WORKING ON THE WORK: FIVE YEARS OF ENGAGEMENT

Jerry Jefferson Morgan
University of Southern Mississippi

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The University of Southern Mississippi

WORKING ON THE WORK: FIVE YEARS OF ENGAGEMENT

by

Jerry Jefferson Morgan

A Dissertation
Submitted to the Graduate Studies Office
of The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Education

Approved:

December 2007
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Abstract of a Dissertation
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ABSTRACT

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by Jerry Jefferson Morgan

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The present study investigated the impact of the Working on the Work action plan on mathematics achievement in a Mississippi Gulf Coast school district. The district of study has used the action plan developed by The Center for Leadership and School Reform since 2001. Mississippi Curriculum math test results served as the instrument that was used for the database taken by 105 students from 2002-2006. A repeated measures ANOVA test was conducted to assess the prediction of mathematics achievement from gender, race, and time. Results showed that gender did not significantly predict mathematical achievement \([F(1, 101) = .76, p = .384]\). Secondly, race was a significant predictor of math achievement \([F(1, 101) = 60.33, p < .001]\). Lastly, the impact of the Working on the Work framework did increase the results of mathematics achievement over time \([F(4, 404) = 20.55, p < .001]\). Although most-school districts have tried different methods to adhere to No Child Left Behind guidelines since 2001, this type of school reform seems to be working.
ACKNOWLEDGMENTS

I would like to express my thanks to all of those wonderful University of Southern Mississippi educators who have assisted me with their guidance and knowledge, especially Dr. Clyde Ginn. I would have never made it this far without him! I would also like to thank my wife, Lu Marie Morgan, for all of her patience during the times when I had to attend class and work on papers or projects. Next I want to thank Dr. J. T. Johnson—where would all of the USM graduates be without the stat king! My committee, Dr. Wanda Maulding, Dr. Gaylynn Parker, and Dr. Terrell Tisdale, deserve recognition as well. Lastly, I want to thank my parents for the gift of life, help, understanding, and persistence.
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CHAPTER I

INTRODUCTION

Over the past several years in a Mississippi coast school district, there has been a shift in the way in which work has been designed for students. The former superintendent partnered with The Center for Leadership and School Reform to bring in consultants to train administrators and teachers on the Working on the Work action plan. The framework for this action plan is discussed in Chapter VII of *Shaking Up the Schoolhouse* by the CEO for the Center for Leadership and School Reform, Dr. Phillip Schlechty. The framework was so popular that he soon launched the framework into a book titled *Working On The Work* (2002). The inception for the framework in this district began implementation over 5 years ago. The true focus of Working on the Work is centered on engagement and the levels of engagement. The book looks at improving student performance by improving the quality of work that students receive. As the former superintendent stated many times, “Only expect a child to spend the time on a lesson that you spent in planning it.” The district has since replaced the superintendent; the role is still held by an academic superintendent. He has stated, “WOW is part of the box of the school district. We have a commitment to it and will follow through.” The newest superintendent has been in this position for the past 2.5 years. The researcher investigated the impact of Working on the Work for the past 5 years on mathematics achievement in the district previously mentioned.

Setting

The concept of the Working on the Work has been around since 2001. It is discussed in Chapter 10 of *Shaking Up the School House* (2001) by Dr. Phillip Schlechty. The framework was soon launched into an action plan for schools in *Working On the*
Work in 2002. Since that time, many administrators have attended the Center for Leadership and Reform’s Principals Institute to enhance mission statements and vision to include the quality of work. The district of study is one of only two districts in the state of Mississippi using the quality work design. Included in the program is consultation from the Center of Leadership and School Reform. These consultants work with administrators and design teams to help incorporate quality work design.

Problem Statement

Since the mandate of No Child Left Behind holds all schools to a higher standard of accountability, the superintendent saw that teachers and students were becoming test-centered. This, in turn, caused drastic reductions in the enhancement of quality work in lessons that children receive. Teachers complained that creativity was replaced by blueprints, curriculum guides, and frameworks. Another statement by the previous superintendent at the district’s convocation stated, “Your job is not to bring up test scores. It is your job to create quality work for students that will in turn bring up test scores.” It was the intention of this study to see the effect of the implementation of Working on the Work and its impact on mathematics in the district of study. This was done through the following research statement: Has the Working on the Work Framework significantly impacted student math achievement in the district of study over the past 5 years?

Purpose of the Study

The state standards of accountability will soon reach new heights through the Mississippi Curriculum Test II. This will cause many schools to see decreases in school performance data. This will cause a ripple effect in the role of the learning leaders and the students. The Working on the Work action plan provides new ideas to access student
engagement for these leaders. The purpose of this study is to see if the Working on the Work Framework has made a significant difference in student mathematical achievement in the district of study.

Hypotheses

1. There is no significant difference in student mathematics achievement in the district of study due to the implementation of the focus on designing quality work.

2. Gender has no effect on the relationship between math achievement and the focus of designing quality work over a 5-year period in the district of study.

3. Race has no effect on the relationship between math achievement and the focus of designing quality work over a 5-year period in the district of study.

Delimitations

1. Subjects were limited to the regular education student performance mathematics data on the Mississippi Curriculum Test of a selected school district over the past 5 years.

2. The data were collected during the 2006-2007 school year.

3. All variables not so specified were considered beyond the scope of this study.

Definition of Terms

Authentic engagement - the task, activity, or work the student is assigned or encouraged to undertake is associated with the result or outcome that has clear and relative immediate value to the student. It is the highest level of engagement (Schlechty, 2002).

Design qualities - the 10 components that should be considered in teachers designing the work they provide for students. They include the following: Content and
Substance, Organization of Knowledge, Product Focus, Clear and Compelling Product Standards, Affirmation of Performance, Affiliation, Novelty and Variety, Choice, and Authenticity.

Engagement - students' psychological investment in learning. Students understand the material and internalize it into their lives (Newman, 1992).

Mississippi Curriculum Test - test given each year to all students in grades 2-8 that measures grade level proficiency in Reading, Language, and Math.

Passive compliance - the student is willing to expend whatever effort is needed to avoid negative consequences, although he or she sees little meaning in the tasks assigned or the consequences of doing those tasks (Schlechty, 2002).

Rebellion - the student summarily refuses to do the task assigned, acts in ways to disrupt others, or attempts to substitute tasks and activities to which he or she is committed in lieu of those assigned or supported by the school and by the teacher (Schlechty, 2002).

Retreatism - the student is disengaged from the tasks, expends no energy in attempting to comply with the demands of the tasks (Schlechty, 2002).

Ritual engagement - the immediate end of the assigned work has little or no inherent meaning to the student, but he or she associates it with extrinsic outcomes and results that are of value. This is the second level of engagement (Schlechty, 2002).

Schlechty Center (Center for Leadership and School Reform) - a private nonprofit corporation that works with public school districts and their leaders to transform the existing system of rules, roles, and relationships that govern the way resources are used in schools to a system that is focused on the quality of work provided to students (www.schlechtycenter.org).
Working on the Work - an action plan written by Dr. Phillip Schlechty for educators.

Justification of the Study

The district of study has been using the Working on the Work action plan for 5 years. In that time, the superintendent has changed and every school in the district has a new instructional leader. Has the implementation of a focus on designing quality work impacted students and schools in a successful way? In the age of No Child Left Behind, is the focus on engagement of students the real answer to successful schools and districts? This study will benefit any school or district that wishes to change its focus from standards to quality. The Middle School Journal has an abundance of literature to support engagement. The entire issue of the March 2007 edition was dedicated to engaging instruction to captivate students. In Teacher Man, written by the Pulitzer Prize-winning author of Angela's Ashes and Tis, the author notes that he could not turn his children on to creative writing until he discovered their creative writing that came through an excuse note to miss his class. He culminated this activity by having students write an excuse note for Adam or Eve to God. McCourt had a 33 year teaching career. The literature shows that the student's opinion of the work counts. What adults find engaging is not necessarily what students will find engaging.
CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

Meier (2004) pointed out in the foreword of Dennis Littky’s *The Big Picture* that school reform for more than a century has been dealing with how to improve on a paradigm of schooling derived from another age and intended for a different purpose. She gave the example that most successful people are good at doing and talking—that is where they truly show their stuff. Reading and writing are important, but also these are things that only a small and specialized group of people is primarily good at doing. Yet education persists in a form of schooling that measures “achievement” largely in the latter terms, not the former. Littky (2004) has been an educator for over 30 years. He suggested the return to tradition in education:

Let kids learn in settings where adults are doing interesting work. Let novices learn from masters. Then create a part-time community for kids where they can use expanded knowledge of the real world as the foundation for new growth—an environment where they can learn about being a member of a peer group, where they can reflect on how they are doing at their work sites, and where they can hone skills and explore concepts that, they are coming to realize, will be critical to their futures. (p. 5)

Littky (2004) further pointed out that too many schools and education policy makers forget how the process influences how a student takes knowledge and then uses it. Too many forget how important intrinsic motivation and desire are to the learning process. Without this motivation, they may fall through the cracks. These cracks include the following statistics: According to a study conducted by the Manhattan Institute graduating
class of 2001, one of every three students who enroll in high school drop out before graduation (2003). For minorities (Black and Spanish) the statistics are higher. The Center for Disease Control and Prevention reported in 2002 that suicide was the third leading cause of death among people 15-24 years of age (2003). In the more than 40 years from 1952-1995, the incidence of suicide among adolescents and young adults has tripled. Children under the age of 18 were arrested in 16% of violent crimes (Greene & Foster, 2002). The research shows that change is needed. In the March 2007 edition of The School Administrator, Portis and Garcia stated that “the superintendent is a change leader, and without exception superintendents characterized district reform as difficult work in largely uncharted territory” (p. 20). The superintendent of the district of study found Working on the Work and the Center for Leadership and Reform as a possible solution for change in the design of work that students receive.

The review of related literature outlines the premises of Working on the Work Framework, which is focused on student engagement and its relationship to quality design.

Included in Figure 1 is The Working on the Work template. It is the backbone of the action plan. It is divided into four sections. They include the following: systemic properties such as culture and structure; design resources which include resource variables and technology; design qualities of context and choice that will be discussed in great detail in this chapter; and results for customers which include the community, parents, school system, and the student. This review further explores student engagement and the design quality work components. Lastly, this review explores other types of school reform and discusses math achievement.
Fig. 1. Working on the Work (Schlechty, 2001, p. 15)
The design qualities are in 10 categories: Content and Substance, Organization of Knowledge, Product Focus, Clear and Compelling Product Standards, Affirmation of Performance, Affiliation, Novelty and Variety, Choice, Authenticity, and Protection From Adverse Consequences for Initial Failures.

This literature review will be helpful to districts, administrators, and teachers who want to adopt this WOW action plan. It may also be helpful to instructors in higher education as they plan to teach new curriculum standards.

School Reform

What is school reform? School reform is an educational phrase that includes programs and policies. Many schools in the United States are in the process of reform. What students need to know to be successful makes new demands on school policy, technology, and subject matter. The two types of school reform are related to matter and the way in which school leadership is administered. The first is related to a school’s subject matter and the way in which the subject is taught. The second is related to school governance procedures. This type affects how schools are managed and the roles of teachers and administrators. Some examples of this type are site-based decision making, shared decision making, and community programs. It is important to remember that terms like reform and renewal should be thought of as small steps toward change. Compared with school restructuring, reform and renewal do not greatly alter the school’s organization (www.projectappleseed).

School reform may be started by powers inside or outside the school. Congress has passed several laws that have driven educational reform. First of all, A Nation at Risk (1983) required high schools to change requirements for graduation. It called for each student in secondary schools to have 4 years of English, 3 years of mathematics, science,
and social studies, and 1.5 years of computer science. Another example is Goals 2000: Educate America Act that reformed schools by establishing high academic and occupational standards. It also provided support to states and communities to help students reach those standards. No Child Left Behind (2001) allows parents to see the qualifications of all staff members. It also sets yearly standards for growth on state testing. All students are required by this legislation to take tests in reading and mathematics in grades 3-8. By 2008, 25 states will have exit exams for graduation.

Recently, the National Academic Educational Program (NAEP) has made schools change testing programs and raise the bar to meet national standards. For example, Mississippi ranks near the bottom educationally. Where does this ranking come from? It comes from the NAEP. Therefore, state standards where the proficiency levels are not set as high as the national levels must be changed.

In 2007 alone, several national reports called for an overhaul of the nation’s educational system. These reports include “Tough Choices or Tough Times,” the report on the New Commission of Skills of the American Workforce, from the National Center on Education and the Economy; “Beyond NCLB,” from the Aspen Institute’s Commission on No Child Left Behind; “On the Clock: Rethinking the Way Schools Use Time,” from Educator Sector; and “America’s Perfect Storm,” from the Educational Testing Service (Chen, Chung, & Johnson, 2007).

According to the Center of Education and School Reform (Schlechty, 2005), there are five basic assumptions regarding school reform. First of all, there is an urgent need for dramatic improvement in the performance of America’s public schools. Since the inception of No Child Left Behind (2001), schools are more than ever under the national microscope. Secondly, the key to improving the schools is the quality or work that
students are provided; schools must be organized around students and work rather than around adults and the work of teachers. Third, students are volunteers. Their attendance can be commanded, but attention must be earned. Next, the changes required to organize schools around students and student work cannot occur unless school districts and communities have or develop the capacities needed to support change—capacities that are now too often lacking in even the best run schools. Lastly, leadership and leadership development are key components to the creation of district-level capacity to support building-level reform.

Although the true focus of this study uses the reform strategies suggested for the Center of Education and School Reform (Schlechty, 2005), there are other models. In a 5-year study, researchers from American Institutes for Research tracked the life cycle of comprehensive school reform programs in hundreds of elementary and middle schools across the country. They found that the following programs were featured: Accelerated Schools Project, ATLAS Communities, Co-nect, Expeditionary Learning/Outward Bound, Modern Red Schoolhouse, Success for All, Turning Points, and Urban Learning Centers (Viadero, 2007).

Accelerated Schools Project. This reform was developed in 1986 by Henry M. Levin, an economics professor at Stanford University. This program features accelerated instruction for all children, including at-risk students. The program now has satellite training centers across the country and is based in Storrs, Connecticut (Viadero, 2007).

ATLAS Communities. This reform was developed in 1992 as the idea of four prominent reformists—Yale University psychologist James P. Comer; Howard Gardner, a Harvard University professor; Theodore Sizer, a Brown University professor emeritus; and Janet Whitla, a former president and chief executive officer of the Education
Development Center of Newton, Massachusetts. This reform uses Short and Authentic Teaching Learning and Assessment of All Students. The national office is based in Cambridge, Massachusetts (Viadero, 2007).

Co-nect. This model was established in 1992. Co-nect is a data-driven school-wide improvement program. The model has been adopted by Pearson Achievement Solutions. This is a part of Pearson Education, a nonprofit education media company based in Saddle River, New Jersey (Viadero, 2007).

Expeditionary Learning/Outward Bound. The Outward Bound outdoor-adventure program has been around for 60 years; however, it did not evolve into a formal school reform project until 1992. This program uses real-world community service projects as a key part of school curriculum. It is based in Garrison, New Jersey (Viadero, 2007).

Modern Red Schoolhouse. Founded in 1992 by the Hudson Institute based in Washington, it features a K-12 design. It is now called the Modern Red Schoolhouse Institute in Nashville, Tennessee (Viadero, 2007).

Success for All. This is the most popular school improvement program. A husband and wife team of researchers, Robert E. Slavin and Nancy A. Madden, both of John Hopkins University, founded this model. It is based in Baltimore (Viadero, 2007).

Turning Points. This program is based at the Center for Collaborative Learning in Boston. It is strictly a middle school reform model developed in 1999. It was spawned from the landmark national report of the same name that was published by the Carnegie Council on Adolescent Development (Viadero, 2007).

Urban Learning Centers. This is a pre-K-12 model that was a collaboration of the Los Angeles Unified School District and United Teachers of Los Angeles (Viadero, 2007).
Center for Leadership and School Reform. Since its inception in 1988, the Schlechty Center has developed a track record of working with school boards, superintendents, principals, and teachers across the country. It started with the 10 District Standards Framework. Its focus was the core business of schools—providing students with content-rich, engaging work, every day. The second framework, Working on the Work, deals with School Standards and Classroom Standards (www.schlectycenter.org).

Beliefs Underlying the Working on the Work Framework

Schlechty states in his book Working on the Work: An Action Plan for Teachers, Principals, and Superintendents (2002) that “WOW is not a program. It is a system of thought and a way of life” (p. 17). At the center for Leadership in School Reform, student engagement is at the heart of everything that educators believe and the Working on the Work Framework guides educators in the design of work for schools and school districts.

According to Schlechty (2002), the WOW framework requires new thinking. The thinking is perhaps summarized in terms of the assumptions on which the framework is based:

- One of the primary tasks of teachers is to provide for students’ work with which students engage and from which they learn what is intended that they learn.

- A second task of teachers is to lead students to do well and to be successful in the work that students undertake.

- Therefore, teachers are leaders and inventors.

- Students are volunteers, and what they volunteer is attention and commitment.
• Differences in commitment and attention produce differences in student engagement.
• Differences in the level and type of engagement affect directly the effort that students expend on school-related tasks.
• Effort affects learning outcomes at least as much as intellectual ability does.
• The level and type of engagement will vary depending on the qualities teachers build into the work they provide students. (p. xvii)

Therefore, teachers can directly affect student learning through the invention of work that has those qualities that are most engaging to students.

Why did the district of study choose to implement Working on the Work? Why did the former superintendent choose to enter a model for school reform? According to the former superintendent, the district has a varying population of schools. All elementary schools are Title I with the exception of one, and both middle schools receive Title funds. That means that every school receiving the funding has at least 50% free or reduced lunch counts. Table 1 displays the socioeconomic status of each school.

It is important to point out that some schools have over 90% free and reduced lunch count. The schools are different, and society is changing. Schools must change with society. For further evidence on the need for school reform, the Center for Leadership and School Reform pointed out the following seismic shifts in its opening presentations to principals and teachers in 2001:

• From a society where the majority are parents to a society where the majority are non-parents and grandparents.
Table 1

**Socioeconomic Status by School**

<table>
<thead>
<tr>
<th>School Site</th>
<th>Free/Reduced Lunch Percentages</th>
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<tbody>
<tr>
<td>Gulfport High</td>
<td>69.59%</td>
</tr>
<tr>
<td>Bayou View Middle</td>
<td>64.81%</td>
</tr>
<tr>
<td>Central Middle</td>
<td>90.29%</td>
</tr>
<tr>
<td>Anniston Elementary</td>
<td>69.27%</td>
</tr>
<tr>
<td>Bayou View Elementary</td>
<td>65.63%</td>
</tr>
<tr>
<td>Central Elementary</td>
<td>97.19%</td>
</tr>
<tr>
<td>Gaston Point Elementary</td>
<td>96.54%</td>
</tr>
<tr>
<td>Pass Road Elementary</td>
<td>93.27%</td>
</tr>
<tr>
<td>West Elementary</td>
<td>97.00%</td>
</tr>
</tbody>
</table>

*Twenty Eighth Street Elementary was closed in 2006 after Hurricane Katrina; therefore, data were not available.*
• Projections of changing family—by 2010, 45.7 million families will have no children under the age of 18 (U.S. Census Bureau, 2007).
• From academic education as education for the elite to high quality academic education for everyone—"Fifty years ago, high school algebra was a gatekeeper course for college. Today it is a graduation requirement" (Schlechty, 2001, p. 36).
• From pluralism to particularism.
• From schools as community agencies to schools as government agencies.
• From schools without competition for the hearts and minds of children to a state of vigorous competition for the hearts and minds of children.
• From stable, two-parent families to serial polygamy and alternative family structures. (Schlechty, 2001, p. 37)

What is the answer? Well, this former superintendent had the vision to see Working on the Work as the answer.

Student Engagement and Quality Work

Since the focus of this chapter is on engagement and quality work, it is important to understand what engagement really means. Engaged students as defined by Newman (1992) in Student Achievement in American Secondary Schools make a psychological investment in learning. They try hard to learn what the school has to offer. They are not so concerned with the grade but more with internalizing the knowledge in their own lives. When students are authentically engaged in meaningful, quality work, the likelihood for them to learn something new and remember what was learned increases (Hancock & Betts, 2002). Schlechty (2002) expanded his theory that if teachers design quality work they will engage more students. If students work harder to achieve desired outcomes, the
result will be improved academic performance. This theory launched the Working on the Work Framework that is the action plan used by the district in this study. Engaged students work well cooperatively, transfer knowledge, and are creative problem solvers (Jones, Valdez, Nowakowski, & Rasmussen, 1994).

Strong, Silver, and Robinson (1995) asked teachers and students two questions when beginning a research project: (a) What kind of work do you find engaging? (b) What kind of work do you hate? Results confirmed that work that allowed for creativity, sparked curiosity, provided an opportunity to work with others, and produced a feeling of success was most engaging. Students reported a disdain for work that was repetitive, required no thought, or was forced on them. Engagement is at times misunderstood as keeping students busy. According to Watterstein (1995), when educators equip students with the tools to become self-motivated, real engagement takes place. Self-motivation is not about looking for rewards or incentives but rather to personal goals. Students who rely on extrinsic rewards such as grades, stars, stickers, or teacher approval understand less, retain less, and fail to produce any long-lasting commitment to learning (Brewster & Fager, 2000; Kohn, 1997; Lumsden, 1994; Strong, Silver, & Robinson, 1995). Extrinsic rewards simply buy temporary compliance. Kohn (1997) has written that “learning is undermined by rewards” (n.p.). Rewards reduce the quality of student performance. One of the jobs of educators is to help develop an intrinsic desire to make sense of the world and encourage students to become life-long learners (Kohn, 1997).

What about students who are not engaged? Schlechty (2002) listed engagement in five parts. The highest level is the authentically engaged student. This is what all educators should work towards. In this scenario, the task at hand has immediate value to the student. The second highest level defined by Schlechty is a ritually engaged student.
These students are usually very good students for teachers. The work has little inherent value but the students are interested in the outcome. The third level of engagement is passive compliance. This student is simply trying to avoid negative consequences. Next is retreatism. This student is disengaged and expends no energy in demands with the task. The final level of engagement is rebellion. The student refuses to do the work and will disrupt the learning environment (Schlechty, 2002). Schlechty emphasized that no single classroom is authentically engaged 100% of the time. In a study in which data were collected from 86 middle school students during 114 interviews and 24 observations, Dowson and McInerney (2001) found that students' work avoidance may include copying, cheating, asking the teacher for help on a task, or other off-task behaviors like talking, playing with school supplies, trying to talk the teacher into an easier assignment, tuning out, or pretending not to understand. These students are looking for the easiest way out because of a lack of quality work.

*Design Qualities*

Research studies have found that more learning, retention, and enjoyment is enhanced by engaged students (Dowson & McInerney, 2001; Hancock & Betts, 2002; Lumsden, 1994; Voke, 2002). The Schlechty Center for Leadership in School Reform engages education leaders at the district, school, and classroom levels to:

- Enhance the capacity of the district to support and sustain reform at the building and classroom levels.
- Redesign schools so that they are more clearly focused on providing quality work for children and so that students become the true focus of all decisions made in schools.
Help teachers, parents, and others who work in schools and classrooms to better understand the characteristics of quality work for students and ensure that teachers have the tools they need to design and deliver the highest quality of work for students. (Schlechty, 2005, p. 2)

Schlechty (2005) lists 10 design qualities that teachers should consider when they plan their lessons. They include the following: Content and Substance, Organization of Knowledge, Product Focus, Protection from Adverse Consequences for Initial Failures, Clear and Compelling Product Standards, Affirmation of Performance, Affiliation, Novelty and Variety, Choice, and Authenticity.

Content and Substance

The first design quality as identified by Schlechty (2001) is content and substance. It is defined as the content in what teachers, administrators, and the community agree is important for students to know at a particular grade level. The content must be consistent with state and local curriculum. This would include standards, strands, pacing guides, and benchmarks. Schlechty (2001) defines the first quality in this manner,

Among themselves, teachers and administrators have a clear and consistent understanding of what students are expected to know and to be able to do, and there is consistent understanding of what students are expected to know and to be able to do, and there is community consensus regarding these matters. (p. 23)

In other words, if students find relevance in the work, they are much less likely to become bored. Assor, Kaplan, and Roth (2002) found that the relevance of schoolwork is clarified by teacher behaviors, even if boring; students will take more value in the task at hand. Engaged learning tasks should take an extended period of time, present a challenge, and should be assessed, including student self-assessment (Jones et al., 1994).
One model that should be considered in motivational design is the ARCS Model of Motivational Design. John Keller at Florida State University developed this. Effective techniques for designing motivational instruction are suggested (Small, 1997). This theory uses an expectancy-value theory. This suggests that the person must value the task and believe that he or she can succeed at the task (Small, 1997). The five conditions that Keller (2000) states are necessary to be fully motivated are attention, confidence, relevance, confidence, and satisfaction.

Organization of Knowledge

According to Schlechty (2001), teachers and support personnel generally endeavor to ensure that the media, material, books, and visuals used to present information, propositions, ideas, and concepts to students are organized in ways that are most likely to appeal to the personal interests and aesthetic sensibilities of the largest possible number of students and to ensure as well that the students have the skills needed to use these materials. In other words, content is organized so that access to the material is clear and relatively easy for all students. It does not mean that all content should be inherently interesting or relevant to students. Students will learn many important things in school that they do not care about at the time (Schlechty, 2002). The teacher should provide a variety of resources and learning experiences that includes technology (Zorfass & Copel, 1995). Self-directed and highly engaged students can be productive using virtual reality (Osberg, 1997).

A teacher’s actions are very important in presenting the material. Research that supports this began in the 1980s. Strong et al. (1995) invented a model called SCORE (success, curiosity, originality, and relations). SCORE suggested that teachers should clearly define the criteria for success, model the skills, connect unresolved topics for
study and creative projects to students' everyday life, and give work that students will augment relationships with people they care about.

Theories that form the organization of knowledge are as follows: attribution theory, goal theory, and self-determination theory. Anderman and Midgley (1998) suggests that middle school teachers and administrators consider these theories when adjusting middle school practices to engage students. If the teacher takes on the role of a coach or mentor rather than giving lectures, it will be more effective. Creating quality work takes time and can be expensive. Time and resources are in greater demand when designing a quality lesson.

Product Focus

Product focus means that work assigned engages students and almost always focuses on a product or performance of significance to students. In other words, the end result is meaningful to the student. This quality should answer the following questions: Is the work linked to some product(s), performance, or exhibition? Do students know what they are doing and expected to produce? Do students see the meaning or value in the product (Schlechty, 2001)?

Only after teachers clarify project themes and concepts are they able to design and coordinate a set of hands-on activities designed to allow students to connect what they are doing to a meaningful end product that they find compelling or significant (Zorfass & Copel, 1995). Product Focus is clearly linked to standards and assessment. Diez (2000) relates how a middle school science teacher teaches the "big idea" by engaging students. The teacher uses student demonstration of concepts through art, music, drama, and dance. The teacher found that students were more careful with their work when they see that it may be used in another setting. Another approach is the Foxfire approach. It agrees that
course content takes on new meaning when the audience is central and students do well when they realize others will see the results of their labor (Starnes, 1999).

**Clear and Compelling Product Standards**

This quality is defined as being sure that the standards for assessing the products or the performances are clear and important to students. This design quality should display the following: clear assessment standards of the product or performance; concrete examples, prototypes, or rubrics that show what the finished product should look like; and progress assessment by the students throughout the project (Schlechty, 2001). This quality provides more than the traditional objective or benchmark on the board. Students understand the standards by which they are assessed and see them as fair. Rubric has been a keyword in the education field for some time. Each rubric should be tailored to fit the specific task. A checklist of the criteria would also be useful to students. This will promote student understanding of the criteria and allow improved skills in self-assessment (Diez, 2000).

**Protection from Adverse Consequences for Initial Failures**

Students receive feedback on their work and have opportunities to reach the standard or benchmark throughout the process. This design quality should provide the following components: student feedback throughout the project or task, persons other than the teacher provide feedback without affecting the student grade, and if a student does not pass the standard he or she is offered additional opportunities to do so without penalty (Schlechty, 2002). Originally, Schlechty listed this quality as a safe environment. This should be an environment in which students feel free to take risks to learn new things without the fear of failure. Reflection allows teachers and students to promote ongoing assessment and make revisions and refinements along the way. Mistakes should be
welcomed as opportunities for learning, and students should be given a chance to redo work (Anderman & Midgley, 1998). The Kohn Theory states that the process is more important than the product (Kohn, 1997). Mistakes are valuable clues to student thinking. Students can gain confidence through taking risks. Teachers must foster an environment conducive to student engagement by practicing small, seemingly unimportant activities: Greeting students at the door, making eye contact, allowing enough “wait” time when expecting a student to answer a question, dignifying wrong responses with praise, repeating a question, or giving hints that will encourage students to try again (Marzano, 1992).

Affirmation of Performance

This quality means that someone other than the teacher observes student work. Other people find value in the work through public display. Persons who are significant in the lives of students, including parents, siblings, peers, public audiences, and younger students, are positioned to observe, participate in, and benefit from student performance and to affirm the significance and the importance of the activity being undertaken (Schlechty, 2002). Students are more careful with their work samples when they know the work will be seen by an audience outside the classroom (Starnes, 1999). Students want an audience beyond the teacher to affirm that the work is important, needed, worth doing, and has real-world application. Work may be displayed at Open House, hosting guest speakers, job shadow days, team projects across the curriculum, and school community partners.

Affiliation

This is where the work is designed to incorporate cooperative learning or action between the students and adults. This requires that the products be difficult enough to
require cooperative action. Schlechty (2001) states that affiliation involves the following: students are provided opportunities to work with others (peers, parents, other adults, teachers, and students from other schools and classrooms) on problems, issues, products, performances, and exhibitions that are judged by them and others to be significant. This promotes teamwork. As cited by Starnes (1999), Dewey refers to this as building “common and shared life.” Teamwork motivates people. Affiliation promotes cognitive effort, planning, organizing, and self-monitoring. All students want a feeling of belonging and helping others. At-risk students can work as part of a collaborative group and be judged on their ability to successfully complete a complex task. The social group influences middle school and high school students’ level of engagement as much as, if not more than, teachers, parents, or other adults (Brewster & Fager, 2000). Cooperative learning builds acceptance and understanding among the members of the group (Marzano, 1992). This is the theory behind the tech prep initiative. Technology can help foster productive learning relationships.

**Novelty and Variety**

The students use a variety of skills, media, and modes of analysis because the work is varied in methods. This design quality encourages variety in kind, format, difficulty, and time for completion. Baron County Middle School finds its students, teachers, and administrators are no longer bored because they have worked hard to create “purposeful fun” by using an arts focused curriculum to engage students (Manzo, 2000). In this day and age, technology must be utilized to engage students. Rather than the traditional methods (textbooks, worksheets, and tests), student products can take the form of portfolios, videos, Web Quests, and PowerPoint presentations. Teachers who can
create a positive effect—humor, joy, and happiness—into classroom activities are using a basic behavioral principle to enhance student engagement (Marzano, 1992).

**Choice**

Students can choose different ways of doing work and the methods of presentation. Students may have a choice in production, performance, time, sequence, and order of the completion of tasks. Students may be more engaged if they have some degree of control over learning (Brooks & Brooks, 1999). Anderman and Midgley (1998) note that teachers should not relinquish control of the classroom. Teachers should realize that students’ first attempts at decision making and time management may not be successful, but teachers can help by providing guidelines that students can use to monitor progress (Murdock et al., 1995). School leaders should work to promote an environment that encourages teachers to use student choice. Support must be provided for students to ask questions, solve problems, interact with others, think independently, construct their own knowledge, and develop social responsibility and self-discipline.

**Authenticity**

The work is significant to the students and related to their everyday lives. The buzzword in this quality is “real.” Are the conditions similar to the real world? Do students value the significance of the work? Is it important to them? The work is genuine to the students. Humans are driven to encourage in authentic, personally meaningful, and relevant work (Voke, 2002). Course materials should relate to students’ lives and highlight ways that learning can be applied in real-life situations (Bievenue & Gentry, 1997; Brewster & Fager, 2000; Murdock et al., 1995). Educators must keep up to date with trends and technology and find out what causes students to ask questions and look for answers.
Math Achievement

Ai (2002) found that students’ math growth depends on home resources, behavior problems, and attitude towards math. Guo (2001) reveals that boys have a faster rate of acceleration, resulting in a slight difference by 12th grade. Other research singles out racial and socioeconomic divides in math achievement. Diette (2005) states that White and Asian-American students far surpass their African-American, Latino, and Native American counterparts in academic achievement and college enrollment. In the work of Van de gaer (2006), the results are shown on gender differences in math. Boys and girls were relatively even in eighth grade; however, boys accelerate faster in grades 9-12 because of a higher participation in math programs. The study also displayed that the school engagement of peers in classes had a stronger impact on boys’ achievement. Lastly, a study by Lee (2006) at the University of Virginia looked at math achievement over 32 nations. It showed that socioeconomic status had a substantial effect across the nations. It further showed that students’ family indirectly affected math achievement in three ways: mean socioeconomic status of the individual school, socioeconomic status and the distribution of teacher resources, and speaking the test language at home.

Through the use of the design qualities in math classes, teachers can change the attitude of students who have not been successful in mathematics. Although nothing can be done about the home resources, the production of quality design will significantly decrease the number of behavioral problems.

The math curriculum in the district of study varies from grade to grade. Since this study encompassed scores for second grade to eighth, the curriculum offered in each school is important. In most of the elementary schools it is a traditional self-contained math class in grades K-5. However, programs and methods vary. This is a supplementary
program offered by Renaissance Learning. It allows students to work on their own levels to meet their individual goals. Most of the elementary schools use a self-contained setting with the same teacher instructing classes in reading, English, science, math, and history. Two of the elementary schools have experimented with departmentalization. For example, in one particular school, in 2003 one teacher taught every fourth and fifth grade student mathematics. That way, each teacher could teach to a particular strength. It also was easier to plan and instruct. Three of the elementary schools and one middle school used Accelerated Mathematics. This is a supplemental math program developed by Renaissance Learning. It allows students to work at their own level to accomplish goals that are set in different libraries. One of the elementary schools ability grouped for math and taught an advanced math curriculum in fifth grade. The two middle schools have mirrored the same class offering since 2005. Pre-Algebra is offered in seventh grade but a student must make a 93/A average and score Advanced on the Mississippi Curriculum Test to qualify. All other seventh graders take Integrated mathematics class. In eighth grade, all students get the opportunity to earn a high school unit by taking Pre-Algebra, Transition to Algebra, or Algebra I. Also, Algebra I students take the State Subject Area Test each April.

Summary

From the related literature, it is evident that the research shows that activities that engage students may be designed using the 10 components of the Working on the Work Framework. All schools are looking to improve or maintain test results. The goal of the WOW Framework is to improve test results by designing quality work for students. While the answer may not be completely in Gulfport mathematics achievement scores, they will show a district that has implemented these design qualities for half a
decade. The articles outlined in this chapter attest to the idea of engaged students performing better. The data will be useful for administrators, teachers, parents, school districts, and all other educational stakeholders.
CHAPTER III
METHODOLOGY

This chapter provides indepth information on who the participants of this study are and how they were selected, the method by which the data were collected, descriptions of the data, instruments that were used, and how the data were applied and analyzed.

Overview

This quantitative study was used to assess statistical significance of students who have been subjected to The Working on the Work Framework for the past 5 years. The study was devised to determine the effectiveness of the Working on the Work Framework based on mathematical achievement. Achievement was based on the Mississippi Curriculum Test.

Participants

The two middle schools in the Gulfport School District are both represented in this study. One group represents the east side of town, the other the west side of town. The participants are all currently in the eighth grade and have been in the district for the previous 5 years. Fifty students were randomly selected from each school.

Two schools were used in this study; however, they also represent the seven elementary schools in Gulfport. The schools are all part of a 5A classification and have received levels of 2-5 (Mississippi Ratings) over the past 5 years. The east school, grades 6-8, has a population of 700 students. The west school has a population of 520. The demographics of the schools are different. The east school is 45% minority and the west is 90% minority. Both schools are Title I schools (at least 40% free or reduced lunch). The identified schools tested at least 95% of children on grade level on the Mississippi
Curriculum Test. A random sample from each school should give an accurate representation of the district as a whole. Figure 2 displays the demographics of the district of study.

The middle schools identified in this study are traditional middle schools, and each has a 6th Grade Academy, which is in its second year of existence. The faculty and staff consist of a principal, two assistant principals, two counselors, a library media specialist, and a fully certified teaching staff. Each school has used both block scheduling and a 7-period day over the past 5 years. The 7-period day has been in existence for the past 2 years at the east school and the past 2.5 years at the west school. Preadvanced placement courses and special education programs are in existence in both schools. Gifted education was offered through eighth grade 3 years ago but is now only offered in sixth grade. Single-sex classes were used for 2 years in each school in grades 6 and 7.

Both schools offer extracurricular activities including band, choir, strings, and sports.

The Mississippi Curriculum Test is a test given in the spring of each year. It is described by the Mississippi Department of Education as follows:

- Given in grades 2-8
- Areas are reading, language, and math
- 45 multiple choice items in each area
- Untimed
- Aligned with the Mississippi Curriculum Frameworks

The Quantile approach to measurement locates a student’s ability to think “mathematically” in taxonomy of math skills, concepts, and applications. It measures student mathematical achievement and concept/application solvability (www.md.k12.ms.us).
*Male = 50.2%; Female = 49.8%  

Fig. 2. School District Demographics
In September 2001, the Mississippi Department of Education and CTB/McGraw Hill organized and led a standards setting conference in order to establish proficiency level standards. The standards committee was comprised of 210 Mississippi teachers and administrators. They were divided into nine subcommittees, three for each tested area. Committee members defined the four proficiency levels: Advanced, Proficient, Basic, and Minimal (www.mde.k12.ms.us). They are classified as follows:

- Advanced—performs beyond what is academically required for next grade
- Proficient—solid academic performance; well prepared for next grade
- Basic—partial mastery; remediation may be necessary
- Minimal—does not demonstrate mastery; needs remediation of basic skills

Data Collection

Prior to data collection, application and approval to conduct the research was obtained from both the doctoral committee and The University of Southern Mississippi’s Institutional Review Board (Appendix A). Data collection consisted of the following steps:

1. Each of the schools’ instructional leaders were contacted and they required the data to be collected.

2. A letter was obtained from the Gulfport School superintendent with permission to conduct the study and use the following data: (a) consent to use 5 years of math MCT student data; (b) enrollment numbers; and (c) scores for 100 students for the past 5 years in math (Appendix B).

3. The letter was mailed after approval of the Institutional Review Board was given.
Instrumentation

Student data from the MCT in mathematics were obtained from both schools. Results from each proficiency level was assigned a numerical value (1-4) based on the raw score.

Four primary variables were identified in this study. The variables are MCT score, ethnicity, school, and gender. A total of 50 students from each school were used for an overall total of 100 subjects. The subjects were randomly selected from each school. All data were entered into the SPSS program.

Analysis of Data

A two-way ANOVA test was performed to determine if there is a significant difference in mathematical achievement since the inception of the Working on the Work Framework at the .05 alpha level. It also determined if race or gender has an effect on the relationship between math achievement and designing quality work. Specific techniques related to the three hypotheses are as follows:

H1: There is no significant difference in the Mississippi Curriculum Test math scores in Gulfport since the Working on the Work action plan has been implemented.

H2: Gender has no effect on the relationship between math achievement and the focus of designing quality work over a 5-year period in the district of study.

H3: Race has no effect on the relationship between math achievement and the focus of designing quality work over a 5-year period in the district of study.

The data determined the effectiveness of the Working on the Work Framework. The results will be discussed in Chapters IV (Results) and V (Conclusions) of this document.
CHAPTER IV

ANALYSIS OF DATA

Introduction

This chapter presents descriptive analyses as well as quantitative findings on the data gathered from the test scores of eighth grade middle school students in the Gulf Coast district of study. The data include test scores from the Mississippi Curriculum Test over a 5-year period. The data also include gender and ethnicity of eighth grade students used in this study.

The following research questions were used to guide the experiment in this study:

1. There is no significant difference in student mathematics achievement in the Gulfport School District due to the implementation of the focus on designing quality work.

2. Gender has no effect on the relationship between math achievement and the focus of designing quality work over a 5-year period in the Gulfport School District.

3. Race has no effect on the relationship between math achievement and the focus of designing quality work over a 5-year period in the Gulfport School District.

Descriptive Data

The population for the study consisted of eighth grade students from two middle schools in the Gulfport School District that is located on the Gulf Coast of Mississippi. All students used in this study took the Mississippi Curriculum Test assessment on grade level in the Gulfport School District from third grade to seventh grade. This covered the time period from 2002-2006. These assessments are administered to students in May of each year. Benchmark grades include both third and seventh grades. None of the students
used in this study were tested off grade level. Each district may test 5% of students off
grade level and still meet state accountability requirements; therefore, special education
students who were not tested on grade level were excluded from the data collection. The
schools used in this study are the only middle schools located in the Gulfport,
Mississippi, School District. The identified schools test at least 95% of all students on
grade level in grades 6-8. Two schools were used in this study; however, they also
represent the seven elementary schools in Gulfport. Both schools are all part of a 5A
classification and have received levels 2-5 (Mississippi Ratings) over the past 5 years.
The east school, Bayou View Middle, has a population of 700 students. The west school,
Central Middle, has a population of 520. The demographics of the schools are different.
Bayou View Middle is 45% minority and the Central Middle is 90%. Although these
students' scores were pulled from Middle School records, the third-fifth grade scores
were achieved at the elementary level. Bayou View Middle has three feeder schools:
Bayou View Elementary, Anniston Elementary, and Pass Road Elementary. Central
Middle has four feeder elementary schools: West Elementary, Central Elementary,
Gaston Point Elementary, and Twenty Eighth Street Elementary. Twenty Eighth Street
Elementary had to be closed after 2006 due to Hurricane Katrina.

A total of 109 students were randomly selected from the test data. Fifty nine
students each were selected from Bayou View and 50 were selected from Central. A total
of 105 students were used for the study. The subject group consisted of female and male
students from various ethnic backgrounds including African American, Caucasian, Asian,
and Hispanic. However, the Asian and Hispanic populations in these schools were very
small and were not used in the statistical analysis. The total was only 4%. The other
groups fell as follows: White female = 25%; White male = 19%; Black female = 26%; and Black male = 35%.

Table 2 shows the figures based on gender, race, and test results. Results are listed from third-seventh grade on the Mississippi Curriculum Test in mathematics. Each score was recalculated by dividing the main score by the perfect score in each grade level and then multiplying by four. Perfect math scores for each grade level are as follows: third = 640; fourth = 680; fifth = 715; sixth = 715; and seventh = 740. Also listed in Table 2 are means and standard deviations for each group of students. The highest mean was obtained by White females (3.47) in third grade, and the lowest was obtained by Black males and females (3.00) in grade 5. Standard deviations were not large. The highest was obtained by White females (.29) in the third grade and the lowest was obtained by White males (.15) in the fifth grade. Results from Table 2 are further explained by using the information in Figure 3.

Figure 3 shows that White students’ achievement in mathematics over the 5-year period was higher than Black students’. It also shows that both race group scores declined from third to fifth grade and increased in sixth grade, only to decline in seventh grade. The decline in Whites from sixth to seventh is more of a decrease than the decline in Black students over the same period. Table 2 shows that the drop is higher in White females and only a slight drop in White males from sixth to seventh grade. The means in grades 3, 6, and 7 are greater than grades 4 and 5. There are no gains in grades 3, 6, and 7.

Tests of Hypotheses

The results from testing the hypotheses of the study are provided. Each hypothesis is reiterated, and the analysis of the data is presented for each hypothesis.
<table>
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<th>MCT Grade</th>
<th>White Female Mean</th>
<th>White Female SD</th>
<th>White Male Mean</th>
<th>White Male SD</th>
<th>Black Female Mean</th>
<th>Black Female SD</th>
<th>Black Male Mean</th>
<th>Black Male SD</th>
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<td>.27</td>
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<td>.23</td>
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<td>.21</td>
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<td>.15</td>
<td>3.10</td>
<td>.21</td>
<td>3.09</td>
<td>.29</td>
</tr>
</tbody>
</table>
Fig. 3. Mississippi Curriculum Test Math Results from 2002-2006
Hypothesis 1

Hypothesis 1 stated: There is no significant difference in student mathematics achievement in the Gulfport School District due to the implementation of the focus on designing quality work \[ F(4,404) = 20.55, p < .001 \]. Therefore, Hypothesis 1 was rejected. There was some change in the mean MCT scores; however, they varied across the years and primarily decline. Figure 3 and Table 2 represent the means used to test Hypothesis 1.

Hypothesis 2

Hypothesis 2 stated: Gender has no effect on the relationship between math achievement and the focus on designing quality work over a 5-year period in the Gulfport School District \[ F(1, 101) = .76, p = .384 \]. Therefore, Hypothesis 2 was accepted. Although girls had the higher means in most grades, this was not statistically significant. Table 2 presents the means used to test Hypothesis 2.

Hypothesis 3

Hypothesis 3 stated: Race has no effect on the relationship between math achievement and the focus of designing quality work over a 5-year period in the Gulfport School District \[ F(1, 101) = 60.33, p < .001 \]. Hypothesis 3 was rejected. The test was significant that race has an effect on math achievement. Whites outscored Blacks in mathematics since the inception of this action plan. Both Table 2 and Figure 3 display these results.

Ancillary Findings

While it was not hypothesized, data were found that relates to student achievement using two-way and three-way interactions. Using a two-way ANOVA, the
following results were found: The first two-way interaction was time and race \( [F(4, 404) = 2.76, p = .027] \). This test was significant. Therefore, test scores have varied on the math section of the Mississippi Curriculum Test over a 5-year period since the inception of the Working on the Work action plan. The second two-way interaction involved time and gender \( [F(4, 404) = .65, p = .625] \). This test was not significant. The final two-way interaction involved race and gender \( [F(1, 101) = .025, p = .876] \). This relationship was also not significant. There was one three-way interaction that involved time, gender, and race \( [F(4, 404) = .475, p = .754] \). This final interaction was also not significant.

**Summary**

In this study, the math scores in the Gulfport School District did see some gains over the 5-year period of study. The scores fluctuated from year to year. There were several significant differences that favored the Working on the Work action plan. All of the subgroups scored well in the third grade. Scores continued to decrease until a rise in sixth grade. Scores did change across time, but not always in a progressive direction.

Data gathered on ethnicity in this study revealed that there were slightly more African-American students tested in the third-seventh grade MCT compared to the number of Caucasian students tested. This is due to a higher number of minority students overall in the Gulfport School District. There is a lot of research that supports that minorities score lower in mathematics than the majority. This study simply agrees with the traditional research.

There were no significant findings when scores were compared by gender; however, females did score slightly higher than males in both ethnic categories. Traditionally, in secondary education males score higher than females. For the lower
grades, as far as this study is concerned, this is not the case. Although scores varied, the difference was not enough to prove significant.

Other interactions tested were time/race, time/gender, race/gender, and time/race/gender. Only time/race proved to be significant.
CHAPTER V
SUMMARY, DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The general purpose of this study was to determine if the Working on the Work action plan has made a difference in mathematics achievement in the district of study over a 5-year period. This was based on several variables. These variables included math scores from the Mississippi Curriculum Test over the previous 5 years, ethnicity, and gender of randomly selected middle school students in the district of study located in the state of Mississippi. These variables were analyzed to determine if there was a significant difference in student mathematical achievement since the inception of the implementation of the action plan.

Summary of Procedures

The study was limited to two middle grade schools in Gulfport, Mississippi. The schools contain grades 6 through 8, which are recognized by the Mississippi Department of Education as middle grades. Both schools may test up to 5% of students off grade level on the Mississippi Curriculum Test; therefore, these special education students were not used in this study. Two traditional middle schools were selected for this study based on the fact that they contain students from all over the district of study. There are the only two middle schools in the district. They represent seven elementary schools. Each of these participants has been in the district from 2002-2006. Information about each school was obtained through the central office in the district. Next, a packet containing a letter of request was mailed to the superintendent soliciting a letter of permission to use the math data from the Mississippi Curriculum Test for the 2002-2006 school years. The packet
contained a letter explaining the study and its purpose and a self-addressed, stamped envelope to the researcher. A telephone call was made to the principal of the west side middle school to agree to release the data. The researcher is the principal of the east side school.

A total of 105 eighth grade students were randomly selected from the schools to be used as subjects for this study. Variables used from the data included test scores, gender, and ethnicity of the subjects used in the study. Fifty five students were used from the east side middle school and 50 were used from the west side school. Although there were 109 students selected, 4 were eliminated which were classified as other.

Both schools from which data were requested granted the researcher permission to use the archival data from their respective schools. All information requested with the data was sent and was also usable. The data were entered into SPSS and tests were run to analyze the data.

Summary of Findings

Chapter IV provided information about the descriptive analysis of the data gathered in the study as well as tests of the hypotheses. Both of the schools used in this study are classified as part of a 5A school district in the state of Mississippi. That is the largest school classification granted by the state of Mississippi. Both schools used in this study are recognized as self-sufficient schools which operate independently and consist of grades 6 through 8. The schools used in this study had middle grade enrollments ranging from 520 to 700 students.

The eighth grade middle school students in this study consisted of 48.6% female students and 51.4% male students. The ethnic make up of students enrolled in the district
is 51% minority and 49% majority. The ethnic make up of the students used in this study is 42% Caucasian and 48% African American. Only a small percentage of the original data (3.8%) contained other ethnic groups. They were, therefore, excluded form the tested data.

The students used in this study who were enrolled in middle schools varied in math over time. The mean scores on the math section of the Mississippi Curriculum Test were highest in third grade for all groups with the exception of Black males—White females, White males, and Black females. Black males' highest mean occurred in sixth grade. All groups’ scores decreased in the elementary upper grades 4 and again in grade 5. When each group entered middle school in grade 6, the scores rose again—White females, White males, Black females, and Black males. Scores begin slightly decreasing again in grade 7.

Further analysis disclosed some significant findings regarding this study. White students’ achievement gain in mathematics over the 5-year period was higher than Black students’ achievement gain. The decline in Whites from sixth to seventh is more of a decrease than Black students over the same period. The drop in mean scores is higher in White females and only a slight drop occurs in White males from sixth to seventh grade.

Tests of Hypotheses

Three hypotheses were tested at the .05 level of significance. The results of the tests of the hypotheses follow.

Hypothesis 1 stated: There is no significant difference in student mathematics achievement in the district of study due to the implementation of the focus on designing quality work. There was some change in the mean math MCT scores; however, they
varied across time. There was primarily a decline found in scores on the MCT between grades 3-7. Therefore, Hypothesis 1 was rejected.

Hypothesis 2 stated: Gender has no effect on the relationship between math achievement and the focus of designing quality work over a 5-year period in the district of study. Although girls had the higher means in most grades, this was not statistically significant. Therefore, Hypothesis 2 was accepted.

Hypothesis 3 stated: Race has no effect on the relationship between math achievement and the focus of designing quality work over a 5-year period in the district of study. The test was significant that race has an effect on math achievement. Whites outscored Blacks in mathematics since the inception of this action plan. Hypothesis 3 was also rejected.

Discussion

The Working on the Work action plan was not effective when compared to math achievement over a 5-year time period, according to the results of this study. The findings of this study showed some gains and losses in math test results over time for the middle school students. The purpose of the W.O.W. action plan is to design authentically engaging work for students that will, in turn, bring up test scores.

The researcher has been a middle school math teacher, elementary assistant principal, elementary principal, and middle school principal in the district of study over the past 11 years and has worked in 5 of the 10 schools in the district of study. In 2001, the researcher became an elementary principal at the age of 29 and began implementing this action plan in a low-achieving elementary school. In 2 years, the school increased from a level 2 to a level 4. The researcher currently oversees the east side middle school
which is ranked number 7 in the state in Algebra I Subject Area Test scores and #9 in the state overall. The researcher admits to being somewhat surprised that scores varied over time. Since becoming a principal in 2001-2007, every principal in every school has changed. At the age of 37, the researcher is the senior principal in the district of study. Each year, new administrators and teachers must be trained on the action plan. The researcher only wonders what scores could be if there was consistency in administration. The superintendent who implemented the plan has also retired. The researcher does not credit W.O.W. alone with the rise in scores over time. *No Child Left Behind* (2001) has made people work harder and be more accountable for the work that students receive on a daily basis.

Although the findings of this study did not show a significant difference in males and females in math achievement, the higher scores in the lower grades by females may indicate improved performance for male students in higher grades. As discussed in Chapter II, Ai (2002) found that students’ math growth depends on home resources, behavior problems, and attitude toward math. Guo (2001) revealed that boys have a faster rate of acceleration, resulting in a slight difference by 12th grade. Other research singles out racial and socioeconomic divides in math achievement. Diette (2005) stated that White and Asian-American students far surpass their African-American, Latino, and Native American counterparts in academic achievement and college enrollment. Although both of the middle schools used in this study were located in the same city, the results do model traditional math achievement research. In the work of Van de gaer (2006), the results are shown on gender differences in math. Boys and girls were relatively even in eighth grade; however, boys accelerate faster in grades 9-12 because of
a higher participation in math programs. In the study, by the seventh grade both White females’ and males’ means were almost the same (3.37 to 3.35) and Black females’ and males’ means were almost the same (3.10 to 3.09).

There is not a perfect solution to be sure that every child is successful in the educational setting. The Working on the Work action plan may be good for most districts, but there are many factors which school administrators and school boards must consider, including size of enrollment, funds to pay the Center for Leadership and School Reform, time for professional development, and whether the action plan is practical for the school district.

School administrators and school boards can benefit from the findings of this study. With the demands of the No Child Left Behind Act and the expectations of increasing the graduation rate for high schools, it will become increasingly important to improve the educational process by students receiving quality work from educators.

Conclusions

The findings of this study implicate reasons as to why the Working on the Work action plan is successful for middle grade students over a 5-year period:

1. Students’ in grades 3-7 math scores on the Mississippi Curriculum Test varied, but they never reached the highest means obtained in third grade.

2. Students’ scores on the Mississippi Curriculum Test for both races and genders (African-American males and females and Caucasian males and females) were relatively the same exiting seventh grade.

3. African-American students’ math scores on the Mississippi Curriculum Test were lower over the 5-year period than Caucasian students’ math scores.
Limitations

1. Special education students may be tested off grade level on the Mississippi Curriculum Test. They were, therefore, not included in this analysis of data.

2. Although some other (Spanish and Asian) students' data were collected in the random sample, the number (4%) was too small to include in the data analysis.

3. The high transient student mobility rate is a factor. Only 50 students from the west side school were eligible for this study.

4. The implementation of the action plan fell on the building administrators; therefore, it may not have been carried out correctly.

Recommendations for Practice

It is recommended that all schools, especially those with increasing dropouts, high absentee rate, and excessive discipline issues with students, consider implementing the Working on the Work action plan. It is also recommended that schools study the research to determine if the action plan is practical for their school district. If the school or school district makes the decision to implement the action plan, it is recommended that teachers and staff members be trained thoroughly with follow-up staff development. It is further recommended not to expect immediate results. Change in teachers, administrators, and design takes time and patience.

Although there were no statistically significant differences regarding gender found in this study, schools with failing males, particularly African-American males, should consider this concept when addressing that issue. Since the results of the study revealed less of a drop in scores from sixth to seventh grade for African Americans, the curriculum should be used as a blueprint for further success.
Recommendations for Future Research

After analyzing the results within this study, the following recommendations can be made for future studies of ninth grade academies:

1. It is recommended that the study be extended to include students' Subject Area test score in Algebra I and eighth grade Mississippi Curriculum Test scores.

2. It is recommended that the study be repeated and include other factors such as discipline, report card grades, and average daily attendance. This information can be useful in demonstrating a more extensive comparison between the engagement of work students receive and attending and engaged in class.

3. It is recommended that the study be repeated in other school districts that have implemented the Working on the Work action plan for at least a 5-year time period.

4. It is recommended that a study be conducted to include a school that has really implemented the action plan correctly. Therefore, results could be used to display the effectiveness of the action plan.
APPENDIX A

HUMAN SUBJECTS PROTECTION REVIEW COMMITTEE

The project has been reviewed by The University of Southern Mississippi Human Subjects Protection Review Committee in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months. Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: 27080006
PROJECT TITLE: Working on The Work: Five Years of Engagement
PROPOSED PROJECT DATES: 06/28/07 to 12/14/07
PROJECT TYPE: New Project
PRINCIPAL INVESTIGATORS: Jerry Jefferson Morgan
COLLEGE/DIVISION: College of Education & Psychology
DEPARTMENT: Educational Leadership & Research
FUNDING AGENCY: N/A
HSPRC COMMITTEE ACTION: Exempt Approval
PERIOD OF APPROVAL: 08/06/07 to 08/05/08

Lawrence A. Hosman, Ph.D.  8-20-07
HSPRC Chair  Date
APPENDIX B

PERMISSION TO CONDUCT STUDY

Gulfport School District
Board of Trustees & Office of the Superintendent

June 26, 2007

Bayou View Middle School
Attn: J. J. Morgan
212-43rd Street
Gulfport, Mississippi 39507

Dear Mr. Morgan

Please consider this letter as a reference to our June 26, 2007, phone conversation requesting permission to collect data from Gulfport School District’s 8th grade Mathematics students over the last 5 years. You have permission to carry out this research project.

Mr. Morgan, as with any study, please make sure you do not include individual student names in your research and follow federal research regulations in securing your documentation.

In service to the youth of the Gulfport School District,

[Signature]

Glen East, Superintendent

District Offices • 2001 Pass Road • 228.865.4600 • 228.865.4718 fax
Gulfport School District • P.O. Box 220 • Gulfport, MS 39502-0220

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REFERENCES


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