Clear Water, several district promoted

instructional directives were underway that provide background for the accountability

context at the school. In the next two sections I examine Mr. Clark's relationship with

that context. First I will address the instructional expectations of the principal, Mrs.

Schribner, and the directives that she was implementing. Then I will explore Mr. Clark's

relationship with accountability within that climate.

<center>Instructional Initiatives at Clear Water Elementary</center>

Data driven instructional improvement was a key feature of professional growth

initiatives at Clear Water Elementary School during the 2002-2003 school year. The

initiatives that Mrs. Schribner described to me stressed addressing individual learning

styles, which she believed could be done systematically, and the importance of teachers

working together in teams and using data to reflect on and guide instruction. Although

Mr. Clark did not participate in the initiatives I describe here, I include them because they

reveal the expectations of the school principal and map out the direction the school and

school district were taking to address instructional improvement. And although Mr.

Clark was not directly impacted by these expectations and initiatives in the time I spent

with him, their presence in the school created a climate that may have had a relational

influence on his thinking about teaching and what it meant to be accountable.

Furthermore, examining instructional improvement processes under development

foreshadows potential areas of conflict between Mr. Clark's vision of instructional

improvement and the district's.

It is also important, for the purposes of understanding Mr. Clark's interaction with

the instructional improvement context of his school, to understand the degree of change

that occurred during the school year. Mrs. Schribner was only in her second year as

principal and was still establishing herself as the school leader. In addition to the new

math curriculum the teachers also had the first administration of the MSA looming over

them. Little was known about the test other than it would be a significant departure in

format from the MSPAP and that this year's scores would establish a base line against

which adequate yearly progress would be assessed. New instructional initiatives were in

the works at the district level and that too had many teachers concerned. Mrs. Schribner

explained:

> [The district's schools] are undergoing a huge paradigm shift in their instruction
>
> and instructional team models next year. So everyone right now is very
>
> disconcerted about that change that is coming. Our supervisors will no longer be
>
> supervisors; they'll be called instructional facilitators. They will directly report to
>
> the principal along with our teacher mentor for our school. So that's another
>
> initiative that's coming that teachers have some concerns about. "What's it going
>
> to mean to me?" So we're facing that reorganization district wide. So, we're
>
> dealing with a lot right now. (Schribner, Interview 2)

The school improvement plan (SIP) was the primary guide for instructional

improvement. Mrs. Schribner told me that Clear Water's SIP was focused primarily on

reading achievement:

> In Maryland schools, of course you're compelled to follow the school
>
> improvement format which is data driven. So our data were telling us that
>
> reading is still an area, especially in third grade, we don't really have our children
>
> where they need to be in third grade with all of the expectations and standards in

place for, especially in the area of comprehension, at our school. (Schribner,

Interview 1)

Mrs. Schribner gave me a copy of the SIP, and it did not address math instruction at all.

Because the math curriculum was so new, and there was such a great focus on reading,

when it came to math instruction, the teachers were left primarily on their own with their

instructional guides that outlined the pacing schedule, content indicators and expected

curricular outcomes.

Mrs. Schribner led instructional improvement in ways that were congruent with

the demands of the state and district but she was an experienced educator who relied on

her own education and experience to set expectations for instruction. She told me that in

her master's program at the University of Florida she studied the relationship between

reading and cognition. She described that program as being "scientific based" and one

that viewed learning as a neurological activity. As such, education students took

statistics classes in the medical school. Mrs. Schribner reflected on her educational

background, how it influenced her own teaching, and her belief in the utility of using

standardized measures for instructional improvement:

So having that background, going in and understanding more about cognition and

human development and brain research as a teacher certainly affected the way I

taught and the way I knew humans learn….And also I think just knowing, what

the norm is, and what do we mean by norm really anyway, and special needs

children have their own norms. We've got to just kind of get away from that

view of teaching and learning and view kids more individually and what that kid

needs to move forward. Where they're at, diagnosing where they're at and

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moving them forward – some of our standardized measures…what's the floor there, what's the "below level" there?…And sometimes I don't think young teachers are real good at doing that. Because that effects their teaching. You don't really know the children you're teaching. (Schribner, Interview 1)

Mrs. Schribner's vision for knowing the student and addressing their individual learning style was a statistically oriented approach that strove to align instruction to students' learning needs as determined through diagnostic and achievement tests. Additionally, she strongly believed that teachers could not work in isolation of each other, that they must work together in teams to examine student data and use it to reflect on instruction. She began to implement a process for developing team collaboration during the 2002-2003 school year by promoting a program of professional development with her third grade team in which those teachers learned to understand the "zone of proximal development"[11] for each child in their classrooms in every content area. Using a standardized instrument to assess student learning style preferences, the teachers worked with a facilitator from the district to "help the teachers look at their class profile and identify the strong strands in different categories and then stop and reflect on their teaching. Does their teaching style match the student learning style and if not how can we bring that better into balance?" (Schribner, Interview 1). Mrs. Schribner briefly described some of the complexities and implications of this professional development model:

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[11] The "zone of proximal development" was defined by Lev S. Vygotsky as a gap between a child's "actual developmental level as determined by individual problem solving" and his or her "potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (Vygotsky, 1978, p.86 in Driscoll, 2000, p.246-247).

I stressed more this year than ever, knowing the learner….I do see many teachers

taking that very seriously and beginning to understand what I mean by that and

putting it into operation. And knowing where that zone of proximal development

is for each child in your classroom. It's a heavy responsibility. And then in each

content area where is that zone?….So getting teachers to really look at individual

students and their performance and putting pieces together, saying, "Well, what's

causing that? How can I increase that, how can I accelerate?" And getting over

the notion of remediation, of pulling back and slowing down instruction. That's a

real big concept…It is possible, but how can we leverage resources toward those

students who need that. (Schribner, Interview 2)

Knowing the learner as Mrs. Schribner envisioned it and adapting instruction to

individual students required a considerable amount of teacher learning in understanding

how to interpret and use data and learning to teach to different learning styles. Some

teachers in the school, mostly primary grade teachers, began to organize study groups

with each other to learn more about educational topics that were relevant to instructional

areas they hoped to improve upon. Mrs. Schribner was proud of the work that her

teachers began that year and believed it to be one of the greatest areas of teacher growth:

One of the huge growth initiatives, that I think I am really proud of is the teacher

initiated study groups that are professional learning communities…Our teachers

initiated three different groups, different books on their topic on different levels

from primary to intermediate and the fact that they willingly, voluntarily

participated in those professional discussions outside of the school day. So as far

as teacher professional development, that was very successful this year.

(Schribner, Interview 2)

Mrs. Schribner was aware that the initiatives she was implementing and preparing to implement would be difficult for some teachers to accept. She recognized that asking experienced teachers to change their instructional habits was a major request. When I asked her what her biggest challenge of the school year was, it was this very idea – that teachers have their own comfort zone within their own practice that they resist moving out of – that dominated her thoughts:

Just moving people out of their range of comfort into their zone of proximal development and growth and learning. Because if they're not self-actualized or reflective educators, and I would say maybe half are very reflective educators and the other half are like, "Hmm, yeah, do I have to do this? What does the supervisor want me to do," that kind of thing. Yes, I think that's a big hurdle, so is nudging them in that zone of discomfort. And to learn and grow. As a professional you've got to be in that discomfort zone. If you're back in that comfort zone you're right where you, you know. So, I mean, a teacher like Stanley, it's hard for me to move him to a zone of discomfort and learning. He's probably one of the harder ones to do that with because he is so successful, so what evidence do I have that he needs to be moved into that zone? So I think you have to individualize with teachers just like we do with students. You know, where are they at at this point, where do they need to grow and develop. And what's okay, what's good, what do you need to acknowledge as "You're already doing this." And I think we need to always link with what's going well, the

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strengths, and how can we increase that to increase student achievement. Stanley

gets a lot out of his students and they certainly perform well for him because they

want to perform well for him. They want to pull everything together as much as

possible. (Schribner, Interview 2)

I had not asked Mrs. Schribner how Mr. Clark fit into any of her thinking about

professional development or instructional improvement. Her comments about him in

relation to her vision of professional growth initiatives revealed that she understood how

difficult full implementation of her professional development initiatives was likely to be.

However, her comments also revealed an acknowledgement that success as a teacher is

difficult to define and that neither successful teaching, nor successful professional

development, can be formularized. Mr. Clark was by no means what I term a rogue

teacher, one who ignores directives or believes he has nothing to learn about teaching.

However, he was confident in his beliefs about teaching and somewhat skeptical of the

directives that resulted from policy changes such as NCLB. Next, I will examine Mr.

Clark's perspectives on the changes he experienced in his classroom with regard to the

new curriculum and his views on instructional improvement and accountability.

Mr. Clark and Accountability

"You weather the storm. And you keep in mind that everybody in that storm in your boat

is your students and that's who you're really looking out for."

Most of the participation in the professional learning community initiatives that

Mrs. Schribner described occurred in the primary grades. Mrs. Schribner admitted that

the initiative was "less well received at, you know, the intermediate level." because, "I

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think those teachers needed a need for it…. Sometimes intermediate teachers are just a different breed" (Schribner, Interview 2). Mr. Clark was, in Mrs. Schribner's view, one of a different breed. She told me, "I don't know that I see Stanley voluntarily participating in some of these professional learning community discussion groups, reading, discussing…he's not one who would sign up for that kind of experience." (Schribner, Interview 2)

Mr. Clark would not be specific with me about his views on the instructional initiatives or professional development structures that were being put into place. However, he was skeptical that too many expectations of teachers were merely old books with new covers. He was neither a covert dissenter nor one who would openly dispute directives that were initiated at the school because he didn't believe either response was productive. He admitted that he considered his silence a personal weakness because he believed teachers should speak out more against expectations and directives they didn't agree with, but with his eye on his personal responsibility to his students, he accommodated administrative directives when asked. He described his personal sense making about his responsibility as a teacher in a climate of changing educational mandates:

> I'm here to educate students, I'm not here for this or that, but we do it because we want students to be happy, because if they're happy they're going to perform. We want the parents to be happy. Cause if the parents aren't happy the students aren't happy. We want the administrators to be happy. Elementary school is like a big happy place and if you complain a lot somebody's going to be unhappy. So sometimes you internalize that and you bite your tongue when really you should

stand up and say this is ridiculous, this is nonsense. But I try to generally try to have a positive outlook on it and I realize that in twelve years that education is just a cycle. What's popular today will not be popular a few years down the road. And what was not popular a few years ago is now all of a sudden very popular. It's like a storm that you weather. You weather the storm. And you keep in mind that everybody in that storm in your boat is your students and that's who you're really looking out for. It doesn't matter – the waves crashing on this side, the politics on this side and you know the new whatever they consider to be new on that side, there's nothing new under the sun in my opinion. It's something that's rehashed. Somebody's selling a book about it. You can write a book about this or about that, it's nothing new. We all learn, we've all learned the same way for a long time, in my opinion. You can put new labels on it so we can sell things to people. But you just have to remember that the students are in the boat with you. I'm the captain of the boat in this classroom and I help them to ride out the storm. Sometimes I probably should have raised my flag up and said - *something*. But I don't because my main concern is those students and let the politics on this side and the new fads on that side battle it out. I'm just trying to keep my boat steered straight, keep my kids going in a straight line. (Clark, Interview 3)

I believe that Mr. Clark would be hard pressed to participate in lengthy analyses of student data or happily participate in book discussions or team lesson planning. Autonomy was important to him. He admitted to being something of an island when it came to planning instruction with other teachers. He admitted, "I'm pretty self-contained. I like to do what I like to do and I like others to do what they like to do. We

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don't necessarily have to do the same thing" (Clark, Interview 1).   Moreover, he inferred that if he was to be held accountable for his teaching, he should have control over the decisions he made to teach his students. Too much pressure to change his practices, particularly changes that were derived from political arenas, challenged his sense of autonomy and control. He also implied that efforts to reform education were more for someone else's political or financial gain than for the benefit of children. As an individual there was little he could do to fight against the political climate that seemed to be growing around him, and so he would keep his mouth shut, not make waves, and continue to teach his students according to his own tried and true standards and beliefs.

Instructional improvement for Stanley Clark was more intuitive than a product of formal education or professional development. When I asked Mr. Clark about his learning as a teacher, the kinds of experiences that helped his teaching evolve to the way it appeared now, he conveyed the following messages about the nature of teaching and learning to teach: (1) Teaching is an endeavor in which experience is the best teacher and personal style matters; (2) Having content knowledge does not ensure one's ability to convey it to children; and (3) Teaching is contingent on the quality of relationships between teacher and students. He explained:

> Teachers are great for borrowing ideas from other teachers and just making them work for yourself. But you have to tailor it to your own personal way of teaching and your own personal mannerisms and it's a very personal thing really. There isn't a book that can tell you how to teach and I'm truly a believer that teaching is an art form. And everybody interprets it differently. So, college can prepare you with knowledge to share but it doesn't necessarily tell you how to share that

knowledge. That's up to the person to share the knowledge. And it doesn't

always prepare you for classroom management. That's something that comes

completely from yourself, how you manage a classroom. There's not – you can

read books about classroom management, you can steal some of those ideas but

it's still going to come right down to how you interact with the students in your

class. The kind of relationship you build with them and the kind of respect you

have for them in turn comes back to you. They need to know that your yes means

yes and your no means no, how far they can push you before you're going to push

back. So it's an ever evolving every day is a different situation.

(Clark, Interview 1)

Mr. Clark believed that his sense of personal responsibility for the success of his

students was far more influential on him than any external accountability system. He

stressed that, "I am putting everything I have into these kids with the hope and the faith

that they're going to turn out to be good people in the end. And that's really what we

need" (Clark, Interview 2). However, Mr. Clark was also a pragmatist and even though

he admittedly "bit his tongue" about things teachers were sometimes asked to do, he took

the obligation of the accountability system seriously – albeit with provisions that focused

on his students' sense of accomplishment.

> I'll do what I need to do for the children to be successful. Because that's what it
>
> comes down to. I need to make sure that when they hand in the test that they
>
> feel that they're successful and they can do the test. And I feel that I've armed
>
> them for the test. And that's not teaching to the test 'cause it is math. As long
>
> as you're learning math you should be able to do the test. Whatever test,

multiple choice, fill in the blank, MSPAP, MSA, whatever. If you know your

basic number sense and your math concepts and your vocabulary, then you

should be able to do any test in math. (Clark, Interview 4)

Mr. Clark was reluctant to voice displeasure to me about the heightened focus on

accountability since the passing of NCLB, but apparently he had not been as guarded

with Mrs. Schribner. She relayed his feelings about the new legislation and noted that he

took it very personally:

Stanley's extremely offended by No Child Left Behind, because it implies that

before No Child Left Behind we were leaving children behind. And just the

terminology offends him as a professional, as a teacher. And so Stanley

definitely has this sense of responsibility and credibility and he's never going to

leave any child behind in his classroom. Never has, never will.[12] (Schribner,

Interview 2)

Stanley Clark: Summary

Stanley Clark was a teacher with a passionate personal view of his responsibilities

as a teacher. In regard to teaching mathematics, his primary concern was for his students

to gain confidence in their math skills and develop number sense; qualities he believed

would help them build a foundation for success in mathematics in subsequent years.

Perhaps even closer to his heart, and always evident in his teaching, was his concern that

his students turned out to be "good people." However, Mr. Clark understood that society

measures achievement through testing and so his caring about his students in a climate of

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[12] Although Mrs. Schribner was the principal at Clear Water for only two years when I interviewed her, she
had known Mr. Clark as a teacher since the first of his 12 years of teaching.

high-stakes accountability was often manifested in his efforts to help students perform the skills that were tested on county and state assessments.

There was a strong expectation from Mrs. Schribner that teams of teachers work together for instructional planning and monitoring student progress. Mr. Clark seemed to have a collegial relationship with the other teachers on his team but he did not choose, nor did he feel compelled, to participate in team planning directly linked to instruction. Mr. Clark preferred to rely on his own intuition, experience, and teaching knowledge and skills to plan his instruction despite the principal's initiatives that advocated collaboration. Beyond meeting with the teachers on his team for regrouping students, comparing progress on the pacing schedule and student performance on unit testing, he preferred to reflect on and plan instruction alone. He believed that the knowledge of his students he gleaned through daily interactions with them was more beneficial to his instructional planning than investing time on designing collaborative teaching strategies with other teachers.

Mrs. Schribner shared Mr. Clark's belief that knowing the student was necessary for students to progress in achievement and she stressed that conviction to her teachers as a primary aspect of teaching. However, in order to 'institutionalize' knowing the student, she promoted systematic ways of determining the student's zones of proximal development, which could then be addressed by adjusting instruction. The initiatives Mrs. Schribner was implementing at Clear Water aligned well with the data-driven models of instructional improvement that the state and district advocated. She was preparing her teachers for the data-driven professional development that would begin implementation the next year. Greater teacher supervision, supervised by instructional

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facilitators and teacher mentors, was coming to Clear Water. Mrs. Schribner was already

concerned that some of the teachers, like Mr. Clark, who were confident in their teaching

and skeptical of new initiatives, would be difficult to move into new ways of thinking

about their work.

External accountability loomed large in the district and Mr. Clark accepted this

situation even though he was personally offended by the notion that teachers needed

external mechanisms to hold them accountable for their work. He had no quarrel with the

state learning outcomes or the content of the curriculum and followed the county's pacing

schedule with little variation. He employed many of the suggested activities and

resources the county delineated for teaching the fifth grade mathematics curriculum and

meticulously prepared students for district unit testing. But Mr. Clark "borrowed" time

where he determined he could because he didn't buy into the notion that the students

would achieve the state's learning outcomes because mathematical concepts had been

spiraled over grade levels. Ultimately, he believed that in order for no child to be left

behind, he must tailor his instruction to the needs of his students and so he stretched the

pacing of the curriculum to the extent that he could if he thought it was necessary. He

was able to do this because he believed the curriculum allowed sufficient leeway on how

he could teach and because he had the confidence of his principal and his school

community that his students would achieve academically under his instruction.

CHAPTER VI

BOTTOM UP ACCOUNTABILITY IN A TOP DOWN ACCOUNTABILITY SYSTEM

Many teachers in the state of Maryland have never known teaching without the climate of high-stakes accountability. Annette Blakeway, the subject of this case, is one of those teachers. Ms. Blakeway's thinking about teaching and her teaching practice were highly influenced by the notion of accountability. Ms. Blakeway's personal version of accountability was influenced by two factors: first, her own beliefs about her role and responsibilities as a teacher of mathematics, and second her interpretations of the expectations for teaching she received from the state. Her personal version of accountability, namely, bottom up accountability, was derived from a number of sources other than the state. However, because she agreed with the state's version of accountability, she was motivated to learn about the state's expectations for teaching and learning in mathematics and assimilated them into her own. Also, because she was determined to excel as a teacher and accepted the view that test results were a reflection of her teaching, she willingly adhered to instructional directives regarding curriculum and test preparation practices.

Annette Blakeway was extraordinarily organized in her practice and held a stanch 'work ethic' for herself that she tried to instill in her students. She believed thoroughness and attention to detail in all aspects of her teaching provided her students with the necessary foundation to build their understanding and inspire mathematical reasoning. In her relationships with students, it was evident that effort was expected but in itself was not sufficient to succeed in her class. Demonstrable understanding was her goal and she

strove to guide her students to a level of mastery in mathematics above and beyond the merely proficient.

In most ways, Ms. Blakeway fully supported the press of accountability from the state, county, and school. Indeed, she was an advocate of the state learning standards and used information she received from state testing in ways the state encouraged. However, top-down efforts at the district level to align the curriculum to the state tests from year to year hampered her ability to maximize the benefit of using test analysis for instructional improvement. Also, at her school, Stone Valley Middle School, Ms. Blakeway was both supported and sometimes frustrated by the version of accountability that was created through her principal's school improvement processes. Although the teacher and her principal had similar beliefs about the purposes of education and the kind of learning they wanted for their students, his version of accountability sometimes superseded her professional judgment. When her autonomous decision-making was compromised, she was affronted by the notion that her performance as a teacher was questioned, especially given her drive and efforts to accommodate the numerous aspects of the accountability that surrounded her work.

ANNETTE BLAKEWAY: EIGHTH GRADE TEACHER

Annette Blakeway, a white woman in her early thirties, had been teaching mathematics for nine years at the time of this study. She taught all nine years at Stone Valley Middle School. Stone Valley is in a district that has a somewhat transient population and one whose students vary greatly in their socio-economic status. It is what Ms. Blakeway described as a "bedroom community" for wealthy people who work in surrounding areas that had higher economic bases, but it is traditionally a working class area.

Ms. Blakeway's undergraduate degree was in business administration with a minor in psychology. Her undergraduate advisor successfully talked her out of pursuing a bachelor's degree in education, calling her desire to teach a "phase you're going through" (Blakeway, Interview 1). She took his advice and completed her degree but her compulsion to teach continued after working in a job corps program after college. This program was established to assist young men undergoing treatment for drug and alcohol abuse. Subsequently, she returned to college for two and a half years to earn her teaching certificate in secondary mathematics.

Ms. Blakeway's interest in education resided with her love of mathematics. She perceived herself a mathematician. She spent several summers commuting a considerable distance to work with scientists at a federal agency developing educational materials for schools. This experience confirmed her competence as a mathematician and strengthened her passion for mathematics. Ms. Blakeway viewed mathematics as the discipline students must master if they hope to be successful in many professional fields. As a teacher she believed it was her responsibility to educate students to be "productive

individuals in society," and she was adamant that teaching students to understand mathematics was a primary vehicle for doing that. She told me, "I hope that I'm teaching the doctors, the engineers, the person that's going to earn millions, invent the cancer drug. That's our purpose. Educate our children to be our future" (Blakeway, Interview 1).

Annette Blakeway was determined to be the best possible mathematics teacher she could be and she strove for her students to attain more than basic mathematical competency. She wanted them to develop an appreciation for mathematics as a means to explain the world around them and a discipline that would exercise their minds. To her, the study of mathematics enabled students to learn to think abstractly and challenge themselves intellectually. Ms. Blakeway's beliefs about her role as a teacher of mathematics were reinforced and informed by the formal accountability system in which she worked. She was zealous about setting high standards for student work habits and products, and believed it was her responsibility to create a learning environment that motivated students to meet those standards. In the following sections, I first explore some of Ms. Blakeway's beliefs about her responsibility as a teacher and how she developed these beliefs. I include how the state's accountability climate influenced how she understood her responsibilities. I then turn to her teaching itself. After I explain the school context in which she worked I examine a number of her practices that illustrate her beliefs about teaching in practice.

Accountability as an Ethic

"I take my own learning in my own hands."

Ms. Blakeway began her teaching career in 1993, several years after Maryland developed it's formal accountability system. She had no experience teaching without the constant reminder that educators are expected to be 'accountable' for their work. From the start, the MSPAP was central to the development of her perspective on the work of teaching. She willingly accepted that the Maryland learning outcomes were based on commonly agreed upon standards by reputable agencies and organizations, such as the National Council of the Teachers of Mathematics, and she took responsibility for learning what the state expected from her as a teacher of those standards-based outcomes. Being highly motivated to be accountable to the state's expectations of teachers from the start of her career, Ms. Blakeway took personal responsibility to find out about Maryland's system of standards and educational outcomes by applying to the Governor's Academy[13] at the end of her first year of teaching. She told me:

> I realized – I came from Pennsylvania – I didn't know Maryland's standards.
> They had MSPAP at that time and – what are these outcomes? My whole first
> year I spent asking, "What are the MSPAP outcomes, what are you talking
> about?" …So I decided to take my own learning in my own hands and I applied
> for the Governor's Academy the first year after teaching and got selected for it.
> And um, so I learned all about the outcomes there. (Blakeway, Interview 1)

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[13]The Maryland Governor's Academy for Science and Mathematics is a summer program that provides outstanding mathematics and science teachers in grades K-12 an opportunity to learn about the content of science and mathematics, develop their teaching skills and learn how technology and manipulative materials can be used in the teaching of mathematics and science. One of its primary goals was "to help schools improve the performance of students in Maryland's science and mathematics assessment programs (Maryland State Performance Assessments at grades 3, 5, and 8 and the High School Assessments) and in other educational reform efforts" (Maryland Governor's Academy).

Ms. Blakeway seemed to embody a teacher who understood the concept of standards based education. She also appeared to understand the importance that society placed on students' ability to demonstrate a certain level of achievement in mathematics. She appreciated having state learning outcomes and content standards to inform her about what to teach her students. She incorporated the expectations that the state and society placed on teaching into a set of principles that defined her own performance as a teacher. I refer to these principles as her personal work ethic. She was a determined learner about both mathematics and mathematics teaching. She didn't wait for external mandates to motivate her own instructional improvement. She was demanding of herself as a teacher, always looking for new teaching ideas and developing better lessons. It didn't matter that these efforts consumed considerable time, energy, and personal expense. Her work ethic compelled her to continually learn more about teaching mathematics and put her learning into practice.

Ms. Blakeway's work ethic was demonstrated through her intrinsic motivation to develop her pedagogy. She told me that instead of "working at McDonalds" during the summer, she chose to do professional development activities. She sought out and attended numerous seminars and classes at local universities and federal agencies because she believed those experiences helped her be a better teacher. Through such activities, she not only developed her understanding of teaching mathematics, but also learned to use new technologies (e.g., the graphing calculator) for teaching math.

Ms. Blakeway's work with government scientists enabled her to understand the mathematics that professionals working in the sciences believed students should learn and be exposed to in school mathematics courses. Professional development activities

that she personally sought out clarified state mathematics standards for her, and through her work as a curriculum planner with her district she was familiar with local mathematics standards. She also learned about pedagogical standards through her attainment of National Board Certification. Ms. Blakeway dedicated enormous energy to perfecting her practice enabling her to enact formalized content and pedagogical standards in her classroom. Moreover, Ms. Blakeway had no quarrel with formal accountability testing. She saw testing as a way to gauge her students' performance against the standards and as a reflection of her success as a teacher.

To better understand Ms. Blakeway's beliefs and understandings about teaching, I now turn to an examination of the different dimensions of her teaching practice. First, I describe the school context at Stone Valley. I then examine classroom management practices Ms. Blakeway employed to create a robust learning environment for her students. I examine these practices because they set the scene for the subsequent examination of Ms. Blakeway's purposeful attempts to instill a work ethic in her students that was similar to her own. Finally, I describe a lesson that clearly and rigorously addressed the learning standards of the school district while demonstrating the vitality of her teaching and her high learning expectations for her students.

Ms. Blakeway's Mathematics Teaching at Stone Valley Middle School: Creating a Context for Vigorous Teaching of a Rigorous Curriculum

I have described Ms. Blakeway's belief in her role as a teacher and her personally stanch work ethic. Observing her teach, I could see that she tried to instill work habits and learning dispositions in her students that mirrored her personal ethic of self-responsibility and determination to excel. Stone Valley's block scheduling allowed Ms.

Blakeway to teach the mathematics curriculum in ways that encouraged her students to question their thinking about mathematics and learn the skills Ms. Blakeway believed supported them in taking more advanced math courses. I begin my examination of Ms. Blakeway's teaching by describing the structure of her school day.

Block Scheduling as an Instructional Support

"You can really hone in on things."

Stone Valley employed a block schedule of five 80-minute class periods. The block schedule also included an "intervention" class, a 40-minute block of time that could be used by students to redo work, get individual help from teachers, and do homework. Student clubs also met during this time. According to Mr. Kellet, Stone Valley's principal, the intervention period was "required by law as a bridge to excellence" (Kellet, Interview 1). The extended periods of class time allowed Ms. Blakeway to pursue her vision of mathematics teaching and enact the curricula thoughtfully and thoroughly. She utilized the time afforded to her in both her regular class periods and the intervention period with great efficiency. Engaging eighth graders in 80 minutes of meaningful and directed math instruction five days a week required a decided effort by the teacher, but Ms. Blakeway viewed and used the block schedule as a valuable resource. The extended blocks of time made it possible for her to employ interesting and varied lessons that were facilitated through promoting organizational skills and a sense of responsibility in her students. Ms. Blakeway was delighted with the block schedule. She told me:

> Last year I had each class for 55 minutes a week four times a week and I had to
> do the same thing I'm doing this year. This year I get them five times a week for
> 80 minutes. Imagine the learning I can get through this year. I mean my scores

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on my geometry, for instance, are jumping three to four points each test, simply

because you can really hone in on things and get it through there. Plus…55

minutes is tough to get through computers and get through graphing calculators

plus teach an objective. Now you've got 80 minutes, it makes a real difference.

I'll take 120. (Blakeway, Interview 1)

Getting through the learning required by the curricula and teaching students to use

technology like graphing calculators required more than mere time. To get at the learning

that Ms. Blakeway expected of her students, she became adept at classroom management

and lesson planning. I turn now to the work environment in Ms. Blakeway's classes, one

that seemed designed to encourage maximum student engagement in the learning of

mathematics over the 80-minute class periods.

Classroom Management Framing the Student Work Environment

Ms. Blakeway taught only eighth grade classes: one general math class, one

algebra 1 class, and one geometry class. I observed Ms. Blakeway teach 21 classes. She

worked her students hard – there was virtually no 'down time' in any of the classes.

Through meticulous planning, she directed nearly every minute of class time toward

student learning. Her students sometimes tired; on several occasions I heard students

comment to her (good naturedly) that she must be trying to kill them with work. One

student commented that they did as much work in one math class as they did in a day of

all their other classes put together. From my observations, it appeared that the work was

never "busy work." It was always directed at the objectives that were clearly posted in

the room. The activities and problems presented were so varied and purposeful that there

was virtually no hint of rote practice in any of the work assigned. Additionally, the

students regularly used graphing calculators, manipulatives for modeling concepts, measuring tools, and a veritable potpourri of devices to investigate mathematics. These materials were available for student use at all times. Students also had access to and used three computers in the classroom that were loaded with software to practice mathematical skills if they chose to use them.

In order to teach the mathematical content at the level Ms. Blakeway aspired to and at the quick pace that was common in her classes, she became adept at organizing her classes in work efficient ways. Time was not wasted handing out materials or pushing desks around to work in small groups. Efficiency was maximized by the arrangement of the classroom itself and having materials prepared, organized, and distributed at the students' worktables before they entered the room. Ms. Blakeway told me that she scavenged these worktables over the years as other teachers discarded them. She believed worktables were better suited for much of the work she had her students do. They needed space to spread out their tools and group work was easily facilitated.

From the first day of class, Ms. Blakeway inculcated student responsibility for the proper use of materials and adherence to classroom routines. Every day Ms. Blakeway prepared baskets that contained materials for each of her three classes and these were placed at the students' tables. Students were taught not to touch the baskets unless instructed and when they were told to do so, they took from them only the materials they were to use. By establishing work routines from the start of the school year, time spent on routine management was minimized.

When I began my observations of Ms. Blakeway's classes in January 2002, it was obvious that her students had assimilated this responsibility because she spent very little

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time giving instructions about classroom routines. The students knew exactly where to find what they needed to do their work. Moreover, the students knew what was expected of them. "I don't know what I'm supposed to do" was not a comment heard in the classroom. Ms. Blakeway explained how she developed classroom expectations and routines in her teaching:

> You try to set the standard and you try to come down at that point and let them know what's acceptable and what's not and explain that. Then, you hold them to it. Usually the first couple of weeks I constantly reinforce the routines and compliment them. Most of them [understand the routines] by the second day, by [my] saying, "Okay stop. What did we do wrong." By reinforcing it by the third or the fourth day they're in the routine. And then I just constantly reinforce it for the next couple of weeks and then eventually you can just back off on that because they've got it down. Like the kids not touching the baskets. I mean that took a couple of days but now they know and so it works really well. (Blakeway, Interview 1)

Although the use of the baskets, for example, may seem a small thing, Ms. Blakeway's attention to every detail of her teaching and her organization and preparedness for class enabled her to move seamlessly from activity to activity during the class periods. She was able to use a wide variety of materials and tools because the management of them did not detract from the flow of the lesson and students didn't have an opportunity to get sidetracked (or sidetrack the class) because instructional materials and routines were managed inefficiently.

Teaching Students the Value of Purposeful Work

Similarly, Ms. Blakeway was unrelenting in promoting her ethic of self-responsibility and attention to detail in the work of her students. She simply didn't tolerate sloppy or incomplete work. Student work was posted all around the classroom and every paper I looked at showed work that was complete and clearly presented. The students' writing was remarkably legible, mathematical terms were used abundantly and appropriately and ideas were well formulated. I had rarely seen student work in any other classroom that appeared so consistently well done. Students' daily assignments showed attention to detail and achieved the required exposition of the process they used to solve problems. When I asked her how she elicited this kind of attention to detail in the work of her students she explained that she set high standards for student work products and held students accountable to them:

> As I walk around with the homework and I'm checking on the homework you'll notice I'll tell some kids, "You need to redo this. This is not quality. This is not the expectation that I hold for you." And they're usually generally, the first couple of times their real snippy about it, but then they're fine after that, "Oh, okay. Oh, I knew that." So they know. Like John yesterday, his graphs were really pathetic. They were all over the place. He just kind of shook his head, "Yeah, I know." So he'll redo them, he'll bring them into me today and they'll be redone, but again, it's setting that standard and holding them to it all the way through. Not relaxing on that standard, hold them to that level all the time and push them to keep going higher. (Blakeway, Interview 1)

Most of the work that was posted on the walls of the classroom consisted of projects that were assigned as extensions of work done in class. These projects were interdisciplinary. For example, students were required to read the novel, *October Sky* by Homer Hickman and write about the mathematical ideas in the story. They also did a "string art" project in which students designed beautiful works of art made of colored string attached to nails carefully set in thick cardboard that transformed straight line segments into curves as they converged on predetermined points on a plane. The products of both of these projects were prominently and carefully displayed around the room creating a space that seemed more like a gallery or museum than a classroom.

In another instance, I was present when the "ABC Book of Geometry or Algebra" project was assigned in which students created a book that defined and illustrated geometry or algebra terms from A to Z. The students were permitted to choose their focus (algebra or geometry). In this project, students were encouraged to use whatever medium they wished for their final product. They could use computer software, such as *Power Point*, *Kid Pix*, and *Hyper Studio*, all of which Ms. Blakeway installed on her classroom computers for student use, or they could create traditional paper books. One student suggested using a digital camera to collect images and Ms. Blakeway told students they could also use a scanner to produce images (as long as they didn't violate copyright laws). Other than explaining the assignment, these projects, which were required in all classes, were done outside of class time. Ms. Blakeway encouraged the students to use the intervention period to work on them or come in after school if they needed help. She believed these projects were valuable because they helped "turn students onto math." She also saw these projects as an opportunity to reinforce and

extend concepts studied in class. Students were allotted three weeks to complete the assignment. The "on time" completion rates for the project for each of her classes were posted on the chalkboard when I was in Ms. Blakeway's classroom in March. Her general math had an *on time* completion rate of 72.4%, the algebra 1 class 81.8%, and geometry 100%. She assured me that the ultimate completion rate in all of the classes would be 100%.

The general math class had the lowest on time completion rate. In this class she had her lowest achieving students, some who were not motivated to be in school. Yet, the expectations Ms. Blakeway had for these students' academic performance were at the same high standard she held for her most advanced geometry students. She seemed to understand and appreciate her adolescent students. When I asked her to describe an eighth grader to me she didn't hesitate to reply:

> Love you one day, hate you the next. Wish they never had you, want to have you always. Loving life one minute, bawling the next. Everything's wonderful, I hate life. You know they're up and down, they're all over the place, everything is more important than what is going on in your room…every child is different and their learning is at a different place. Even in the general math where they're supposed to all be on grade level, you have kids in there above grade level kids below grade level, kids that are on grade level. And even in geometry, kids that are above geometry that can think really high level, kids that are right there with you and kids that need that algebraic background. So they're all over the place.
> (Blakeway, Interview 1)

Although Ms. Blakeway acknowledged the rapidly fluctuating temperaments of her young teenage students and the disparity of abilities that were present in all of her classes, she maintained her high standards and expectations for everyone at all times. Regardless of their ability, their motivation to study math, or whether or not they liked her on any given day, Ms. Blakeway demanded much of them. She did not tolerate students lagging behind in their work. If students came to class without their homework they stayed after school to complete it and parents of habitual offenders were contacted. Work that was not up to her standard was not accepted – period. If a student was physically well enough to be in school, he or she was well enough to participate fully in class activities. She was very aware, and almost prideful, that she was demanding but believed that being demanding was part of her responsibility as a teacher. She said to me with a smile, but in a serious tone:

It's dog eat dog and you're wearing milk bone underwear, you get it [the work] done…. I'm not here to baby them and some of them try to be your friend or whatever. No, I'm here to teach you and you *will* learn and you *will* do your work. I mean I'm probably thought of as a hard ass because I don't cut them any breaks. I treat them all the same. You will be expected to do this. A couple of them may have medical conditions or things like that where I might make extenuating circumstances and do some stuff extra for them or something, but no, you're expected to do the work, you're expected to do it on time to the best of your ability, and I expect you to try. You're not going to sit in my room and put your head down. You're going to try. And I get the message across loud and

clear, I think, that they need to do their work. And participate and be actively

engaged and anything less is not acceptable. (Blakeway, Interview 1)

I have established that Ms. Blakeway was well organized and expected a serious

work ethic in her students. Ms. Blakeway perceived these components of her practice as

necessary foundational elements for the study of mathematics that led to student

understanding. In the next section, I describe a math lesson that illustrates the level and

kind of academic performance that she expected of her students. Although I considered

this lesson to be exemplary because of the level of student engagement throughout the

class and the apparent collective understanding of difficult concepts, the practices

employed were common to Ms. Blakeway's instruction. She used a variety of activities

to reinforce concepts, managed the activities and instructional materials efficiently and

effectively, and expected a high level of intellectual effort from her students.

Raising the Academic Bar for All Students

In her general math class, I observed Ms. Blakeway teach difficult mathematical

concepts that one might expect to see in a full-fledged algebra class. During an

observation in April the following objectives were posted on the board:

The students will connect solutions in graphs and tables to solutions of equations.

The students will understand how the intercept appears in tables and graphs.

The students will understand how the role of change affects the graph of a line.

(Observation 4/2/03)

The students had been working on these algebraic concepts over a period of

weeks prior to this class. In this particular class, the students had to demonstrate their

understanding of the relationship between equations, tables and graphs in a variety of ways.

The 80-minute class began with a "warm up" in which the students graphed linear equations on coordinate planes and determined their slopes. They were instructed to check their results on graphing calculators. The students did this work individually while Ms. Blakeway circulated around the room correcting and prompting them with comments such as "Put arrows on the end of your lines." "Mark the rules" (rule = equation). "Do you see the pattern? Up one over two" (the rise and run of the graphed line). Every student was engaged in the warm up. There was virtually no idle chatter among the students. The majority of students knew what they were doing and the skills they had developed in previous classes seemed to enable them to attempt this rigorous work without complaint or trepidation.

The students worked on the warm up for about 20 minutes before Ms. Blakeway prepared them for the next activity. She announced, "As you finish, I'm putting a little baggie on your table. In it is a graph, a table, a rule, and words. Try and match the ones that go together. Match graph, table and rules using words." There were 12 slips of paper in each baggie, or four matched sets. An example of one matched set is:

- The rule: y = -2x
- The words: y is the product of negative 2 and x
- The table:

X	-4	-2	0	2
Y	8	4	0	-4

- The graph:
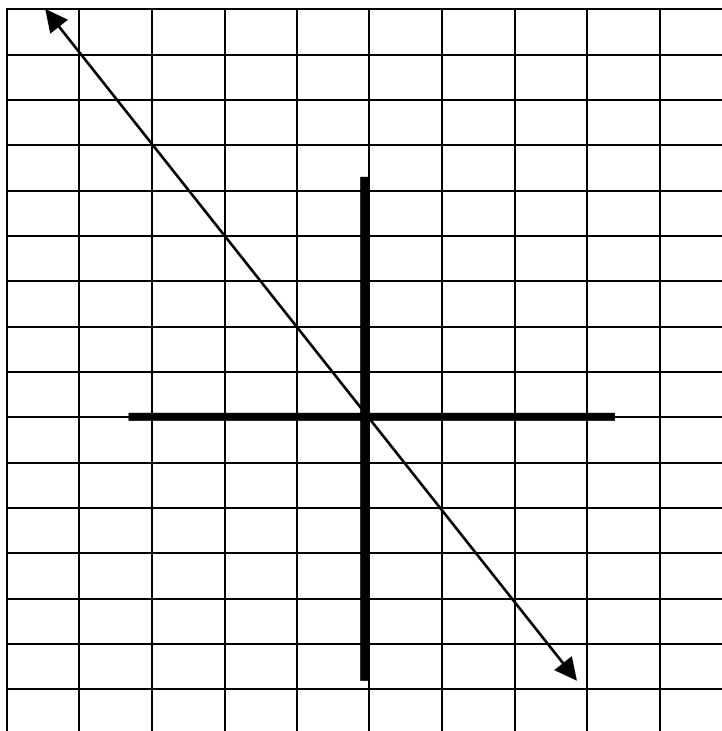
The students worked with others at their tables (three to four students at table). They attacked this activity; it seemed more a puzzle to them than an exercise. I heard authentic mathematical discourse between students. They sometimes disagreed on pairings of the slips of paper. More than just correcting each other with comments such as "these should go together," I heard them justify their reasoning to one another: "These should go together because the coordinates of the line on the graph match the table." I also heard students tell each other when they didn't understand something and their partners at the table would clarify the concepts or procedures for them. I paid particular attention to one girl, who in previous classes placed more of her effort on sneakily communicating with a boy across the room than on math, and observed her become completely engaged with the activity. During this lesson the activity had become the object of her attention and I heard her explain connections between the representations of

the equations to her peers and take a leadership role at her table by organizing the materials for the exercise.

The students worked through two sets of "baggies" in about ten minutes. Ms. Blakeway circulated around the room with answer keys to check the students' work. Sometimes she challenged students on their solutions or pressed them to explain how they connected the different representations of equations as they did. Ms. Blakeway's tone during these interactions was calm but directive. Effort alone did not elicit her praise; understanding was her goal for her students. When the students didn't understand something, they asked their teacher for clarification with questions that indicated that they had significant grasp of concepts related to the problems. The students seemed to truly want to understand the abstractions they were engaged with. This work seemed to matter to them; it engaged their imagination. They were learning to think and speak mathematically.

About halfway through the 'matching' activity, Ms. Blakeway handed out a Xeroxed sheet of paper called *Getting on Line*. This paper showed six coordinate planes, each containing a graphed line. Nothing was labeled on the paper. The instructions told the students to determine the equation of the lines. Ms. Blakeway instructed the students to work on *Getting on Line* when they finished the matching activity. The students had thought provoking work at hand at all times; no one was idle.

Fifty-five minutes into the class, Ms. Blakeway brought the class together to discuss *Getting on Line*. She posted the equations for the lines on the overhead and began to question the students about finding the y intercepts and the slopes of the lines. This conversation was brief; it was clear that the students understood these processes.

Over the last half hour of this class, Ms. Blakeway assigned problems out of the *Connected Math* textbook. These problems presented another version of matching tables to equations. The problems were multiple choice and asked students to choose a table that made a certain equation true. Using an approach that seemed typical for Ms. Blakeway, she helped students clarify the instructions and allowed them a few minutes to work individually on one or two problems. She then brought them back together to discuss the problems. She reviewed a strategy for creating a table for unknown values and modeled how to set up the table using a graphing calculator to find a value that made $6.8 = -2x$ a true statement when $y = -2x$. She then assigned two more similar problems out of the book. After five minutes of individual seatwork, the class was brought together again to review the problems. Ms. Blakeway told the students that "Part of doing math is figuring out what they're asking you to do." In the case of these problems she said, "Find solutions for the equations – reasoning without using tables or graphs. All they're asking you to do is solve for x." Ms. Blakeway emphasized to the students that they must be able to *explain* and *justify* their answers and explained and modeled the difference. Knowing the difference was important not only to develop understanding of the concept, but also to be able to demonstrate it.

Ms. Blakeway brought the lesson to a close in the last *minute* of class by asking the students what they did that day. Answers such as "matched and found rules" and "justified equations" were called out by many of the students in the class. The students knew they worked hard that day and there was a distinct air of satisfaction in the room demonstrated by Ms. Blakeway and her students alike.

Through this example of a general math class, I have tried to paint a picture of some of Ms. Blakeway's practices that seemed prominent in most of classes I observed. Although this particular class was exemplary in the seamlessness between activities and in the overall performance of the students, it characterized Ms. Blakeway's teaching practice in a number of ways. Concepts learned in previous classes were spiraled throughout the activities and the activities were varied and carefully crafted to appeal to a number of learning styles using a variety of tools. Moreover, it demonstrated that the expectations Ms. Blakeway held for the quality of student work and their engagement with it had become ingrained in her students. Additionally, this class revealed another purpose behind Ms. Blakeway's practices. She was clearly preparing her general math students for algebra 1. She knew the background knowledge necessary for students to be successful in algebra 1 and she also knew what the students would be expected to know and be able to do on local and state achievement tests. Because she taught two high school level courses, Ms. Blakeway had to prepare her students for several county and state tests.

During the lesson described above, Ms. Blakeway stressed the difference between *explaining* an answer and *justifying* an answer. Ms. Blakeway was beginning to coach her students to respond to the components of a rubric represented by the acronym, AREAJ (analysis, representation, explanation, application, justification). This rubric stated how test items would be evaluated on the Maryland High School Assessment (HSA). The students from the eighth grade general math class would take the HSA the following year, and Ms. Blakeway was already teaching them to produce appropriate and complete answers to test questions. I observed her using the rubric in several algebra 1

classes (students in this class took the HSA in eighth grade). She explicitly told the

students that they must be able to address the AREAJ criteria on the HSA. Learning the

correct interpretation of the AREAJ components and being able to demonstrate that

understanding in an answer was carefully linked to content instruction on a regular basis

in the algebra 1 class. As the teacher of students who would take the HSA as well as the

MSA, Ms. Blakeway worked diligently to prepare students for both tests. She stressed

the importance of doing well on the tests to the students. She also indicated to me,

through her classroom practices and in our conversations, that preparing her students for

the tests was her responsibility; it was part of her job as a math teacher. Beyond Ms.

Blakeway's personal sense of responsibility with regard to testing, the air of

accountability was palpable at the school and appeared in a number of ways. In the next

section, I examine the various aspects of accountability at Stone Valley and relate them to

Ms. Blakeway's personal version of accountability.

Intersections of Accountability: Individual, Local, County and State

Through my conversations with Ms. Blakeway and Mr. Kellet, Stone Valley's

principal, I became aware of several dimensions of accountability that seemed to run

parallel to each other at the school. First, there was Ms. Blakeway's personal version of

accountability. She was a highly competitive person and viewed her students'

achievement scores as a reflection of her success as a teacher. Second, there was school

level accountability that appeared through a process used by the Mr. Kellet, the principal,

to manage the press for accountability placed on the teachers at Stone Valley by the

county and state. The goal of this process was to attain accreditation by the Middle

States Association of Secondary Schools. There was formal accountability to the county

through regular end of unit tests and finally, to the state through the HSA and the MSA.

During the days I spent with Ms. Blakeway, not one passed in which students were not

reminded that what they were learning would be formally tested and the topic of

accountability was central to many of our discussions and two formal interviews.

Adherence to the notion of accountability, therefore, became the foundation upon which

the curricula of her classes were built and the rationale behind many of the strategies she

taught her students for demonstrating their understanding of mathematics. In this section,

I examine the different aspects of accountability at Stone Valley as they related to Ms.

Blakeway, her teaching, and her thinking about accountability.

Individual Accountability: Using Accountability Mechanisms to Inform
Instructional Planning

Ms. Blakeway's students took a number of county and state assessments. In

addition to regular county mandated unit tests, they took the MSA, and students taking

algebra 1 and geometry took the state's High School Assessments in those content areas.

Ms. Blakeway accepted that these tests were important county and state indicators of

student achievement. She was methodical in the monitoring of her students' performance

from year to year and tracked how the curricula aligned to the questions on the various

tests. She kept her students' test papers from unit tests and test reports from the HSA

from year to year and used the information they provided to adjust and plan her

instruction by targeting weak areas in her students' achievement. She explained how she

used the testing information:

> I keep notes from year to year. I also keep my test scores from year to year and
>
> my goal is to raise those test scores each year, so I put pressure on myself to raise

that bar. And I think of different ways I can do it. Where did they fall down last year? Well maybe I should try to put this in there. So I try to do a lot of different adjusting and modeling, also in terms of my own professional development where I learn something new. This will stay here. And I try to remember and I put it in there, you know…. I try to do as many different modalities and change ups as possible to keep them hooked in on task and to keep them on task and interested, shall we say. Just also to try and, maybe this one [activity] didn't hook with this one, but maybe it'll hook with that. (Blakeway, Interview 1)

Ms. Blakeway described how she would realign and reconstruct activities and lessons she developed in prior years by weighing her students' learning styles and developmental needs and considering new teaching strategies she became familiar with over time. Ms. Blakeway was not a cavalier planner. She was adept at spiraling concepts within topical units and across the curriculum and purposefully chose activities that addressed the curriculum as presented. Planning as such required that she thoroughly understand the scope and sequence of the curriculum. For her general math class in particular, aligning her instruction to the curriculum was tricky because the general math curriculum was constantly under revision.

The school district responded to modifications in the state tests by reworking the curriculum. In the nine years that Ms. Blakeway was at Stone Valley, the curriculum for eighth grade general math had changed every year in response to the content and structure of the tests. For her, this was problematic because of her commitment to following the curriculum. If she taught the curriculum as presented, the changes made it difficult for her to analyze what aspects of her planning and instruction benefited her

students in relationship to the tests from year to year. It seemed that her concern laid in both the alignment of the curriculum to the tests, i.e., was the content on the tests the same as the content she taught, and her approaches to teaching to the test, i.e., was she teaching students processes in ways that were rewarded on the test. This frustrated her because the regular rearrangement of the curriculum interfered with her ability to connect her instruction to her students' performance. She lamented:

> In general math, I have never, in the nine years I've been teaching, been able to teach the same thing because they [the county] change it [the curriculum]. In my book how do you know it's working because you keep changing it? You know? You can't find things that work. One year the scores for MSPAP were like a 69 and 70 was the cut, or 65 and 70 was the cut. To me whatever I did that year worked – they changed it! (Blakeway, Interview 1)

The "cut" referred to the score that indicated proficiency in mathematics on the MSPAP. Ms. Blakeway could see that her students at her school were scoring at a high level in comparison to the other schools in the county or state, but as a teacher who followed the curriculum closely, the yearly changes complicated her ability to use test scores to inform her instructional planning.

Given that the MSA was given for the first time in 2003, it was evident that Ms. Blakeway would continue to face the dilemma of enacting an ever-changing general math curriculum. Mr. Kellet told me the level of mathematics on the MSA was extremely difficult for the general math students because many of the topics on the test were not covered in the eighth grade curriculum at all or until after the test was administered. After speaking with the county's curriculum specialist he predicted curricular changes by

the next school year: "We've already talked about what units do we teach because there are certain questions on the test they never even got to." He said that the district would, "realign the ordering so that they get it so we're best preparing the kids for that test" (Kellet, Interview 2).

The realignment of the ordering that Mr. Kellet referred to meant that topics formerly reserved for the latter part of the year, those which contained information that may be the least familiar to students, would likely be placed earlier in the school year. There was a lot of content to cover to meet the state's scoring goals and the county had already attempted to do that in the 2002-2003 school year by pacing the topics in the curriculum so they could be covered before the MSA was administered. The curricular guides that Ms. Blakeway showed me indicated the title of the units that were to be taught, the expected learning outcomes for those units, the number of days allotted to the teaching of the units and the expected date of completion of each. Ms. Blakeway told me, "Oh it's [the curriculum is] paced, it's paced huge. When our supervisor walks in she'd like everyone in the county to be on the same page at the same time. They want you to be where they're at and sometimes its irregardless if the child learns it" (Blakeway, Interview 1). Being "on the same page" didn't seem to faze Ms. Blakeway, her personal mathematical understanding made her adept at spiraling concepts through different topics and she was, therefore, able to include the reteaching of concepts with little upset to the pacing schedule. However, changing the curriculum year after year did not support Ms. Blakeway in comparative assessment of the success of her instruction from year to year.

Ms. Blakeway also used formal assessments as an indicator that her students had achieved a level of mastery. I asked her about the goals she had with regard to student

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achievement and in relationship to mastery vs. proficiency. She told me that mandated testing helped her make those determinations:

> Well, for instance in geometry, I took what the students were able to do after the year of the curriculum last year on High School Assessment and watched their performance as they were doing the High School Assessment and how they were able to apply what they learned. And then I took this year's group based on what I saw that I thought we could improve on from last year and I've incorporated that into my curriculum and my teaching. And so I've incorporated more of what they need and also more critical thinking of what they need based on what I saw. So in terms of taking them, instead of just being proficient I want them to be able to do it, but I also want them to be able to think and apply it to other levels, so I try to incorporate that into the classroom and get them to feel free to take the risks and try new things and try different methods. And then, don't just don't give up if you can't get it. Try something and see what you can pull from that. (Blakeway, Interview 2)

I have established that Ms. Blakeway was committed to following the curriculum and using state tests to guide her instruction. Moreover, Ms. Blakeway incorporated the expectations of student achievement from the state's perspective into her own determinations of student performance that indicated mastery of mathematical skills and reasoning. The tests provided Ms. Blakeway with a kind of support to think about her instruction. At Stone Valley, another dimension of accountability was present that seemed to be in place to create a school-based version of accountability. Mr. Kellet, Stone Valley's principal, drove this local version of accountability. In the next section, I

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explore this aspect of accountability from the perspective of Mr. Kellet, relate it to Ms. Blakeway's practices and examine her response to it.

Local School Accountability

At the time of my study, Mr. Kellet was in his second year as principal at Stone Valley. He came to the school from a county in rural Maryland. He advanced quickly through the ranks from teacher to principal at his previous school district and credited his rapid rise to leadership at a high school there to his attention to accountability. There were significant similarities between Mr. Kellet's and Ms. Blakeway's beliefs about accountability, but as will become evident, given their differing roles and responsibilities as educators, the accountability expectations of the principal were not necessarily agreeable to Ms. Blakeway.

Mr. Kellet became a principal during a time when Maryland's accountability system was well developed. He, like Ms. Blakeway, had taken advantage of multiple opportunities for professional development at both state and national levels and had become familiar with an arsenal of methods intended to improve teaching and learning at his school. Also, like Ms. Blakeway, Mr. Kellet believed he was preparing his students to become productive members of society. For him, educating students meant educating them for a career. He told me this was his greatest concern for his students:

> Trying to provide a quality education so that we are meeting not only the
> legislator's wonderful ideas that we can test the heck out of our students, but it's
> my belief that we're preparing students to be able to make a career. And a career
> means you need to go beyond high school. You need to be able to have the

technical reading and technical writing, the theoretical academic pieces and you

need to push many of the students that you need to push. (Kellet, Interview 1)

Finding the balance between testing the "heck out of students" and promoting the

skills and dispositions necessary for a career drove Mr. Kellet's vision of leadership. His

vision was highly influenced by his participation with the Middle States Association of

Secondary Schools[14] as a chairperson of evaluation teams over the previous three years.

When he arrived at Stone Valley, he viewed the strategic plan of the school as lacking

cohesion and direction, so he used the Middle States Association accreditation process as

a vehicle to redirect the plan, making it, in his view, more targeted to the needs of the

school. He also believed the accreditation process was a way to incorporate school

driven learning goals for students with the numerous local and state mandates for school

accountability. He explained:

I have been involved with Middle States Evaluation as a chairperson…. The

[evaluation] process is designed to allow for collaborative work from the grass

roots piece. When I got here there were fifteen initiatives and everyone thought

they had to do all fifteen in different directions. We came in here and said, "You

know what guys, you can take all these initiatives, with a planning process and

put it all under one umbrella." And that's exactly what we did. So we elected to

go with this Middle States piece. We've developed – in one year we did all the

self-assessments, taken self-studies taken with the indicators of the twelve

national standards. Then that gave us strengths and weaknesses that we were able

then to build up our goals we needed to be able to do, and then prioritize our goals

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[14] The Middle States Association of Secondary Schools is a non-profit, non-governmental organization of
diverse institutions. Through a peer administered evaluation process it seeks to accredit institutions and
foster and ensure continuous improvement of educational services (Middle States Association, 2004).

from there. From there, the committees, every teacher in the school is on two

committees – one's on an academic committee, one's on a communication

committee. And they developed multiple activities, strategies and activities.

(Kellet, Interview 1).

Stone Valley achieved Middles States accreditation by the end of the school year.

Mr. Kellet was proud that it was only one of three schools in Maryland that reached the

accreditation stage. The scope of the process was impressive. It included aspects of

school climate and student behavior as well as academic achievement. Mr. Kellet

stressed the "grass roots" aspect of the accreditation process. He explained that the staff

determined the needs of the school and designed their school improvement plan

accordingly. Beyond grass roots goals for raising expectations of student behavior and

learning, the burden of improving students' scores on tests was a major push behind the

school's improvement plan. Mr. Kellet asserted that the accreditation process enabled the

school to attend to the goals of NCLB, the MSA and the county's new curricula. As he

described the numerous and complex goals of the accreditation process his concern that

Stone Valley performed well on the state's measure of "adequate yearly growth" was

clearly evident. He elaborated:

> We have shown a continuous school improvement plan based on multiple
>
> measures to be able to give us focus and help us achieve the success that we want.
>
> We have three basic areas. Two of them are student performance based and one
>
> is what they call non AFG[15] goals, non-accreditation for credit, that's what AFG
>
> is. Academic achievement goals we umbrella any unfunded mandate that comes

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[15] AFG is an acronym for Accreditation For Growth. It refers to a protocol for evaluation that focuses on the "outputs desired of student performance" rather than "inputs of school improvement," i.e. facilities, program, services, etc. (Middle States Association, What is AFG?).

down the pike and we get all sorts of unfunded mandates. It could be No Child

Left Behind Act…state issues, such as the brand new MSA tests. How do we

adjust our curriculum for that? And who pays for that?…if we don't show

adequate yearly growth, then we're going to get slapped on the hand and we

could end up getting reconstituted. So those are real issues. (Kellet, Interview 2)

Mr. Kellet described AFG goals at Stone Valley as communication pieces with

stakeholders, not goals directly related to student performance on tests. He stressed the

importance of infusing technology in the curriculum and differentiating instruction.

Additionally, these goals were intended to support the goals and beliefs of the school

itself such as "all students can learn" (Kellet, Interview 2).

In both interviews I had with Mr. Kellet, he stressed the grass roots component of

the plan but as he spoke I surmised that it wasn't as derived from the concerns or

consensus of the staff as he professed. I pressed him to talk about his role as the

instructional leader of the school and he directed me back to the Middle States evaluation

plan. He said:

I refer back to the strategic plan. It's staff directed, what staff development do

you need? It's my job to provide staff development opportunities for them, as

well sometimes when they don't want to do that, in which, you know, even being

around here some people don't necessarily want to do certain things. It's my job

to turn them around and say, "This is where we're heading." But this comes from

a grass roots direction. (Kellet, Interview 1)

Throughout our conversations, Mr. Kellet appeared to be a man pulled between

his ideology as an educator and responsibility as a school leader in Maryland. He told me

that many decisions that affected instruction were out of local control. For example, teachers pressed him to allow for more homogeneous grouping in their classes but it was mandated by the county that all classes (with the exception of advanced mathematics classes) be heterogeneously grouped. Furthermore, because of the focus on county and state tests, Mr. Kellet closely monitored both his teachers' performance in the classroom and their students' test scores. The end result of his drive to improve the school, from the perspective of Ms. Blakeway, was a breakdown in morale:

> He's really pushed a lot of teachers to be accountable and to meet quality I think. He's also pushed for a lot of staff development. Some things are not kosher with the whole status quo. There is a lot dissent right now within the building, and it could be just because of being held accountable. (Blakeway, Interview 1)

Ms. Blakeway seemed somewhat chagrined that Mr. Kellet went so far as to examine her students' mid term examinations, especially those of her algebra and geometry students who would be taking the HSA. He told her that he was checking for evidence of any achievement gap and wanted to have documentation that the school was addressing areas of concern stressed by NCLB. Given her personal efforts to monitor her students' test performance and take action on what the tests told her, I inferred from Ms. Blakeway's tone when she spoke about her principal's monitoring of her students' scores that she was somewhat demoralized by his actions.

Despite the tension between Ms. Blakeway and Mr. Kellet because of the manner in which he pushed accountability in the school, there were significant similarities between Ms. Blakeway's stated and enacted goals for her students and Mr. Kellet's vision for the school. They both strove to motivate their students to achieve, to learn to

think abstractly, or as Ms. Blakeway said in every class I observed, to think "out of the box." Both wanted their students to become adept at learning to use technology and Ms. Blakeway continuously used technology in her classroom and actively sought out and purchased new high-tech tools and computer software to use in her classroom. Mr. Kellet's vision enabled her to take advantage of opportunities to purchase these materials. Finally, they were both highly tuned into and responsive to external accountability mandates.

It is evident that the press for accountability from the state was a significant feature in Mr. Kellet's and Ms. Blakeway's versions of accountability. In the final section on the different dimensions of accountability in Ms.Blakeway's work as a teacher, I turn more directly to the effect the pressure of county and state accountability had on her.

Accountability to the County and State: Open to Public View

Ms. Blakeway was positioned as a teacher in an educational system that places considerable external pressure on teachers to improve student achievement. The public aspect of accountability, i.e., the release of test results for public view, was responsible for what seemed to be both Ms. Blakeway's greatest struggle with accountability and the area in which she had the least control. Although she was attuned and responsive to accountability mechanisms and instructional mandates, Ms. Blakeway was powerless to influence every aspect of her work. She took responsibility for student achievement, to the degree that she could, in a number of ways. She kept careful records about her students' achievement on tests from the time she began teaching. She believed that state and local testing were rational ways to ensure accountable teaching practices and she

used information from testing to help her set instructional goals. However, she also saw a downside to accountability. She was aware that test results did not always present a complete picture of student achievement – or teachers' efforts. They did not explain how factors beyond the teacher's control, such as student placement in advanced classes, influenced students' scores. Because Ms. Blakeway took her students' scores personally, her inability to control student placement in her classes, yet being held accountable to their success on assessments, angered her.

Ms. Blakeway told me that for the 2002-2003 school year her goal was to improve her students' geometry scores on the HSA. She described the scenario the previous year in which her geometry students scored well on the test but she was criticized because they were not higher. Moreover, a contradiction in the interpretation of the scores baffled her. Her algebra 1 students had an average score on the test of 88. These algebra scores were considered very high in comparison to the state scores. Her geometry students also had an average score of 88, yet these scores were considered wanting. The tone of her voice and the edginess of her demeanor revealed the anger that surfaced in her when she talked with me about this issue. She said that she had students in geometry that year who should not have been placed there. Those students had taken algebra 1 in seventh grade and had failed it. She argued against their placement in geometry in eighth grade because they hadn't achieved a sufficient mastery of algebra to take the high school geometry course, yet she took the 'rap' for not scoring higher on the HSA. She ranted:

> I had four kids that shouldn't have been there, they failed algebra. You should
> not be in the next course if you failed it. So there's an accountability thing that

needs to be looked at. So that's where I disagree with accountability. Just because their parent wants their child in the top class because it's a stigma thing, it's not acceptable. But if the parent wants it, that's what happens. So they get in there, so my score was 88 in geometry…. Okay, 88 in algebra, and we're being told we're phenomenal….an 88 in geometry, only one school in the town had an 89, and I'm being told it's not good enough. It was pathetic! So when you look at the high school scores [in geometry] they were at 42, 38. I'm like, wait a minute, the median was a 90, I was almost there but I had kids in there that didn't belong in there and they probably pulled mine down…. I sat in a meeting in front of all these other teachers; they went on about how pathetic the scores were. Not once, five times. Five times saying how pathetic that 88 was whereas the 88 in algebra was outstanding.   (Blakeway, Interview 1)

Ms. Blakeway understood that there was an expectation for high geometry scores for middle school students because students in this placement were considered highly capable and motivated. However, she was angry because, regardless of her professional opinion, some of her students were placed in geometry because of parental pressure to have their children in advanced courses. She experienced what she considered a public slap in the face about her performance as a teacher because of the scores from one group of students.   As she defended herself to me, she again revealed her belief that test scores were as evaluative of her skill as a teacher as they were a measure of student achievement:

When you're telling my scores in front of an entire staff are pathetic – you know, let's get real. Look at what the problem is. You've got kids who shouldn't be in

there that I know didn't do well on that because they shouldn't be there. Take

them out and I'll smoke it. (Blakeway, Interview 1)

Ms. Blakeway personalized accountability. *She* would "smoke" the test because

she knew what her students needed to know and be able to do and she would make sure

they could do it all. I never heard her say that any of her students' scores would be

higher if they tried harder or cared more. Nor did she complain that her students'

previous teachers did not prepare them for the work they were expected to do in her

courses. She believed that if her students met her expectations on a daily basis, their test

scores would reflect that she was doing her job. However, given what she viewed as her

high level of professionalism, accountability was unfair if her professional judgment

about the placement of her students was not followed.

Annette Blakeway: Summary

Ms. Blakeway is a teacher who constructed her practice around a love of

mathematics and a highly developed and multifaceted perspective about what it means to

be a teacher in an era of accountability. She strove to infuse an appreciation for

mathematics in her students as well as develop in them the mathematical skills,

knowledge and dispositions that are deemed necessary to become successful and

contributing members of society. She was confident in her approaches to teaching

mathematics to her students. There was no paucity of information available to her about

standards for mathematics teaching, and she accessed, interpreted and enacted them with

vigor.

Ms. Blakeway's sense of personal responsibility as a teacher drove her to take her learning about teaching into her own hands. She sought out professional development opportunities that informed her knowledge about the educational outcomes the state expected, and investigated what it means to do mathematics in practice through her summer work with government scientists. She understood that knowing mathematics did not guarantee high quality teaching in mathematics and furthered her pedagogical development by seeking out professional development opportunities beyond what was required to hold her position as a teacher in addition to attaining National Board certification.

The daily lessons Ms. Blakeway created in her mathematics classes demonstrated her learning of standards and pedagogy. She was analytical in her planning and organized in her practice, enabling her to negotiate regular changes in the mathematics curricula in her county. With the onset of a rapidly paced general math curriculum in the 2002-2003 school year, she was able to spiral concepts with ease due to her own deep understanding of mathematics. Her zeal to try new pedagogical ideas and technology kept her well supplied with lessons and instructional materials that addressed the varied learning styles of her students and she engaged them with interesting activities, both short and extended, that helped them achieve conceptual understanding that would contribute to their deeper mathematical thinking and future learning.

Ms. Blakeway's practice was honed by her belief in the societal expectation that teachers should be held accountable for their students' achievement. She understood the value and utility of the state's content standards and learning outcomes to guide teachers in what to teach and how students should demonstrate their learning. Therefore, she had

few quarrels with preparing her students to take the various state tests. Instead of criticizing testing as a limited or narrow indicator of student learning, she adopted what she perceived to be the philosophy of Maryland's accountability policies. She believed that external accountability was more about making sure that teachers created learning opportunities for students to acquire deep understanding of mathematical concepts, apply them to real life situations, and understand mathematics as a way to communicate about the world. Moreover, accountability mechanisms allowed her to measure her own success as a teacher. Accountability was personal to Ms. Blakeway; she believed that she was a major factor in ensuring her students' measurable achievement and her competitive nature drove her to improve her students' scores from year to year. However, Ms. Blakeway's deeply personal relationship with accountability had a downside. When test scores could be used to criticize her teaching, particularly when the critique didn't acknowledge the contextual factors of the classroom, or when she believed that they were used to 'check up' on her, they could make even a devoted and successful teacher feel demoralized.

CHAPTER VII

CONSTRUCTS OF GOOD TEACHING AND HIGH-STAKES ACCOUNTABILITY

In the previous chapters I explored how MTY candidates understand and construct their practices in diverse school and classroom contexts and a changing and regulated high-stakes accountability system. In each case, I examined how the teachers understood their practices by looking at their beliefs about teaching. I also looked at how they constructed and realized their practices based on the context of their classrooms and the accountability climate of their schools, and by extension their school districts and state. Each of the three teachers held strong beliefs about what it means to teach. Each teacher also made efforts to accommodate perceived accountability directives in their teaching, whether that meant, for them, being accountable to the county through the ways they delivered the curriculum, being accountable to the state through their attention to preparing students for state required tests, or being accountable to their students by teaching in ways they believed were in their students' best interests.

This chapter focuses on how the teachers' different constructs of good teaching reside in a high-stakes accountability climate. Although the cases of the three teachers reveal differences in practices and beliefs about teaching, there is a glaring similarity in the way they thought about their profession. Moral dimensions ran through their relationships with their students, in the management of their classrooms, and in their mathematics instruction. These moral dimensions manifested themselves in different ways, but their presence pervaded each teacher's practice.

Focusing on the question of how the teachers' constructs of good teaching reside in a high-stakes accountability system forced me to reconsider the concept of

accountability, specifically with regard to formal policies directed at it. I began to examine the language of some of the public documents that the MSDE and the U.S. Department of Education released regarding their accountability policies and there I also noted the distinct presence of moral dimensions in the language justifying educational accountability.

Formal accountability measures, namely NCLB, want all children to achieve academically, but further they want children to be good people and be prepared to contribute to a greater society. The executive summary of the NCLB Act begins with a quote from President Bush: "These reforms express my deep belief in our public schools and their mission to build the mind and character of every child, from every background, in every part of America" (Ed.gov, 2002). Although increased measurable academic accountability is the most visible and arguably the most attended to aspect of NCLB, there is also a clear message that education is a moral endeavor.

The state of Maryland also imparts messages about the moral dimensions of schooling. For instance, Goal 4 in Maryland's plan for preK-12 education, *Achievement Matters Most*, states, "All schools will be safe, drug free, and conducive to learning" (MSDE, 2004, p.5). The goal stipulates that schools must "create a safe, healthy climate for learning" and establish a "code of conduct." The plan then goes on to stress its plan for school accountability related to achievement as measured by various state tests. The state's inference here being that safe, healthy climates that are conducive to learning are not created solely through programs of academic instruction, they are created through relationships between persons and are sensitive to local concerns and norms. The state's document suggests that in order for children to learn, learning that schools are

accountable for, they must be mindful of and attempt to realize the moral mission of

schooling because learning and the holistic development of the child are interconnected.

In order to understand the linkages between the versions of accountability the

teachers in my study encountered and the realization of their constructs of good teaching,

which are laden with moral dimensions, I first explore literature on moral dimensions of

teaching. I then turn to an examination of the three teachers' practices and beliefs to

illustrate how their constructs of good teaching could be interpreted as belonging to the

moral domain. Next I examine the literature on the concept of accountability in order to

understand how the teachers' constructs of good teaching resided with the accountability

structures they encountered in their schools. This is followed by a return to an analysis of

the teachers' work to understand how they interpreted accountability in their school

contexts and responded to it in their practices. Finally, I link their constructs of good

teaching using the analytic frameworks of moral dimensions of teaching and the

meanings of accountability to examine how their constructs resided in a high-stakes

accountability climate.

<div align="center">Examining Moral Dimensions of Teaching</div>

"Students who attend schools where they perceive that teachers do not

care about them are more likely to be at-risk than those in schools where

teachers care" (Chow-Hoy, 2001, p.656).

The moral significance of teaching is as old as the first recorded knowledge about

the practice. Modern scholarship and research on the moral dimensions of teaching show

that teachers strive, consciously or unconsciously, to be more than classroom technicians

or conveyors of knowledge (Hansen, 1998, 2001b). Teachers hope to have a positive

influence on their students by assisting them in learning to learn, discovering their own potential and learning to respect themselves and others. Hansen (1998) noted that while teachers "may not employ the term 'moral,' they envision and talk about their work in frankly moral terms" (p.643). His description of teaching encompasses the connection between the intellectual and the moral in teaching:

> Teaching means promoting enabling attitudes, orientations, and beliefs, the kind that allow students to progress rather than regress as human beings, to grow in both intellectual and moral terms. In short, teaching is steeped in presuppositions about moral goodness and about what it means to live a flourishing life. (Hansen, 1998, p. 648).

When teachers attend to their students by listening to them, take them seriously by engaging them in intellectually demanding ways and identify their strengths and weaknesses to build on their strengths and overcome their weaknesses, they are teaching in moral ways. Thus, teaching that occurs in the classrooms of good teachers is more than merely technical or instrumental, it is aimed at, among other virtues, building students' character, respect for themselves and others, and independence. By attending to the virtuous, teachers create learning environments that enable students to grow intellectually and morally.

In Chapter Two I highlighted the work of several scholars on the moral dimensions of teaching. I focus now on aspects of their work that are most relevant to my examination of the MTY candidate's constructs of good teaching. I begin with Tom's (1984) views about the power relationship between the teacher and his or her students.

Tom (1984) asserted that whether the teacher assumes power by taking an authoritarian stance in the classroom or if the teacher relinquishes authority to his or her students, the teacher ultimately retains the position of power. The teacher's goal in both scenarios is to develop desirable dispositions in the student. When the teacher surrenders power to the student, the goal is the development of autonomy in the student; when the teacher retains power, the goal is to focus attention on the teacher's competence.

Tom (1984) and Valli (1990) both confirmed that choices teachers make with regard to the curriculum have significant moral dimensions. Tom (1984) asserted that when a teacher chooses to teach one topic or objective over another, a moral choice about the "worthwhile learning" desired by the teacher is made. Valli (1990) concurred, adding that the curricular choices teachers make reflect "community consensus" about what is moral and contain "tacit conceptions of value" (p.41).

It is important to note that at the time that Tom and Valli made these claims about the moral dimensions of curricula, teachers generally had more autonomy over curricular choices with regard to content than the teachers in my study were granted. However, despite the highly structured nature of the curricula that the MTY candidates were asked to adopt, as I will address later, they made decisions on the curricular enactment based on their relationship with their students and the local context.

Jackson (1986) pointed to the moral dimensions of the teacher's approach to instruction. He described the mimetic (conveyance of knowledge) and the transformative (transformation of subject matter into appreciation or curiosity about the subject) approaches to teaching. He asserted that good teaching requires both approaches, but particularly the transformative, which promotes moral and intellectual change in students.

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The major theme running through all of the scholars' descriptions of the moral dimensions of teaching is the relationship between the teacher and his or her students. Noddings (1984, 2001) highlighted this relationship in her work on the ethic of care. She stressed that caring encompasses reciprocal relationships of receptivity, relatedness, and responsiveness between teacher and student. Noddings also emphasized that caring for students requires that the needs of the "cared-for" (the student) take priority over the well-being or comfort of the caregiver (the teacher).

Finally, for the purposes of examining the moral dimensions of the practices of the three teachers in my study, I return to the work produced by the Manner in Teaching Project I referred to in Chapter Two. The researchers on the project studied the moral dimensions in the practice of teachers to reveal a more robust conception of teaching; one that includes how teachers cultivate highly regarded intellectual traits and the development of character in their students.

Fenstermacher (2001) asserted that the teacher's day-to-day practices foster the moral and intellectual development of their students. He identified six methods teachers use for such development: the construction of the classroom community, didactic instruction, design and execution of academic task-structures, calling out for conduct of a particular kind, private conversations, and showcasing specific students. Richardson and Fallona (2001) related how the teacher's manner, or "virtuous traits of character" also promote the development of intellectual traits and the development of moral virtue in students. They positioned manner as an important component of classroom management that contributes to student learning.

Chow-Hoy (2001) emphasized that the school context accounts for different moral dimensions in the work of teachers. He showed that there is a link between school programs and/or the philosophy of the principal and teachers' perceptions of their work. The school context is important, Chow-Hoy wrote, because it impacts "the degree of emphasis [teachers] placed on the development of social skills and virtues" (p. 676-677) in their students.

My discussion of the moral dimensions of teaching provides a backdrop to examine the moral in the practice of the teachers in my study. In the next sections I look at each teachers' constructs of good teaching using the moral dimensions of teaching as an analytic framework. I use this analytic framework for this purpose because I contend that the MTY candidates' constructs of good teaching had strong moral orientations. There are many avenues to take in this analysis. As all of the scholars referenced above will attest, teachers' practices, particularly the practices of good teachers, are saturated with moral significance, making it difficult to succinctly describe the many ways the teachers in my study taught in morally directed ways. I must emphasize that although the moral dimensions of teaching do not represent the entire focus of my study, they are an important strand. In the following section I use that strand as it relates to the MTY candidate's constructs of good teaching.

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Teachers' Constructs of Good Teaching and

Their Portrayals of Moral Dimensions of Teaching

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Hansen (1998) noted that teachers rarely employ the term "moral" when they talk about their practice, but they envision and talk about their practice in moral terms. In this

section I discuss how the teachers in my study envisioned and talked about their teaching as a backdrop to explaining how their constructs of good teaching resided in a high-stakes accountability climate.

Mrs. Walker: A Caring Approach to Skills Attainment

Mrs. Walker was acknowledged as a good teacher by her students, their parents, her school administrator and her colleagues. In addition to receiving the MTY award for her county, she received several other prestigious awards for her teaching. The portfolio she showed me about her awards overflowed with testimonials from parents, students, and other teachers praising the work she did with students. For Mrs. Walker, and for her promoters, it was the moral dimensions of her teaching for which she was recognized as a good teacher. The letters did not praise her mathematics pedagogy per se, they did, however, reveal that she was admired because of the relationships she developed with students. Relationships that resulted, for many students, in a psychological ease with the study of mathematics they had not experienced with previous teachers.

Mrs. Walker believed that good mathematics teaching in the fifth grade developed a solid foundation of basic skills in students. Her patient instruction and attempts to build communities of learners provided a non-threatening environment for students to examine their understandings and practice their skills together. Through Mrs. Walker's methods, many students who failed in math in previous years relaxed their resistance to studying mathematics and gained confidence in their ability to execute mathematical skills. Students and their parents praised her for making her classroom a place where children felt safe and comfortable. In her classroom students found a sense of belonging and acceptance.

Mrs. Walker said "…when you look at it we are with children longer than they are with their parents…So hopefully we are shaping their lives so they can deal with all the events of the real world." Mrs. Walker's relationship with her students was in some ways like that between a mother and child. She referred to them more often than not as "children" rather than "students," indicating the responsibility she assumed for their care and well-being. She sometimes used instructional time to engage her children in conversations about drugs and sexuality because she believed it was beneficial for them to talk about the adult issues some of them faced in their lives. Even though she was uneasy about addressing these difficult issues, her attention to them demonstrated her ethic of care. Her students were the "cared-for" (Noddings, 1984); Mrs. Walker subordinated her own sense of comfort in deference to her students' needs.

Mrs. Walker made her classroom a safe haven for students. There were extra students in her classroom on many occasions because they had been sent out of other teachers' classes for misbehavior. This happened so often that I sometimes wondered if some of the children misbehaved just to be sent to her room. However, being sent to her room was not a vacation from schoolwork for them. Mrs. Walker insisted the students work on the assignments that were sent with them and was stern with them when they showed up at her door, indicating her disappointment that they could not control their behavior. It was apparent that she was successful at instilling the virtue of appropriate deportment in her classroom because students rarely misbehaved in her class. She was also successful at conveying the virtue that the work done in her class was important for the students' intellectual growth. This virtue was demonstrated most directly by a "trouble maker," who was frequently cast out of other teachers' rooms, when he warned

his classmate to stop annoying him during Mrs. Walker's class because he wanted to get a good grade.

The philosophy of teaching statement Mrs. Walker wrote for one of her teaching awards stated her conviction that "formal education is supplemental to day-to-day socialization." She addressed this philosophy in a number of ways. In her teaching methods and in her manner, she emphasized equality among the individuals in the fifth grade. For example, she had no control over the mixing of her enrichment class and inclusion class one day a week, but however difficult that must have made her instructional planning, she used the situation to promote the virtue that students, regardless of their abilities in mathematics, could work together for mutual benefit. When teaching to the broad range of abilities in the class she chose instructional materials that were challenging enough for her enrichment students, but sufficiently skill based for the inclusion students. She paired inclusion students with enrichment students so they had the opportunity to get to know each other and experience working together for mutual benefit. Through her choice of instructional materials and student pairings, Mrs. Walker strove to create fairness among her students. Because the enrichment and inclusion students became friendly with each other, her included students "special ed" label lost its significance in the eyes of many students and others in the school community.

Furthering her attempts to establish equality among her students, Mrs. Walker regularly held competitions between classes using a common homework assignment as the vehicle for competition. The competition prompted the completion of assignments, and the common assignments sent the message that Mrs. Walker had the same expectations of all of her students. Additionally, Mrs. Walker often explained to one

class how students in another class approached a certain problem or about a good idea someone had. These approaches and ideas sometimes came from the first period inclusion class. Through homework competition and referencing students' ideas across classes, she was able to highlight the work of the inclusion class to the other classes in ways that drew attention to their competency rather than their inclusion status.

Creating a community of learners in her classroom was a key feature in her teaching. Mrs. Walker regularly employed Fenstermacher's (2001) example of manner in teaching, showcasing student work. This was usually done informally through having students show their work at the board and explaining their answers. Done in this way, showcasing student work not only addressed the learning of content by requiring students to articulate their thinking about solving problems, but it also demonstrated that there was more than one way to approach a problem and stressed the value of others' ideas. When "life-lines" were called to the board to assist a peer or check their work, Mrs. Walker built community by helping students understand that asking for help when needed and providing help when asked were virtuous traits.

The MSA test preparation prompt on perimeter that Mrs. Walker used in each of her classes was also an example of showcasing, albeit every student's work was showcased. This technique was useful for providing a means to discuss the mathematical concept of perimeter in detail and promote mathematical discourse. Even when the answer being showcased was incorrect or did not satisfy the evaluation criteria, it was mathematically educative for students because they were prompted to explain why the answer was in error and explain how to improve it. It was morally educative because

students were taught to be respectful of each other and that there was no shame in making a mistake.

The position of power Mrs. Walker assumed also revealed a dynamic moral relationship. As Tom (1984) indicated, the power relationship is not always one of the teacher having power over the students. Mrs. Walker frequently relinquished her role as the authority in the classroom to her students. The use of life-lines was a frequent example of the student becoming the teacher. In another instance, she gave students decision-making authority about what assignments to mark on their grade sheets. Granted, she indicated to me that she did this in order "to give all the children the benefit of the doubt that they will have good grades on their grade sheet," however, when she engaged students in the process of deciding what would be recorded, she required that they provide arguments in favor of including an assignment. When this happened, it appeared that the students understood the significance of having power because they used reasonable arguments to convince Mrs. Walker why an assignment should be a part of their grade. One could argue that Mrs. Walker acted irresponsibly by allowing her students to decide, on occasion, which assignments were graded. However, she believed the gain in self-esteem and confidence this practice provided her students far out weighed the marginal, and possibly artificial, increase in the students' daily grades.

The examples provided above are only a few examples of the ways Mrs. Walker's practice demonstrated moral dimensions in the context of teaching mathematics. Her practice was so saturated with moral meaning that to elaborate on the nuances of moral meaning that occurred from minute to minute would be impossible. I turn now to how

Mrs. Walker's concept of good teaching was supported by her principal and the school environment.

Moral Dimensions in the Context of Monument Elementary School

Mr. Braniff, Monument's principal, provided a description of good teaching that seemed to capture the image of Mrs. Walker. Mr. Braniff believed that the essence of good teaching lay in the interaction between teacher and student. When he talked about good teaching, even above content related pedagogy, he described teaching that demonstrated elements of Noddings's (1984) ethic of care: receptivity, responsiveness and relatedness. He stressed that teachers must relate to students as individuals if they hoped for students to be receptive back to the teacher or receptive to his or her instruction. He was contemptuous of teachers who acted like "robots" in the classroom because "kids don't interact well with robots." For him, the well-being of the students was the hallmark of good teaching because when students feel cared for and are happy they are open to learning.

Mr. Braniff's vision of good teaching was further promoted by Project Target, the school-wide initiative that he believed was so successful during the 2002-2003 school year. It aligned very well with Mrs. Walker's efforts to treat all students as capable individuals and promoted the virtue of equality. Project Target acknowledged students for their effort (in equal measure to their achievement), their preparedness for learning, and good citizenship. In summary, considering Mr. Braniff's beliefs about good teaching and the goals of Project Target, the caring context of Monument Elementary School was a perfect fit for Mrs. Walker.

Mr. Clark: Nurturing Number Sense

Mr. Clark, like Mrs. Walker, was a highly respected teacher in the community. Parents wanted their children to be placed in his classroom, Mr. Clark believed, because of his ability to "connect" with children. He told me that he had letters from parents validating this belief; in fact, he was nominated as the MTY candidate by a parent of one of his students, likely based on this quality. Mr. Clark believed that his ability to connect with students was "given by God;" it was beyond his comprehension to approach teaching in ways that were other than caring and nurturing.

Also like Mrs. Walker, moral dimensions of teaching were evident in nearly all of his interactions with students and the ways he presented his lessons. Many of his practices could be subsumed under the heading of manner in teaching, such as didactic teaching, holding private conversations with his students, or calling out reminders about mutual respect and self-discipline. Because these manners of teaching were so intertwined with the moment-to-moment delivery of his lessons, I do not attempt to extract or categorize them here.

Mr. Clark was able to create a caring, nurturing relationship with his students using a power structure that was quite authoritarian. When it came to teaching mathematics, Mr. Clark was a well of patience, flexibility, and compassion, but when it came to his expectations for student behavior, he was impatient and inflexible. He was intolerant of any kind of horseplay and as a result, students did not disrupt his lessons with misbehavior. He had an uncanny ability to spot even the most covert attempts by students to play with gadgets, draw pictures, or construct origami underneath their desks when they should be attending to the lesson. When students' attention to a lesson did

wane, he used a number of techniques (the lesson on metacognition, for example) to help them regain their focus. He deliberately and consistently addressed the virtues of self-discipline and self-responsibly for both behavior and learning. Mr. Clark established himself as the authority about moral conduct as well as mathematics because he believed "it's so important for adults to remember that a ten year old is not an adult." His students responded positively to this power relationship because he was consistent in his expectations regarding behavior and work effort. His students were quite aware of the power differential in the classroom but the relationship resulted in a classroom atmosphere of mutual respect and stability.

Mr. Clark believed that "students are always open with you and will do their best for you if you establish a good relationship with them." He had, in some ways, a paternalistic relationship with his students in much the same way that Mrs. Walker had a maternalistic relationship with hers. He sought to endear his students to him. He listened to stories about their lives and thoughts, and did his best to know about his students, their likes and dislikes, and their family situations. Between classes students vied for his attention; they clearly felt respected and valued by him. When addressing students in class, Mr. Clark often called them "honey" or "buddy." Although these nicknames sometimes were used spontaneously, I noted that Mr. Clark used them most often when a student appeared to be nervous or uncomfortable, or when he wanted to a student to know he was pleased with his or her work or behavior. Mr. Clark, practicing an ethic of care, was responsive to the moods and feelings of his students and they in turn were receptive to his efforts.

Mr. Clark believed that good mathematics teaching in the fifth grade developed number sense in students. Because he taught one of the "lower groups" in math, he regularly reminded his students, "Everything we do is going to be with 0 through 9 so don't get all wigged out because everything we do is 0 through 9. And all we're going to do with those is add, subtract, multiply, or divide." By presenting this concept of what the learning of mathematics entailed, Mr. Clark believed he helped students overcome their anxiety about mathematics and learn to make connections between mathematical concepts.

Mr. Clark's moral construct of good teaching supported his construct of good math teaching. I return to his assertion that the greatest qualities of a teacher are patience, flexibility and compassion. Mr. Clark understood and accepted that his students got "wigged out" over math and so his three virtues of good teaching compelled him to show students a number of ways to think about solving a problem. He tried to connect mathematical concepts to their experiences, and attempted to make the climate of his class as fail-safe as possible as long as students made an effort.

Moral Dimensions in the Context of Clear Water Elementary School

Mrs. Schribner supplied me with the school improvement plan for the 2002-2003 school year. As I noted in Mr. Clark's case study, it did not address mathematics teaching at all. The only school-wide goal other than those directed at reading was a "character education goal." This goal stated:

> Clear Water Elementary School will personify a community of virtue in which honesty, fairness, trustworthiness, caring, respect, and responsibility are always modeled, taught and deliberated as an integral part of the curriculum and daily

school operation. Working in partnership with families and the community, these practices will result in improved student achievement, safe and orderly school environments, and the development of citizens who are contributing members of society.

Neither Mr. Clark nor Mrs. Schribner mentioned this goal when I asked them about the school climate or community. The school improvement plan outlined a plan of action that formally incorporated character education into the reading program. It was evident in Mr. Clark's case study that he did not support many formalized mandates for instructional improvement and it is likely that he would find a directive around character education as superficial and political as he found most educational reform directives. Interestingly, however, if he was familiar with the school improvement plan I believe he would have recognized his teaching as personifying the virtues espoused in it. I doubt, however, that the school improvement plan influenced his approach to the moral dimensions of teaching that were so infused into his teaching. Mr. Clark was guided by his personal vision of good teaching: "I am putting everything I have into these kids with the hope and the faith that they're going to turn out to be good people in the end."

Ms. Blakeway: Fostering Mathematical Intellect

Ms. Blakeway had a somewhat different construct of good teaching than did Mrs. Walker or Mr. Clark. Some of this was likely accountable to the age of her students and her love and deep understanding of mathematics. Also, of the three, her construct of good teaching was the most overtly focused on bringing her students to a high level of mastery in mathematics. Unlike the other teachers, she seemed to build every aspect of her teaching, even her approach to the moral dimensions of teaching, around her goal of

student understanding and appreciation for mathematics. And, as I will explain in greater

detail in a later section, unlike the other teachers, her construct of good teaching was

influenced by the accountability climate in which she learned to teach.

Ms. Blakeway's relationship with her students was authoritarian, and she admitted

that sometimes her students became frustrated with her because of it. However, she

believed it was her moral responsibility to hold high learning and behavioral expectations

and make tough intellectual demands of her students. Her high expectations sent the

message to them that they were capable learners.

There appeared to be a high level of mutual respect between Ms. Blakeway and

her students despite her authoritarian style. Her students appeared to understand that she

was authoritarian because she cared about them and their learning. She took her students

very seriously in whole group discussions and one-on-one conversations. She listened to

them carefully and by doing so demonstrated that she was interested in their ideas, a

strong message of respect. Ms. Blakeway frequently challenged her students to convince

her why their thinking about a certain problem made mathematical sense. I observed

several of these dialogues in which there was genuine debate between Ms. Blakeway and

her students. These debates inculcated an intellectual atmosphere in her class that her

students took pride in. They were responsive to her high intellectual expectations, her

fairness, and her consistency. It is telling that of the three teachers, Ms. Blakeway was

the only one that was nominated for the MTY award by her students.

Ms. Blakeway's emphasis of the virtue of hard work permeated her teaching. In

her case study, I highlighted the work ethic she lived by and sought to instill in her

students. She modeled her work ethic by being meticulously organized and prepared for

class, making every minute of class time count, and always striving to try new things in her teaching. She expected similar efforts from her students. She didn't accept sloppy or incomplete work and enforced consequences for late work. Although her students sometimes wanted to take the easy way out and hand in an assignment that was carelessly done, they deferred to her when she required that they redo an assignment. They seemed to recognize that she was asking them to redo work for their intellectual growth, and because she did not give them rote assignments, they could justify to themselves that they might learn something by meeting her expectations.

Some of the methods Ms. Blakeway used to convey the moral virtues of intellectual discipline and tenacity toward learning looked very much like two of the methods Fenstermacher (2001) described to "create classroom settings to function optimally for the participants" (p. 641): construction of the classroom community and design and execution of academic task structures. In her case study I described the ways Ms. Blakeway arranged her room with worktables rather than desks, prepared baskets of instructional materials that were ready for students before they entered the room, and managed instructional materials such as graphing calculators and measuring tools in ways that did not interfere with the smooth flow of her lessons. From the first day of school she taught her students the correct use of the baskets and tools for learning math. The academic tasks Ms. Blakeway assigned were always well planned, directed at specific objectives and addressed a variety of learning styles. Moreover, the content of the tasks and the way she presented them usually required students to think deeply about what they were doing. Ms. Blakeway's choice of instructional materials matched Tom's (1984)

definition of the moral in the teacher's choice of content; they demonstrated desirable learning toward worthwhile ends.

Ms. Blakeway's approach to teaching mirrors Hansen's (2001b) assertion that the teacher's influence on students can be simultaneously intellectual and moral. She believed mathematics is a way to explain the world. She wanted her students to understand that mathematics is more than a set of rules but a way in which they could exercise their imaginations. Of the three teachers, her instruction in mathematics was the only one in which the teaching was transformational, using Jackson's (1986) description of transformative teaching. Under Ms. Blakeway's instruction I observed students who came to understand the power and beauty of mathematics. Mathematics became more than the manipulation of numbers within a given set of rules but a means of expression.

Moral Dimensions in the Context of Stone Valley Middle School

The greatest contextual feature that seemed to support Ms. Blakeway's vision of good teaching was Stone Valley's block schedule. The schedule provided a significant amount of *time* that allowed Ms. Blakeway to develop the rigorous and disciplined dispositions to learning in her students that she so strongly valued. The 80-minute class periods enabled her to create lessons in which mathematics could be explored, not merely presented and practiced. I did not perceive an urgency to rush through the content of the curriculum in Ms. Blakeway's teaching because she had time to develop understandings of concepts that were foundational for other concepts. Additionally, Ms. Blakeway had the 40-minute intervention period at her disposal. She took advantage of this time to assign projects (e.g., the string art project, the ABC Book of Geometry or Algebra project) that illustrated the creative dimensions of mathematics. I am uncertain how she

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would have incorporated those assignments into her teaching without the intervention period. At the very least, it is possible that she would have used class time for students to work on or get help on those projects – I don't believe she would have discontinued them. But time was valuable to her and she was grateful for the advantage of having that precious resource.

Ms. Blakeway and her principal, Mr. Kellet, saw eye-to-eye on the purposes of education. Mr. Kellet believed "we're preparing students to be able to make a career. And a career means you need to go beyond high school." He told me he approached instructional leadership with that purpose in mind. Ms. Blakeway believed her instruction prepared her students to be contributing members of society and for many, she promoted her conviction that they could and must go beyond high school. She was serious when she said, "It's [the world is] dog eat dog…" when explaining why she was so demanding of her students. She believed a person could not function successfully in society without being numerate. Furthermore, Ms. Blakeway's hope for some of her students was to achieve in careers that required considerable mathematical understanding and expertise. When she said that a teacher's purpose was to "educate children to be our future," she meant a better future. One in which current and future problems are solved by students from today's classrooms.

Each of the three teachers displayed moral dimensions in their teaching that they believed supported their teaching of mathematics. Mrs. Walker believed her ethic of care supported her methods for the development of her students' basic mathematical skills. Mr. Clark nurtured his students' as an avenue to developing their number sense. Ms. Blakeway sought to instill her ethic of purposeful work to develop mastery in and

appreciation for mathematics in her students.   These constructs of good teaching can be

linked to the teachers' responses to the accountability climates of their schools. I make

these linkages in the next section after a brief discussion on meanings and interpretations

of educational accountability.

Educational Accountability: Multiple Interpretations, Contentious Applications

"Educational accountability," like "good teaching," is a term that is familiar to

most Americans. Like good teaching, it is open to multiple interpretations and its

complexity induces contentiousness. Many educators argue that the term connotes

answerability, but because many teachers believe they have always assumed the

responsibility for children's learning and well-being in school, they often view the term

as a lack of confidence in or appreciation for their work.   Scholars of education argue

that the notion of accountability can be applied to so many aspects of education that it

pushes the focus of teachers and school administrators in too many directions.

In Chapter Two I discussed different scholar's views about accountability. Here I

revisit those views in order to emphasize the disparity of perspectives about educational

accountability. As I examine how the MTY candidates responded to the accountability

climates in their schools, these disparities become evident.

Cochran-Smith and Fries (2001) described the tensions between the

"deregulization" model of accountability and the "professionalization" model. The

deregulization model highlights the imperative of the state to expect specific results from

teachers' work based on defined and measurable outcomes. This is in conflict with the

professionalization model that highlights the difficulty of defining outcomes that are not

easily assessable through standardized measures. Cochran-smith and Fries further

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emphasized that the professionalization model responds to local contexts, unlike the deregulization model.

Biesta (2004) asserted that the version of accountability present in schools today could be described as a "technical-managerial" one. This version is parallel to financial accountability that requires auditable accounts of an organizations' activities be presented to the party holding the organization accountable. Biesta and Poulson (1996) contrasted the technical-managerial model with a professional model of accountability in which teachers hold themselves responsible for their professional conduct and their relationships with colleagues, parents, students, and society at large.

Goodlad (1979) criticized what he called a "scientific" version of accountability that presents education as a means to end. He contended that portraying accountability as a means to achieve narrowly enunciated goals marginalizes other more "humanistic" educational goals. His preferred version of accountability, what he termed an "ecological" version, is responsive to local contexts and relationships between individuals. External processes such as state desired academic achievement goals are included in the ecological version, but do not subsume the educational processes that contribute to the health of individual schools.

Fenstermacher (1979) asserted that Goodlad's argument does little to focus on the functional nature of measurable accountability that state driven systems strive for. He submitted that accountability is a relationship between persons rather than institutions, and those who are accountable are expected to focus on a communicable standard of performance. They are also obligated to provide information about the status of the progress of those for whom they are held accountable. Fenstermacher added that a strong

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version of this "generic" accountability requires that those who are held accountable must be considered responsible, trustworthy, and endowed with discretionary authority to accomplish the tasks for which they are held accountable.

Additionally, Fenstermacher (1979) pointed out that what has come to be known as accountability is more a program of action. He contended that programs of action get information about performance standards and measures of achievement from a number of sources that may not be the parties involved in the accountability relationship. Moreover, when the program of action, as in Maryland's version of accountability, is imbued with rewards and sanctions, trust, responsibility, and discretionary authority are often eroded.

Fenstermacher's discussion on accountability is useful for my purposes because he separates out the technical-managerial aspects of programs of action that function as formally mandated accountability plans from the features of strong generic accountability (trust, responsibility and discretionary authority) that good teachers envision but often have difficulty articulating. Most teachers, like those in my study, support the academic standards and learning outcomes that appear in reform plans to raise student achievement. The three MTY candidates agreed that it is reasonable for schools to provide evidence of student learning and one, Ms. Blakeway, used information from the evidence to inform her instruction. However, when the relational aspects of Fenstermacher's version of strong accountability systems are diminished or absent, a tension is created that teachers resent. Because teaching happens in specific contexts that are difficult if not impossible to generalize, teachers feel duty-bound to use their personal knowledge of their students and cues from the local environment to make decisions about their work. High-stakes accountability systems have the potential to become so rigid that teachers perceive they

are not trusted to make the decisions they believe are necessary for their students to learn or thrive. They experience a narrowing of their discretionary authority when their autonomy is discouraged or curricula become too prescriptive, thus, they resist taking responsibility for technical-managerial programs they had no part in designing. Here is where the issue of mutual trust between the parties of accountability resurfaces. When teachers experience the tension between their moral obligations and the demands of the high-stakes system, they may come to mistrust the system that compels them to approach teaching using highly technical-managerial programs, particularly when failing to meet the requirements of the system results in sanctions.

In the next section I return to the practices of the MTY candidates. I examine how they responded to mechanisms related to the accountability system (specifically curriculum and testing) in the context of their schools and classrooms. Here I link their constructs of good teaching to the accountability system in order to understand how they reside together.

Teachers' Responses to Accountability Mechanisms

The teachers in my study experienced the introduction of many new accountability mechanisms during the 2002-2003 school year. Each was teaching a new mathematics curriculum that was aligned with the state learning outcomes and content standards developed by the state. The MSA was in its inaugural year. It was administered at the beginning of March, rather than in May, as was the MSPAP. The early testing was rather unnerving to the teachers because they were concerned that they wouldn't be able to cover enough of the curriculum before the test. The teachers didn't

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know much about the MSA, other than sketchy details about the format, until shortly before the test was administered. Even then, their knowledge of it was incomplete. The principals in their schools understood, after years of high-stakes accountability and what they knew about the provisions of NCLB, that analyzing test data was a growing part of their responsibility as instructional leaders. Some of the principals responded to this more urgently than others; old ways of data analysis were being revised and new types of data were being collected in the schools. How much press the teachers experienced to respond to data driven instructional directives was dependent on the principals' understanding of data driven instruction and his or her comfort in responding to that instructional leadership expectation.

In the following sections, I present the teachers' relationship with the accountability contexts of their schools during the 2002-2003 school year. It is important to remember that the 2002-2003 school year was a transitional year with regard to mathematics curriculum and state testing in each of the three schools. Thus, the picture I present here is a partial or developing representation of the teachers' experiences with accountability.

Mrs. Walker's Relationship with Accountability

Christine Walker seemed, on the surface, relatively unfazed by the notion of high-stakes accountability. After 35 years in the classroom, she saw educational policies come and go and seemed to accept that NCLB was another reform that would be around for a while. She learned to accommodate the directives of Maryland's accountability system before NCLB and was accustomed to preparing students to take a high-stakes assessment. However, the changes in the accountability system had greater implications for the work

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she did in her classroom than she anticipated. Her calm exterior belied the difficulty of attending to the instructional changes that were expected during the 2002-2003 school year.

Mrs. Walker taught two versions of curricula that were paced in response to NCLB. The curricula directed her to teach the curricular topics on a prescribed schedule. As the only fifth grade math teacher at Monument, she was required to keep all of her classes on schedule regardless of their ability. This was particularly difficult because of the regular incorporation of her inclusion class with her enrichment class; classes that employed different curricula. Mrs. Walker believed the presentation of topics in the curricula, especially that of the general math curriculum, was paced too quickly for many of her students. She was disheartened by her belief that many of her students needed "special services" to achieve at a satisfactory level in mathematics but did not qualify for special education, nor were there other interventions for low achieving students available.

Additionally, there was a lot of content to cover in the general math curriculum and Mrs. Walker felt pressured to rush through it because the MSA was administered in March rather than May. Mathematically, Mrs. Walker strove for her students to develop foundational skills. Accordingly, she worried about the consequences of the fast instructional pace she was expected to maintain and complained, "… a lot of the skills, I don't think the children really learn them. What we are doing is really hitting them and they're exposed to them, but I don't think they're really learning."

Mrs. Walker also complained that the curricula's fast pace restricted her from engaging students in extended projects and activities she used in previous years. During my observations, her mathematics teaching was very procedural, and she regularly

engaged her students in the practice of isolated algorithms. It wasn't until after the MSA that she believed she had the discretionary authority to slow down, review unmastered skills with her students and teach using the "hands on" activities she believed helped her students gain conceptual understanding.

In Mrs. Walker's case study I illustrated that she did not follow the curricula to the letter because of the many contextual variables (class schedule, school closures, etc.) that interfered with staying on a schedule. However, Mrs. Walker *believed* she was as faithful to the curriculum guides as she could possibly be. Although she appeared to assume discretionary authority over the curriculum through her "homogenization" of it, she didn't conceive that she had discretionary authority to teach curricular content as she would have given more autonomy. She prided herself on knowing her students and understanding their strengths and weaknesses, so in her view, attempting to stick to the pacing schedule diminished her capacity to be responsive to her students. The lack of discretionary authority she experienced seemed to be her greatest challenge during the 2002-2003 school year.

Regarding the administration of the MSA, Mrs. Walker didn't know much about the test's format at the beginning of the school year, but she began teaching her students to take the test as soon information became available. Teaching to the test was encouraged during the MSPAP years and Mrs. Walker believed it was her responsibility to continue doing so for the MSA. Both she and Mr. Braniff cared deeply that their students were not demoralized by or afraid of MSA. Mr. Braniff in particular seemed concerned about the high-stakes of the assessment, so encouraging teachers to teach to the test had dual purposes: first, concern for the students' psychological well-being, and

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second, to avoid sanctions. Mr. Braniff said, "If my jobs are on the line whether these scores go up 8% this year, I'm going to make sure [students] feel comfortable the first day of testing when they sit there and have to answer the questions. That they're prepared and they know the format."

When Mrs. Walker did teach directly to the test, as in the example of the perimeter problem requiring a brief constructed response, she took the time to teach in a way I had not otherwise observed. In this instance she spent time investigating the concept with her students rather than only practicing the "skill" of finding perimeter. She felt justified in not rushing through this lesson. I got the impression that the pace of this lesson was more akin to her ideal than what she regularly practiced. However, given the scope of the curriculum, teaching in this manner could not be a regular practice for Mrs. Walker.

Mrs. Walker exhibited calmness and confidence in her classroom with her students, but as I got to know her better through our many conversations and our interviews together, I got the distinct impression that her comfort level with the changes in the accountability mechanisms during the 2002-2003 school year was surpassed. As the only fifth grade math teacher at Monument, and because her closest math colleague in the school was a first year teacher, I don't believe Mrs. Walker had the kind of collegial support that may have helped her make sense of the changes. As the math liaison between the school and the district, she received information about curricular and testing changes, but it wasn't apparent that she had professional development directed at instructional strategies that were responsive to curricular pacing or test preparation practices that aligned with her existing practices. Mrs. Walker was assured only by her

expectation that she would eventually learn to teach the "MSA way" just as she learned to teach the "MSPAP way."

Mr. Clark's Relationship with Accountability

Stanley Clark was the teacher that seemed most dismissive of what he perceived to be the managerial-technical aspects of accountability. He viewed NCLB as a political structure that has little to do with caring for children. Indeed, as the "captain of his boat" he believed it was his responsibility to shield children from the political climate in which test scores seemed paramount. To him, NCLB represented a lack of trust between policy makers and teachers. When Mrs. Schribner spoke of Mr. Clark's response to the legislation she said he was "extremely offended by No Child Left Behind." The accountability mandate of NCBL was antithetical to his sense of moral agency. As Mrs. Schribner confirmed, "Stanley definitely has this sense of responsibility and credibility and he's never going to leave any child behind in his classroom. Never has, never will."

As a mathematics teacher, Mr. Clark believed that the best thing he could do for his students was to develop their number sense. He believed that his students, "armed" with good number sense, could be successful on any test in any format, including the MSA. However, as much as he espoused the benefit of his construct of good math teaching for preparing students to be successful on tests, he spent a considerable amount of time teaching students to *take* tests (district required unit tests that predicted MSA formats and would be used as data for analysis). He taught his students to answer questions according to the information he received from the county and defended coaching his students while they took quizzes and tests as a means to extend instruction and assess his students' strengths and weaknesses. However, he made several references

to his students that the unit test would try to "trick" them to test their number sense and that answering questions in a certain way was "part of the nastiness of the test." These seemingly off hand remarks indicated Mr. Clark's belief that tests are narrow indicators of what students know and are able to do and justified his rejection of the concept of accountability.

Mr. Clark followed the new curriculum with little complaint. He believed there was enough flexibility in it for him to have some discretionary authority over how he taught the topics in the curriculum. The curriculum was specific about what to teach and how long to stay on a topic and this pacing was the most problematic aspect of the curriculum for him. Mr. Clark was uncomfortable moving forward in the curriculum before his students mastered a concept. The sense of responsibility he assumed for his students' learning compelled him to continue to teach certain topics with children who had not, in his estimation, sufficiently attained the concepts. He did not trust the theory of the curriculum designers – that spiraling curricular topics across grade levels would ensure that they learned important concepts.

Mrs. Schribner began implementing a number of processes during the 2002-2003 school year that meant a change for the ways teachers worked. She explained that the district was undergoing a major reorganization that endorsed a data driven approach to instructional improvement, using standardized measures to diagnose students' learning styles and level of academic achievement. Instructional facilitators would be assigned to school sites to work with teachers and the principal expected teachers to work with their grade level teams for instructional planning. Mrs. Schribner also encouraged teachers to

participate in teacher study groups in which teachers read and discussed books on instructional improvement.

Mrs. Schribner anticipated that Mr. Clark would be difficult to move in the professional development directions she envisioned. Mr. Clark was fond of his autonomy and was confident in his skill as a teacher. Regarding team planning he said, "I like to do what I like to do and I like others to do what they like to do." He didn't believe he was likely to learn anything he considered new from an instructional facilitator or get to know his students through data analysis. He alleged that books on instructional improvement were attempts to profit from educational fads. Teaching for Mr. Clark was not a technical skill one could learn by reading a book, and understanding a student's needs required more than analyzing test data. Teaching knowledge came from experience and knowledge of the student came from the relationship the teacher built with the student.

During the transitional year to Maryland's revised accountability system, Mr. Clark did not experience much pressure from his principal to accommodate the professional development and team planning directives that were taking hold in the school. Mrs. Schribner was easing her teachers into new ways of thinking about teaching beginning with teachers in the primary grades. Mr. Clark didn't like to rock the boat at the school regarding matters over which he believed he had no control, such as accountability driven directives. He said he liked to keep a "positive outlook" about the "cycles" in education because to do otherwise was destructive to the morale of those around him. At the time of my study, the positive outlook he tried to maintain had yet to be severely challenged. For the time being, he was willing to "let the politics on this side

and the new fads on that side battle it out." He would continue to follow his own course as long as he could.

Ms. Blakeway's Relationship with Accountability

Annette Blakeway was an advocate of the technical-managerial version of accountability she encountered at her school. She came to teaching with a background in business administration so she was familiar with the importance of accountability from a financial perspective. She experienced working in a high-stakes accountability climate throughout her teaching career and, therefore, learned to teach with her eye on content standards, learning outcomes, and test scores because to her, these were rational ways to structure and assess teaching success.

Like Mrs. Walker and Mr. Clark, Ms. Blakeway was expected to respond to changes in the general math curriculum and her students would take the new MSA. However, there were significant differences in Ms. Blakeway's scenario as compared to those of the other two teachers. Some of her students took the state's High School Assessment, adding another accountability mechanism to attend to. Rather than having an hour or less per day to teach math, she had 80 minutes. She was certified to teach secondary mathematics rather than teaching under a general elementary certificate. But the most glaring difference was that instead of simply complying with the accountability mandates of Maryland, she embraced them. She learned everything she could about the state's content standards and learning expectations and used test results to compare the achievement of her students from year to year. She appreciated having this information to use to inform her instruction.

Ms. Blakeway did not find that attention to testing detracted from her construct of good teaching – teaching students mathematical mastery through meaningful and thought provoking practices. Her own mastery of mathematics enabled her to use assessment rubrics, such as the AREAJ rubric, as a teaching tool. She endorsed the educative value of the rubric because it encouraged her students to examine their work thoughtfully and thoroughly and promoted purposeful work habits.

Although the paced curriculum in her general math class told Ms. Blakeway what to teach and when to teach it, she did not view it as diminishing her discretionary authority over how she taught mathematics. In fact, she praised the curriculum's organization as a good guide for new teachers and, as an experienced teacher, didn't consider it restrictive to her mathematics pedagogy or choice of instructional materials. The only problem she had with the curriculum was that it changed every year over her nine years of teaching at Stone Valley Middle School, making it difficult to do the kind of data analysis the state endorsed as a benefit of testing.

Ms. Blakeway appreciated what she interpreted to be the theory behind Maryland's version of educational accountability, but the practical application of the theory had its pitfalls. In some ways, the high-stakes of the accountability system created tension in her school and put undeserved pressure on her. Her principal implemented a school improvement process that was so accountability oriented that she believed he was unnecessarily monitoring her students' test scores. Mr. Kellet assured me that his goal to achieve Middle States Accreditation was directed at creating a holistic learning environment for students, but there was no question that he felt pressured to make sure Stone Valley students performed well on the MSA. He said, "…if we don't show

adequate yearly growth, then we're going to get slapped on the hand and we could end up getting reconstituted." Ms. Blakeway criticized the school improvement process because it had a negative effect on the morale of the teachers. She spoke for herself as well as her colleagues when she said, "There is a lot dissent right now within the building, and it could be just because of being held accountable." Furthermore, Ms. Blakeway was demoralized by the critique of her students' HSA scores in geometry in front of other math teachers from the district. In this instance, she interpreted the critique as unjust because her discretionary authority over the placement of students in advanced mathematics classes was negated. Having done everything in her power to realize her construct of good teaching *and* be responsive to accountability mandates, the press of high-stakes blemished Ms. Blakeway's otherwise comfortable alliance with accountability.

Summary

The three MTY candidates had individual constructs of good mathematics teaching that was based on their history, experience, and beliefs. Good mathematics teaching for Mrs. Walker was developing foundational skills in her students; Mr. Clark believed good mathematics teaching helped students develop number sense; and Ms. Blakeway believed that good mathematics teaching meant extending mathematics out of the algorithmic box many of her students placed math in and inspiring them to think more broadly about mathematics. All of the teachers believed their instruction empowered their students to engage more fully in mathematics. The most powerful connection between the three teachers' constructs of good teaching was their common belief that

good teaching also motivated their students to become good people who are able to participate successfully in society. The moral dimensions of their teaching manifested themselves differently in the teaching of each teacher, but these dimensions were a common theme in their talk about teaching mathematics, and appeared in nearly every aspect of their relationships with their students and their pedagogies.

Accountability, as it appears in the rhetoric of NCLB and Maryland's plan for preK-12 education, connotes moral meaning. Inversely, accountability for student learning as a general construct was also an inherent aspect of the teachers' beliefs about good teaching. But with regard to formal accountability, the teachers had significantly different responses to it in their teaching practices. Interestingly, the moral dimensions of their teaching were in some ways congruent to their approach to accountability, particularly with regard to testing. Mrs. Walker's ethic of care about the self-esteem and psychological comfort of her students compelled her to use valuable time to teach the brief constructed response format of the MSA. Mr. Clark's nurturing ethic of care compelled him to spend considerable time and effort helping his students take quizzes and tests, believing this would arm them when they took tests independently. Ms. Blakeway had so incorporated accountability into her schema for teaching that preparing students for both the MSA and the HSA supported her ethic of purposeful hard work and virtue of intellectual engagement.

This chapter revealed tensions between the teachers' constructs of good teaching and the high-stakes that revolved around the accountability climates of their schools. In the final chapter of this dissertation, I bring this discussion on the relationship between teachers' constructs of good teaching and accountability, specifically high-stakes

accountability, full circle. I examine why making links between the two concepts may be

informative to policy makers and make suggestions for future research.

CHAPTER VIII

SUSTAINING 'GOOD' TEACHING IN AN ERA OF ACCOUNTABILTY

This study explored teaching from the perspectives of three 'exemplary' teachers

and how their practices resided in a high-stakes accountability climate. All three teachers

were acknowledged as good teachers by many educational stakeholders – their students,

parents, administrators, and members of their communities. They were honored as the

Teacher of the Year for their respective counties because their practices represented

teaching that was judged as beneficial to students, desired by parents and endorsed by

administrators.

My central goal for this study was to develop an understanding of what

experienced teachers, who taught in ways that are valued by society, believed about good

teaching and how they constructed and realized their practices in an accountability

climate over which they had little control, yet were expected to accommodate. Because

the three teachers were considered successful at teaching in a high-stakes accountability

climate, I wanted to learn how they navigated the demands and pressures of the

accountability mechanisms they encountered in their schools through their example and

their ideas.   My purpose behind this line of investigation was to give a human face to a

policy reform movement.

In this final chapter, my aim is to consider these human faces of accountability in

teaching against the 'principles' of accountability that are inferred in accountability

mandates such as NCLB.   This dissertation is about teaching amidst accountability. The

teachers studied are all math teachers but that fact served primarily to provide a context

for the study of the question: How do teachers' constructs of good teaching reside in a

high stakes accountability climate? Therefore, this study was not about good math teaching per se but the relationship between the teachers' practices and the educational goals of the state. Implicit in their teaching processes were representations of mathematical knowledge and what it means to 'know' mathematics. Representations that were constructed from a combination of their beliefs about the role and value of mathematics in students' lives, the nature of learning mathematics as a discipline, and their interpretations of the messages about academic achievement in mathematics relayed by the state. The results of this study have shown that the MTY candidates grounded teaching, which is inherently unpredictable, influenced by local contexts, and complicated by changing accountability directives, in the moral and ethical stances they hold as practitioners who identify and engage with the holistic learning of students to an equal or greater degree than they engage in the politics surrounding education as a public good.

The goals for education in the country and the state of Maryland are described in broad terms[16] and rely heavily on the measurement of student achievement to determine schools' success in meeting those goals. Despite the MSDE's development of voluntary state curricula and common achievement tests across the state, it is individual school districts, and ultimately local schools and individual teachers that are accountable for meeting achievement goals.

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[16] The MSDE lists the following five goals for education for which schools and teachers are held accountable: (1) Achievement will improve for each student; (2) Curriculum, instruction and testing will be better aligned and understandable, (3) All educators with have the skills to improve student achievement; (4) All schools will be safe, drug free, and conducive to student learning; (5) Parents and legal guardians will be involved in education (MSDE, 2004b).

The academic achievement goals as indicated in Maryland's accountability

policies seem clearly defined, however, the 'principles' of accountability – the values,

beliefs, and philosophies that underlie educational goals – are poorly articulated, and in

fact, rarely publicly discussed. Yet, it is precisely those principles that appeared as the

greatest motivating factors in the work of the teachers I studied. In this conclusion, I

examine the relationship between the principles of accountability that appeared in the

practice of the MTY candidates in relationship to the states' educational goals, which are

the base of Maryland's accountability system.

Moral Principles of Accountability

Philosophers of education assert that educational accountability is derived from a

moral mandate (Strike, 1991; Sockett, 1993). If that is the case, then it is reasonable that

policy makers attempt to determine and articulate the moral aims of schooling based at

least somewhat on public desires and perspectives. However, as Strike (1991) contended,

because we lack a "public philosophy" (p.414) about the moral purposes of schooling,

there is little opportunity for democratic decision-making that "requires that the citizenry

have entrée to the intellectual life of its culture and that the culture's intellectual life have

relevance for public decisions" (p. 414). Lacking a means for authentically including the

public in educational decision-making, educational accountability policies, which are

intended to promote the culture's opinions on the purposes of schooling, melt into

bureaucratic exercises that merely infer the inherently moral base of educational

accountability. Sockett (1991), like Strike critiqued this condition of educational

accountability. He wrote:

…our conceptions of accountability are not couched as arguments about the ethical or moral character of the teacher's responsibility to the constituencies he or she serves, but as items in a bureaucratic audit. Accountability has come to be seen as a panacea for educational improvement and the experience of its practice so far is as an expensive bureaucratic nuisance (p.108).

Strike (1982) explained that educational accountability in this country is based on a production model in which "learning is the product, teaching is the production process, [and] the child is the raw material" (p. 81). He critiqued this model primarily on the premise that it assumes that children are passive recipients of education and speculated that the production model of accountability could become oppressive by "undermining the students' and teachers' freedom of choice in education, eliminating the students' responsibility for their own education, and placing too much responsibility on the school" (p.82).

The three MTY candidates experienced a number of accountability directives from the state and the school that paralleled the production model that Strike described. They did not experience accountability directives from the state that addressed the ethical or moral character of teaching. Without the opportunity, vehicle, or support for these practitioners to engage in official dialogue about the purposes of schooling beyond discussions of achieving academic standards and how to prepare students for tests, the teachers in my study, who identified with and valued the moral implications of their work, included their personal moral principles in their constructs of accountability. They determined what they and their constituencies, i.e., their students, the parents of their students, and the school community, held dear as the moral outcomes of schooling and

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their success in making these determinations was largely responsible for their

nominations as MTY candidates. Each of the teachers did respond to meeting the

educational goals of the state through following state derived directives, but

accountability as it appeared in their practices was not solely the result of educational

mandates. The teachers' personal responses to accountability resulted from their own

beliefs about what was in the best interest of their students within the parameters of the

working contexts of their schools and classrooms.

In the next section I review how the MTY candidates' constructs of

accountability, based on the moral dimensions of their teaching, resided in a high-stakes

accountability climate.

Principles of Accountability as Dimensions of Practice

In Chapter VII I described the meanings of accountability from the perspectives

of scholars. Throughout much of the literature on teaching and schooling, several

principles of educational accountability from a moral perspective are repeatedly noted,

i.e., trust, responsibility, and autonomy (Fenstermacher 1979; Strike, 1991; Strike &

Soltis, 1998, Ball & Wilson, 1996). These scholars and others submit that if the public or

policymakers do not endow teachers with these qualities, the expectation for the

achievement of educational goals that accountability systems strive for is unattainable on

the scale or with the quality desired. For example, if teachers do not believe they are

trusted by educational policymakers to prioritize curricular topics, if they perceive that

the limits of their responsibility lie predominantly within measurable academic outcomes,

or if they experience their decision-making authority with regard to the affairs of their

classrooms to be diminished, teachers may perceive accountability policies as constraints

rather than guides to their teaching or they may feel powerless to adequately address the

needs of the students they serve. Not surprisingly, the moral principles of accountability

that the three teachers self-constructed, such as teaching students processes that facilitate

academic learning, making the classroom an intellectually safe place, building

community among their students, and preparing students for life and work as adults were

principles they perceived to be absent in the state's accountability goals. Nevertheless, as

acknowledged exemplary teachers, the teachers were not dissuaded from constructing

their practices in moral ways.

 In the next section, I examine how the MTY candidates assumed principles of

accountability in their practices as they experienced working within the accountability

climates of their schools. Their perceptions of and experiences with the accountability

directives, initiatives, and processes they encountered revealed a combination of tensions,

paradoxes, and compatibilities amidst the dimensions of their practices.

<p style="text-align:center">The Moral Dimensions of Accountability in Practice</p>

 In the previous chapter, I explored the MTY candidates' constructs of good

teaching in relation to the accountability mechanisms they encountered in their schools. I

found that the common link between the teachers' constructs of good teaching was how

they viewed and incorporated moral dimensions of teaching in their daily work. Through

their mathematics teaching, they strove to help their students become good people and

prepare for roles as responsible and productive adults.

Mrs. Walker's, Mr. Clark's, and Ms. Blakeway's examples all confirmed that, to them, accountability in teaching mathematics meant more than ensuring that their students demonstrated achievement of the state's learning outcomes on state tests. Accountability, as a dimension of their teaching practice had strong moral aspects for each of the teachers. "Intellectual honesty" (Ball and Wilson, 1996), the representation of mathematics in ways that create experiences for students to connect their knowledge and experience to learning, was an important moral dimension in each teacher's practice, (i.e., Mrs. Walker's representation of mathematics as understanding basic skills, Mr. Clark's representation of mathematics as number sense, and Ms. Blakeway's representation of mathematics as an intellectual endeavor). Additionally, each of the teachers employed "moral manner" in their practices (Richardson & Fallona, 2001) (e.g., they instilled student responsibility for learning and good work habits and built community among students) as vehicles to academic achievement because they understood that children are not passive recipients of education; moral dimensions of practice developed dispositions in children that engaged and assisted them in learning. In the cases of Mrs. Walker and Mr. Clark in particular, the teachers did not perceive that these moral dimensions were valued in and of themselves because of their absence in dialogue about state imposed instructional accountability. The accountability messages they received were almost exclusively ensconced in initiatives around specific curriculum and testing requirements.

I now examine each teacher's responses to the high-stakes accountability climate in his or her school individually. For each teacher, I interpret how and why there appeared to be a tensions, paradoxes, and/or compatibilities between their constructs of

good teaching, which were based on their personal moral principles of teaching practice, and their perceptions of the high-stakes accountability climates within their schools.

Christine Walker: Trying to Keep Up With Change

Mrs. Walker experienced tension around the accountability climate of her school because she perceived she was pressed to hurry through the curriculum in order to teach her students the skills she believed they needed to know in time for the MSA. Her understanding was that the curriculum was designed as it was so the students would be exposed to as much content as possible before the administration of the MSA. Mrs. Walker was not used to the teaching the curricula on a schedule. This was a very new way of thinking about enacting curriculum for her. She was uneasy moving on to the next topic in the curriculum before her students had attained sufficient mastery of the basic skills related to the topics. Bringing her students to an acceptable level of skill mastery was important to her. Mrs. Walker believed that many of her students needed extra instructional support in mathematics and she, as their classroom teacher, was the only school resource available to them to get the help they needed.

Despite her position as the math liaison for her school, Mrs. Walker was unable to tell me how the district expected teachers to approach the paced curriculum other than they were to teach certain topics on certain dates. I got the impression that she was somewhat baffled by the curricula. She did not seem to be able to construct lessons that addressed varied learning styles or present topics in a variety of ways, and there appeared to be insufficient professional development provided to help Mrs. Walker make the curriculum meaningful to her. Additionally, as the most experienced math educator at Monument and because she was the only fifth grade math teacher, she had no collegial

support system in the school to help her make sense of the new curriculum. Mrs. Walker's discomfort with the paced curriculum was exacerbated by the unusual student scheduling she had to accommodate. The curricula were not designed to be sensitive to local situations such as Mrs. Walker encountered so she homogenized the two curricula she was to teach believing she was doing justice to both. The facet of the curricula that seemed to become most important and urgent to Mrs. Walker was staying on schedule, and she experienced tension as the year progressed because fidelity to the pacing became more and more difficult.

After a decade of preparing students for the MSPAP, Mrs. Walker assumed teaching students to take the MSA would be relatively easy. The MSPAP required that students write extended responses to make predictions, apply concepts to varied situations, or explain their thinking and the processes they used to approach using mathematics in "real life situations." However, the information she had about the MSA at the beginning of the school year was so sketchy that her understanding of the test was simply that students would have to answer questions in the formats of multiple choice and brief responses. She understood there would be no extended writing on the MSA like the writing on the MSPAP. Her perception of the MSA was that it would test students' basic skills. Given the broad scope of both curricula, which she perceived was presented at too fast a pace, she enacted the curricula by having her students practice basic problem solving and orally explain the procedural steps they used to arrive at an answer. She discontinued projects or activities that encouraged more conceptual understanding. It wasn't until after the MSA that she believed she had the discretionary authority to slow

the pace of her instruction and do the "hands on" learning that she believed developed conceptual understanding in her students.

When Mrs. Walker did receive information about the brief constructed response test items that would appear on the MSA, she incorporated writing prompts back into her instruction. Although using the brief constructed response prompt compelled Mrs. Walker to guide her students in a more conceptual exploration of a curricular topic, I cannot assert that Mrs. Walker understood the kind of learning that the state was assessing through brief constructed response test items. Mrs. Walker focused heavily on teaching students to shorten their answers by briefly listing the steps they used to solve the problem and explaining why thy chose to solve the problem as they did, but Mrs. Walker seemed to have no other evaluation criteria for what constituted a high quality response. Mr. Braniff did not indicate that he had any better understanding of the learning outcomes the state expected than did Mrs. Walker. He seemed more concerned that the students' answers fit in the "box," the space allowed for answers on the test, than he did with the learning outcomes the brief constructed responses tested.

It was clear that Mrs. Walker and Mr. Braniff understood the high-stakes of the MSA. Mrs. Walker responded to accountability mechanisms with compliance but with little understanding about how the mechanisms were to facilitate student learning. Without structures in place to support Mrs. Walker's capacity to learn teaching practices that address the increasingly difficult demands of the accountability system, it is open to question whether her students would achieve the learning outcomes the state desired, even if they did learn how to take the test.

Mrs. Walker viewed herself as being a responsible teacher, both to the state's goals and to her students and school community. She took her responsibility to meet the state's goal of preparing students for the MSA through teaching the prescribed paced curriculum very seriously. Meeting the instructional directives that were handed to her from the county consumed a great deal of her thinking and she genuinely worried about enacting the curriculum as instructed so her students would be prepared for the MSA. However, Mrs. Walker was morally distressed because she didn't believe her students were learning the skills they needed to understand mathematics as an important part of their daily lives. Mrs. Walker's personal sense of accountability to her students appeared to be what drove her sense of autonomous decision-making authority in reconstructing the pacing schedules of her math classes so that her students could develop the basic skills she believed they must attain to be successful in school and in life. She would not betray the trust that her students, their parents, or her principal placed in her for making instructional choices that benefited her students. For Mrs. Walker, being accountable to students was more important that being accountable to the states' mandates. Because she had a history of satisfactorily preparing her students for the MSPAP, she had no reason to believe that her practices would fail her students with regard to their readiness for the MSA. Given that the state's guidance for test preparation was sparse until weeks before the test, Mrs. Walker had more reason to trust in her own instructional decision making than she did the promise that the curriculum as written would prepare students for the MSA. Therefore, when Mrs. Walker experienced tension between fidelity to the mandated curriculum and fidelity to what she perceived as the best interests of her

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students, she chose on the side of addressing her students' learning needs as she understood them.

Stanley Clark: Mistrusting the System

Mr. Clark experienced tensions with the accountability climate at his school because he perceived that mechanisms intended to help teachers be 'accountable' challenged the way he worked in the school. He already considered himself to be an accountable teacher and did not believe his teaching would improve through the instructional improvement initiatives that were taking root at Clear Water. An example of how an instructional initiative might help his instruction is related to his implementation of the paced curriculum.

The mathematics curriculum was developed so concepts were spiraled over grade levels. If a student began their school experience with that curricular design, the curriculum designers believed his or her understanding of curricular topics would develop over time. This paced development of concepts and skills would minimize the amount of time spent reteaching topics from grade level to grade level. Because the 2002-2003 school year was the first year of this curriculum design, Mr. Clark's students had yet to realize the benefits of the district's curriculum plan and so he "robbed Peter to pay Paul" to make sure students who were slower than others to attain satisfactory mastery of a topic could stay with certain topics longer.

Mr. Clark's teaching of the paced curriculum would likely benefit from professional development directed at differentiation of instruction for students of varying achievement levels. Differentiating instruction for him meant pulling students out of the regular classroom and repeating the same kinds of activities he had already engaged them

in with the rest of the class. The students he pulled out for reteaching missed out on instruction in upcoming curricular topics using this strategy. Mrs. Schribner's plans for helping teachers understand their students' learning styles and zones of proximal development might have improved Mr. Clark's approach to differentiation. However, he was resistant to receive information on instructional improvement from sources other than his own teaching experience.

I consider Mr. Clark's love of his autonomy and his principal's vision of instructional improvement directives that encouraged teamwork and teacher learning from external sources to be the greatest potential area of tension between Mr. Clark and the accountability climate at his school. Data based instructional improvement was just beginning to take hold at Clear Water and Mrs. Schribner was easing her faculty in that direction. Although I am unable to affirm Mr. Clark's response to specific instructional improvement initiatives at his school, I can assert that moving him in the directions that Mrs. Schribner envisioned would take a great deal of effort on both his part and hers.

Mr. Clark exhibited mistrust in the policies surrounding educational reform, namely NCLB. If the expectations of teachers intensify in response to the high-stakes of accountability in Maryland, the tension between Mr. Clark's vision of good teaching and the state's vision may only strengthen his resolve to protect his students from the accountability system he was so wary of.

Mr. Clark's mistrust of the formal accountability system manifested itself most in his actions, or more accurately inactions, outside of the classroom. In his instructional practice he showed a great deal of fidelity to the curriculum both through following the pacing schedule and using suggested instructional activities. He also took responsibility

for preparing his students for district and state tests because he understood that his responsibility to his students extended beyond his personal beliefs about the state's version of accountability with its strong focus on measurable academic achievement. However, outside of the classroom Mr. Clark avoided participation in the activities designed with regard to that accountability system. As his school principal was designing professional development activities to meet the state's goal of raising achievement for "each student" through data collection and analysis on each student, Mr. Clark withdrew from collegial structures. Mr. Clark was resentful of the message he heard from NCLB that teachers could not be trusted to raise student achievement without formal mandates. Mr. Clark was, however, trusted by his students and their parents to help students learn academic content and so accountability as a principle in Mr. Clark's teaching practice caused him to cling to the autonomy he believed was slowly being taken from him. He believed that each of his students was increasing in their achievement under what he viewed as his personally developed pedagogical practices. Furthermore, Mr. Clark believed that his practices and his relationships with his students were influential on raising his students' responsibility for their own learning and as contributing members of the community, both as school students and future adults. Those aspects of student learning were not evident to him in the state's version of accountability, but they were aspects of student learning which he believed accountable teachers must take responsibility for.

Annette Blakeway: Working with Accountability

Ms. Blakeway provides a contrast to the other two teachers' responses to accountability. Ms. Blakeway's personal understanding of and appreciation for the

concept of instructional accountability enabled her to comfortably situate her practice within the demands of the high-stakes accountability mechanisms at her school. Ms. Blakeway had the mathematical knowledge and pedagogical content knowledge to address rigorous curricula effectively. She consistently sought out professional development to continue her pedagogical improvement, and she made understanding Maryland's academic standards and expectations for student learning a personal endeavor.

The interesting difference surrounding Ms. Blakeway's positive response to mandated instructional accountability compared to the other two teachers' more skeptical responses is that her response was intrinsic. Ms. Blakeway viewed the idea that she should be accountable for raising student achievement as a personal responsibility and conceptualized that responsibility in ways that fit with the state's version of accountability. In most respects, Ms. Blakeway made accountability work for her as much as she worked for it.

In examining Ms. Blakeway's relationship with the accountability climate of her school, I realized that it was not the climate of her school that encouraged or enabled her to meet the instructional demands of Maryland's accountability system. Stone Valley's strategic plan for school improvement seemed incompatible with her approach to accountability. The only significant school factor Ms. Blakeway recognized as contributing to her ability to realize her construct of good teaching was the block schedule that granted her a high dose of time to cover the content of the curricula in meaningful ways with her students. Ms. Blakeway developed her own strategic plan for her professional growth. She personally sought out the Governor's Academy to learn

about Maryland's content and learning standards. She personally took on the task of achieving National Board Certification. She personally sought out and learned how to use technology in her classroom to make learning mathematics more interesting and relevant to her students. Ms. Blakeway held herself accountable for student achievement as the state expected, but she did it on her own terms.

Ms. Blakeway did not seem to experience tension with Maryland's version of accountability but she did experience tension with the accountability climate of her school and school district. She believed her principal to be overly attentive to her general math students' unit test scores and didn't appreciate the feeling that he was checking up on her. Ms. Blakeway believed there was "dissent" among the staff at Stone Valley because the principal was pushing for too much professional development and putting too much pressure on teachers to "be held accountable." Ms. Blakeway particularly resented the demoralization she experienced when her geometry students' HSA scores were criticized in front of her peers in the district because the scores weren't considered high enough for an advanced placement group. This criticism was particularly upsetting for her because she didn't have a voice in the students' placement in this advanced class. For Ms. Blakeway, the local response to high-stakes accountability produced unnecessary tensions in her otherwise mutually supportive relationship with accountability.

The significance of Ms. Blakeway's example is that her practice demonstrated that a teacher can make accountability mandates work for the improvement of her instruction without compromising her construct of good teaching. Unfortunately, it is disheartening to see a teacher work as hard as Ms. Blakeway to have a harmonious

relationship with the concept of high-stakes accountability yet work in a school with discordant accountability climate.

Ms. Blakeway has, in my view, the most interesting relationship with accountability of the three MTY candidates. Accountability, as a dimension of her practice, resounded with the achievement goals of the state. She had exceptionally high academic expectations of her students, which she viewed as her responsibility to them and to the state's goals. She also taught to a very strong moral principle that relayed to her students that they were individually responsible for their learning and that each of them would achieve without question if they adopted the work ethic that she taught and modeled. What is interesting is that Ms. Blakeway did not seem to separate her personal moral principles around teaching and learning from the accountability system. Developing stringent working habits was part of being an accountable teacher in her view and such habits were necessary if the students were to meet the state's academic goals for them. Ms. Blakeway's example shows a teacher whose personal principles of accountable practice were compatible with regulated accountability goals.

What is paradoxical about Ms. Blakeway's relationship with accountability was that the tensions she experienced around formal accountability came from local efforts to enforce an interpretation of the state's version of academic accountability rather than her own interpretation of it. As a teacher responsible for nurturing her students' academic growth, she personally sought to understand what the state expected with regard to student achievement. Educating oneself about the goals of the state, in her view, was what an accountable teacher must do. Through her own efforts, she enacted and supported practices that favored the state's version of accountability because she found

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them to be compatible with her own high standards regarding learning and valuing mathematics. However, when her school's interpretation of how teachers could learn to meet accountability goals were imposed on her and her fellow teachers, she did not view those structures to be useful to her as professional or beneficial to the school climate.

Conclusion: Reflections on Good Teaching and High-Stakes Accountability

"If teachers cannot find some way to make teaching *for themselves* while also doing justice to the moral demands of the job, their teaching itself will suffer"

(Higgins, 2003, p. 146).

Higgins (2003) argued that teachers must find some way to make teaching "for themselves" while also doing justice to the moral demands of the job, or their teaching itself will suffer. He stressed that teachers must be careful not to sacrifice their own intellectual growth and emotional well-being as they give to their students. Higgins reasoned that because many teachers care so deeply about helping their students live a "good life," and because society places a heavy moral weight on educators, many teachers face burnout if they do not attend to their own "quest to lead a good life" in their work. He suggested that teachers should allow teaching to be nourishing for themselves. Higgins's ideas speak to the perspectives and beliefs of the three teachers in this study. Teachers' instructional choices and how they make learning meaningful *with* their students can be a source of growth and satisfaction for them. Teaching was meaningful to Mrs. Walker's, Mr. Clark's, and Ms. Blakeway's lives and they nourished themselves by trying to realize their personal notions of good teaching. However, the tensions the three teachers experienced with the accountability climates of their schools placed pressure on each of them in negative ways. Specifically, in the cases of Mrs. Walker and

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Mr. Clark, the tensions they experienced in the accountability contexts of their schools had the potential to contradict their constructs of good teaching. For example, they would have to learn how to address the aspects of learning mathematics they valued so highly (Mrs. Walker's basic skills and Mr. Clark's number sense) in ways that challenged their existing approaches.

This study highlights the tensions experienced by three 'exemplary' teachers as they attempted to respond to the accountability climates of their schools. It emphasizes teachers' views and experiences with accountability in the context of their lives and work. Tensions between teachers and the accountability climates of their schools are not uncommon to many teachers' experiences, nor are they limited to the time line of my study. However, they are rarely brought to light as a means to consider how the tensions might be mediated.

My analysis compels the question: How can teachers make teaching "for themselves" under the weight of the accountability mechanisms that are being implemented in schools? This question is often discussed among teachers, but because it is so complex and seemingly unapproachable, it is rarely heard in public dialogue about regulated accountability. If the state wants teachers to be accountable for student achievement, teachers' voices must be taken seriously and the tensions they experience with accountability mechanisms must be mediated. I submit that my question is an important one to ask – and investigate – if the kind of learning that policy makers indicate they desire, in the healthy school climates they call for, is to occur.

Suggestions for Further Research

My analysis provokes questions about the linkages between teachers'

understanding and teachers' enactment of accountability policies. Little is known about

teachers' understandings of the accountability directives they are asked to implement. As

teachers seek to understand the knowledge and understanding of their students before

beginning a unit of study, I propose that it would be useful to examine teachers'

understandings of the instructional policies and directives they are asked to implement. It

is important to consider how instructional and accountability policies are presented to

teachers, how teachers are supported in understanding and implementing them, and how

teachers who struggle realizing them in the context of their local schools and classrooms

are responded to. Research on teachers' understanding of instructional policies and

responses to implementation mechanisms may inform our understanding of policy

implementation. Also, research on teachers' experiences with the school wide processes

used to address instructional improvement may assist in raising the capacity of teachers

and school administrators to mediate the tensions and examine the compatibilities that

exist between teachers' practices and the accountability climates in which they work.

Implications for Teacher Learning

To what degree do state accountability policies that attend to curricula and testing

in and of themselves impact teachers' knowledge and experiences regarding the teaching

and learning of mathematics? State or district-wide curricula that guide teachers in when

and what to teach do not guarantee that teaching practices that produce successful

outcomes will take root, particularly when the practices are unfamiliar to teachers'

experiences or their knowledge about teaching. In the cases of two of the three teachers

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in my study, their responses to the expectation that they prepare students for tests did not necessarily help them thread conceptual and procedural understanding in their students, nor did the teaching practices that arose from the use of the paced curriculum always produce authentic mathematical understanding in students. So, we must also ask, as instructional policies change, how do we think about individual teacher learning given the teachers' content knowledge and knowledge of their students? There is not a prototype for teacher learning, but professional development that addresses teachers' understandings of accountability driven instructional mandates might assist teachers in developing practices that are adaptable to their classroom contexts and encourage more than surface level implementation of curricula and test preparation strategies intended on developing mathematical understanding.

APPENDIX A

MARYLAND TEACHER OF THE YEAR APPLICATION REQUIREMENTS
(summary of 2002-2003 packet)

I.   Educational history and professional development activities.
        A. Colleges and universities, post-graduate studies
        B. Teaching employment history
        C. Professional association memberships
        D. Staff development leadership activity and activity in the training of
            future teachers
        E. Awards and other recognition of teaching
        F. Professional Biography
II.   What were the factors that influenced you to become a teacher? Describe
        what you consider to be your greatest contributions and accomplishments
        in education.
III.   Community Involvement
        Describe your commitment to your community through service-oriented
        activities such as volunteer work, civic responsibilities and other group
        activities.
IV.   Philosophy of Teaching
        A. Describe your personal feelings and beliefs about teaching, including
            your own ideas of what makes you and outstanding teachers. Describe
            the rewards you find in teaching.
        B.   How are your beliefs about teaching demonstrated in your personal
            teaching style?
V.   Education Issues and Trends
        A. What do you consider to be the major public education issues today?
            Address one in depth, outline possible causes, effects, and resolutions.
VI.   The Teaching Profession
         A. What do you do to strengthen and improve the teaching profession?
         B. What is and/or what should be the basis for accountability in the
            teaching profession?
VII.   State/National Teacher of the Year
        As the State or National Teacher of the Year, you would serve as a
        spokesperson and representative for the entire teaching profession. What
        would be your message? What would you communicate to your
        profession and to the general public?
VIII.   Letters of Support
        Include three letters of support from any of the following: superintendent,
        principal, administrator, colleague, student/former student, parent, or civic
        leader.

APPENDIX B

OBSERVATION PROTOCOL

Teacher: _____   Date: _____

Class: _____   Students_____

Lesson Sequence

Time	Activity	Concept	Resources	Discourse	Interactions

APPENDIX C
INTERVIEW PROTOCOLS

Teachers – Interview 1

1. Describe how you came to be chosen a MTY candidate.
2. How long have you been teaching and what subjects have you taught?
3. Why do you love teaching?
    a. Why did you decide to be a teacher?
    b. What do you believe is the purpose of education?
    c. As a teacher, how do you view your role in that?
    d. Describe good teaching.
4. Tell me about your students.
    a. How do you know about them?
    b. Describe your relationship with them.
    c. What are your expectations for your students?
5. Describe learning to teach.
    a. What educational experiences have most influenced what you do as a teacher?
    b. What individuals have most influenced your understandings about teaching?
    c. What sources of information do you use to make your teaching better?
    d. Describe learning experiences that you have had for your own benefit or enjoyment that have influenced how you view teaching and learning?
6. How do you decide what to teach and when to teach it?
    a. Is the curriculum your using this year new to you and if so how is it different from what you've used before?
    b. What do you believe are the strengths and weaknesses of the curriculum?
7. How much autonomy do you have in deciding what and how to teach?
    a. Describe instructional directives that your principal (department head, curriculum specialist, etc.) has asked you to incorporate into your practice.
    b. How do you incorporate these directives or suggestions into your teaching style?
    c. What are your views on the instructional leadership you receive from your school or county?
8. Describe you're the relationship between your teaching and the official curriculum.
    a. Resources
        i. Instructional Materials
        ii. Projects
9. Tell me about how you plan your lessons.
        i. Relationships to students' prior knowledge.
        ii. Relationship to official curriculum
        iii. Tell me why what you teach is important for students.

10. What are your procedures for assessing student learning?
   i. Informal
   ii. Formal

11. What are your views on state testing and how do they relate to what you do in the classroom?

Teachers – General Questions from Subsequent Interviews

Interview questions for the second and/or third interviews had several questions specific to the lessons observed. The following are general questions that I incorporated into the conversations with the teachers. Some of these questions were discussed in both interviews.

Relationships with students
- How have the students changed since the beginning of the year?
- As the year has gone by, how has your relationship with your students changed?
- What are the skills and dispositions that you try to instill in your students to help them be successful?
- How do you instill independence in your students?

Teaching Style
- Describe your teaching style.
- Tell me a success story about your teaching. Can you recall a time when you did something during class that made a lasting difference in the way you teach, manage the classroom, or think about teaching?
- Tell me a story about a failure or mistake you made in your teaching that subsequently improved your teaching practice?
- When you think about your teaching, what do believe is the most useful technique you use to create a positive classroom climate? To promote student engagement?

Lessons
- From your perspective, what did the students enjoy most about this lesson/unit?
- In what areas do you believe your students did their best work?
- In what areas did your students struggle with this lesson/unit?
- How is the content of your lessons beneficial to students in their learning or in their lives outside of school? How do you communicate the importance of school learning to students?
- What are your goals for the level of achievement for students? Proficiency, mastery, familiarity? How do you assess that?

Curriculum
- Describe your views about the pacing of the curriculum with respect to the lessons I observed. If you didn't have to worry about pacing, what might you have done differently?

Resources
- Which of the materials you handed out to students of your own design?
- What are the sources for the materials you've used recently?

Homework
- How is it managed? (grading, recording, late work)
- What, on the average, is the rate of return of homework from the students?

Testing
- What information have you received about the MSA?
- What are your impressions about the MSA?
- Discuss the processes you used to administer the tests and/or quizzes I observed.

Professional Development
- Describe the professional development activities you have participated in recently.

Teachers – Final Interview

- How has your teaching grown over this year? What has another year's experience or this group of students taught you?

- What was your biggest challenge this year? This could be specific to one student.

- What was your greatest accomplishment? This could be specific to one student.

- Given free reign for implementing the curriculum, what direction would you take?

- What do you foresee as the major thrust for next year's instructional directives from the school administration?

- As an educator, what do you see as the biggest battle you must fight?

Principals – Interview 1

School Community
- Describe your school community.
- What are your concerns for the people you serve?
- What do you see as the educational needs for the students in this school?
- Do you have, this year in particular, any kind of special theme, project, or vision that you're focusing on in the school?

Teaching
- What is good teaching? (Describe the practices/dispositions of a teacher you consider to be a good teacher.)
- How do you evaluate good teaching?
- What are your sources for making determinations on what good instruction is?
- What are the biggest influences on how you came to understand and develop a sense of what good teaching is?
- What does it mean, to you, for teachers or the school to be accountable?

Instructional Improvement
- What do you encourage teachers to do to improve instruction?
- What are your goals this year for improving instruction?
- What does it mean, to you, for teachers or the school to be accountable?

Instructional Leadership
- I understand that the county uses a paced curriculum. What are your views on this and how does if effect your school?
- Describe how directives from the county fit with your school.
- How does your view of the accountability system in Maryland influence how you act as an instructional leader?
- Talk about testing in this school. What kind of testing demands are on the students this year?
- Tell me your views on the new state testing (MSA) and how that is influencing teaching and learning at this school?
- What opportunities do you provide for teachers to learn about the curriculum and the MSA?

Principals – Interview 2

School Culture/Community
- In what ways do you believe this school has excelled this year?
- What has been the biggest challenge in the school this school year?
- If you had the year to do over again, what changes would you make to improve your school community?
- You have to choose your battles every day. What is the biggest battle that you choose to fight in this school community?

Teaching
- What kind of teaching practices have you observed in the school this year that you believe are exemplary?
- How do the practices and dispositions of new teachers differ from those of experienced teachers?

Testing and Accountability
- What are some of the comments you've heard from teachers about the MSA?
- How comfortable were students with the MSA? Do you believe they were prepared for the assessment?
- Now that you've administered the MSA, how will the focus of instruction change at this school?
- How will the structure of the test influence teaching to the test? What kind of directives will teachers be given to prepare students for the MSA next year?
- The MSA asks for different kinds of responses than MSPAP. How do you believe this will influence teaching and student learning?
- How do you think teaching and learning would be different at this school without the pressure of accountability?

MRS. WALKER'S PACING GUIDES

Week	5th Grade General Math	5th Grade enrichment
1	Pretest #1 • Find the mean, median, mode, and range of a data set and explain how these measures are different. • Use stem and leaf plots and line plots to find mean, median, mode, and range. Quiz #1	Pretest #1 • Compare 1, 2, and 3-dimensional figures to one another. • Classify 2 and 3-dimensional figures by sides, angles, faces, edges, and vertices. • Identify and describe the attributes of solid figures. Quiz #1
2	Pretest #2 • Select the appropriate measuring tool to solve a problem. • Use standard units (customary and metric) to measure objects. • Determine and use equivalent units within the same system. Quiz #2	Pretest #2 • Identify parallelism and perpendicularity of geometric figures. • Identify and describe similar and congruent figures. • Identify transformations: Translations, reflections, and rotations. Quiz #2
3	Pretest #2 • Recognize, describe, and extend patterns. • Generalize a rule for a pattern. • Estimate and determine elapsed time. • Use elapsed time to solve problems. Quiz #3	Pretest #3 • Estimate and determine the perimeter of polygons and real-world objects. • Estimate and determine area of rectangles and estimate the area within any closed figure. • Use measuring, partitioning, and formulas (triangles, squares, rectangles). • Determine relationships between length and area and describe how a change in one measure affects the others.
4	Pretest #4 • Classify 2 and 3 dimensional figures by sides, angels, faces, edges, and vertices. • Identify and describe the attributes of solid figures.	Pretest #4 • Estimate and determine the volume rectangular prisms with and without manipulatives. • Use perimeter, area, volume,

	• Classify triangle and quadrilaterals by size of angles and length of sides. • Parallelism and perpendicularity of geometric figures and real-world objects.	and elapsed time to solve problems. Quiz #4
5	• Identify, classify, measure, and draw acute, right, and obtuse angles. • Draw triangles given their dimensions. • Use protractors to measure angles. Quiz #4	Pretest #5 • Identify, classify, measure, and draw acute, right, and obtuse angles. • Classify triangles by side length (equilateral, isosceles, and scalene.) • Classify triangles by angle measure (equilateral, acute, right, and obtuse).
6	Pretest #5 • Draw, label, describe, and identify: points, lines, line segments, and rays. • Draw squares and rectangles given their dimensions. • Estimate/determine the perimeter of polygons and real-world objects. • Estimate/determine the area of rectangles. • Estimate the area within any closed figure. • Use formulas to find area of rectangles, squares, and parallelograms. Quiz #5	• Use protractors to measure angles. • Measure angles in polygons. • Discuss the characteristics of complementary and supplementary angles. Quiz #5
7	Pretest #6 • Identify parts of a circle (diameter, radius, chord, center, etc.) • Draw circles given their dimensions. Quiz #6	Pretest #6 • Understand vocabulary related to circles, such as diameter, radius, and chord. • Estimate and determine the circumference and area of a circle. • Determine the relationship between the diameter and circumference. • Use pi = 3.14 to find circumference and area.

		• Quiz #6
8	• Identify transformations: translations, reflections, and rotations. • Plot points on a coordinate plane. • Estimate and determine the volume of a rectangular prism.	• Construct/draw circles, squares, triangles, rectangles on a coordinate plane. • Analyze geometric figures on a coordinate plane. • Draw circles, squares, triangles, and rectangles given their dimensions.
9	• Application of 3rd quarter skills. Posttest: 3rd quarter assessment.	• Application of 3rd quarter skills. Posttest: 3rd quarter assessment.
Recursive whenever appropriate- at least weekly	Use mathematical properties to solve problems. • The associative property for addition and multiplication, the multiplicative inverse, the commutative property of addition and multiplication, the distributive property, and the identity property for multiplication and addition.	Use mathematical properties to solve problems. • Mathematical properties of operations, including the distributive property. • The commutative property of addition and multiplication, the associative property for addition and multiplication, and the identity elements for addition and multiplication. • Demonstrate the effect of zero on addition and multiplication.
Taught throughout the quarter; possibly in conjunction with other content areas. (At least 4 times during the quarter)	• Organize, display data using stem and leaf plots, line plots, and line graphs. • Display data in bar and multi-bar graphs, pictographs, and frequency tables. • Analyze and interpret stem and leaf plots, circle graphs, line plots, and line graphs. • Multiplication and division facts.	• Select tools and units to measure accurately (including inches to the nearest 1/8). • Measure length, mass/weight, capacity, time, and temperature. • Read scales on measuring instruments. • Use standard units (yards, meters, degrees, and other units) to measure objects. • Use equivalent units within the same system. • Multiplication and division facts.

2/3/03 Inclusion	
PG Alignment*	Quarterly review and practice
Objectives	Solve algebraic equations.
Warm Up	
Activities	*Hands on Equations*
Homework	*5 two-step equations*
2/3/03 Enrichment	
PG Alignment	Week 1
Objectives	Classify two-dimensional figures as polygons.
Warm Up	WARM UP = RULES OF DIVISIBILITY.
Activities	Whole class discussion about the difference between convex and concave and identification of polygons.
Homework	Identify figures, page 299, practice 1-4 from textbook
2/3/03 General	
PG Alignment	Quarterly review and practice.
Objectives	Solve algebraic equations.
Warm Up	WARM UP – RULES OF DIVISIBILITY.
Activities	*Hands on Equations*
Homework	*5 two-step equations*

*Indicates the week the lesson content aligns with the pacing guides. Unless noted as from the fifth grade enrichment guides, weeks denoted are from the general fifth grade guide.

2/4/03 Inclusion	
PG Alignment	Week 3
Objectives	Use multiple steps to solve problems.
Warm Up	MSA WARM UP – PERIMETER PROBLEM
Activities	*Problem solving, Practice worksheet #72, Logical reasoning.*
Homework	**Problem solving extension worksheet #72**
2/4/03 Homeroom	
PG Alignment	Week 3
Objectives	Use multiple steps to solve problems.
Warm Up	MSA WARM UP – PERIMETER PROBLEM
Activities	*Problem solving, Practice worksheet #72, Logical reasoning.*
Homework	*Problems 3-6, Practice worksheet #72*
2/4/03 General	
PG Alignment	Week 3
Objectives	Use multiple steps to solve problems.
Warm Up	MSA WARM UP – PERIMETER PROBLEM
Activities	Half the class is called out for band and chorus. A visitor (middle school student) discusses middle school with remaining students.
Homework	

2/5/03 Inclusion	
PG Alignment	Week 1
Objectives	Given a set of data find the mean, median, mode, and range.
Warm Up	
Activities	Students solve problems in which they find mean, median, mode, and range.
Homework	2 problems: find mean, median, mode, and range.
2/5/03 Enrichment	
PG Alignment	Week 5 - enrichment pacing guide
Objectives	Classify 2 dimensional shapes, explore classifying and measuring angles.
Warm Up	
Activities	Review of vocabulary of polygons. New topic: measuring angles.
Homework	Draw three angles excluding right and straight angles using a straight edge.
2/5/03 General	
PG Alignment	No Class. Early dismissal.
Objectives	
Warm Up	
Activities	
Homework	

2/6/03 Inclusion	
PG Alignment	No class. Unscheduled assembly.
Objectives	
Warm Up	
Activities	
Homework	
2/6/03 Enrichment	
PG Alignment	Week 3
Objectives	Solve a problem by making an organized list.
Warm Up	Write the next four fractions after 1/2, 3/4, 5/6, 7/8. Explain your thinking.
Activities	**Problem solving extension worksheet #72**
Homework	Make an organized list worksheet. (Deductive reasoning)
2/6/03 General	
PG Alignment	Week 3
Objectives	Solve a problem by making an organized list.
Warm Up	
Activities	*Problem solving, Practice worksheet #72, Logical reasoning.*
Homework	**Problem solving extension worksheet #72**

Note: Differences in font emphasize activities that appeared across different classes.

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