

The Impact of High Stakes Testing on Student Learning in the Classroom

by

Randall Hodgson

A Project Submitted to the Faculty of

The Evergreen State College

In Partial Fulfillment of the Requirements

for the degree

Master in Teaching

2010

This Project for the Master in Teaching Degree

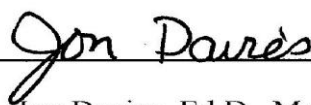
by

Randall Hodgson

has been approved for

The Evergreen State College

by

A handwritten signature in black ink that reads "Jon Davies". The signature is written in a cursive style and is positioned above a horizontal line.

Jon Davies, Ed.D., Member of the Faculty

June 2010

ACKNOWLEDGEMENTS

I wish to thank everyone who has helped me along this journey. This paper has been resurrected from ashes with the help and support of a loving family, friends and an understanding faculty.

ABSTRACT

This paper seeks to answer “Does the high stakes testing environment positively impact student teaching?” with a critical analysis of available literature. The new wave of school reform pushes accountability and consequences for non-performance, thereby increasing the amount of pressure and stress. This paper finds that this increase in stress and pressure causes the decisions made in the high stakes testing environment to have a negative impact on student learning. Alleviating this stress and pressure is instrumental to reversing this negative impact. Further research into how to alleviate this pressure and finding the optimal balance of stakes are questions left unanswered that need to be researched.

TABLE OF CONTENTS

TITLE PAGE	i
APPROVAL PAGE	ii
ACKNOWLEDGEMENTS	iii
ABSTRACT	iv
CHAPTER 1: INTRODUCTION	1
Introduction	1
Rationale	2
Definitions	6
Limitations	7
Summary	7
CHAPTER 2: HISTORICAL BACKGROUND	9
Introduction	9
The Rise of Standardized Testing	9
Changes to the School Environment	12
Summary	14
CHAPTER 3: CRITICAL REVIEW OF THE LITERATURE	16
Introduction	16
Teachers	17
Administration	29
Students	37
Summary	41
CHAPTER 4: CONCLUSION	43

Introduction.	43
Summary of Findings.	44
Implications for Teaching.	47
Suggestions for Further Research	48
Conclusion	49
REFERENCES.	50

CHAPTER 1: INTRODUCTION

Introduction

The goal of teaching is and always will be to positively impact student learning. Teachers try their best to reach each child while contending with a vast array of personalities, disabilities, home situations, cultural differences, variations in socioeconomic status, district goals, school goals, and countless other influences that affect the students learning. Teachers are faced with having to plan lessons that consider all those factors and still provide an overall experience that will help the students to learn the presented material. A relatively new factor in that list is high stakes testing (HST). Students, teachers, and schools are now measured by a series of federal and state mandated tests with consequences tied to the results of those tests. In the past HST was confined to college entrance, graduate entrance, or specialized certification exams. Any testing done outside of what the teacher administered in class had very low impact on students. The only tests which come close to the same effect as HST were placement or language fluency tests. These tests, though high stakes, were only used on a minority of students so preparation for them was far removed from daily classroom instructions. Now high stakes tests are the culmination of a student's K-12 career, and the data high-stake tests provide become the building blocks of political policies. The data is aggregated, examined, codified, disaggregated and then used to determine funding for schools, which schools are allowed to remain open, and which school programs receive funding. HST does and will continue to change how schools are organized, the types of classes offered, and how the public and politicians view schools and teachers.

This paper will attempt to answer the question “Does the high stakes testing environment positively impact student learning?” through the analysis of the available literature and research in the hopes that the answer will give teachers, administrators and students a better idea of how the current HST environment affects student learning and what, if any, changes need to be made to ensure the HST environment positively impacts learning. Chapter one will detail the rationale of why this question is asked, state the limitations of the paper and research analyzed, and describe the controversies involved in the question. Chapter two will describe the history of the advent of HST in the United States of America, the changes in our schools due to HST, and how student learning is changed due to the HST environment. Chapter three is a critical analysis of the available literature and the strengths and weaknesses of that literature. Finally chapter four will summarize the findings of the literature, their connections, and their implications for the classroom. Chapter four will also provide suggestions for further research.

Rationale

The focus of this paper is to seek an answer to the question “Does the high stakes testing environment positively impact student learning.” This answer is beneficial to all members of the education community, from district administrators to students in the classroom because the HST environment affects three major facets of the educational system, the student, the teacher, and the administrators. The educational community, and I as a future teacher need to determine if the decisions made that change these facets positively impact student learning.

Administrative leaders are under extreme pressure to produce annual yearly progress. Each year progress must be made in student test scores or schools face

losing funds, being black marked by the media, or having district or governmental authorities make decisions for them. School administrators are forced to make decisions about how to modify class schedules, programs offered, and staff development opportunities to increase student scores. These decisions must be made with a full understanding of their impact on student learning.

In this new HST environment teachers are also under pressure to positively impact student learning by increasing test scores. Teachers are responding to this pressure by changing their teaching methods, narrowing the curriculum of what they teach to match the state and district tests, and spending an increased amount of time on test preparation activities. As a future teacher answering the question of this paper is especially important as the findings could help me understand how to ensure that I am positively impacting student learning in this HST environment.

Lastly, the answer to this paper's question is crucial to students who are faced with taking the high stakes test and dealing with the results. Students need to know how the HST environment affects their learning, and how other students are responding to this new environment. Without knowledge of the answer students could react blindly and negatively impact their chances at an education.

Each of these facets effects student learning in different ways and understanding how the HST environment both changes these facets is the subject of much debate.

Members of the political and educational communities positioned on both sides of the HST argument, both decry the faults of the other and how the opposition's actions negatively impact student learning. One major point of debate is how to reward or sanction teachers based on their students' test results. On one side of the argument

politicians ask for changes to teacher pay or removal of the teacher from the school if the students test scores do not meet the required standard. Opponents to this idea point to the multiple factors of student life which affect learning and the lack of control teachers have on those factors. (Ripley, 2008).

One of the main arguments against HST is that teachers are no longer able to teach a varied curriculum and are forced to teach to the test. Teaching to the test is a negatively charged term meaning that students only participate in test preparation exercises which focus on “drill and skill” problems and promotes a lack of depth in understanding. Opponents to the current HST environment report that due to the pressures of HST teachers limit the curriculum taught to only the material which will be on the test, creating an unbalanced education (Viadero, 2000 Madaus, 2009).

Another issue that is raised when HST is discussed is funding. Federal policies in NCLB have tied federal funding to state compliance with HST policies (United States of America, 2002). Some states chose to forgo the “minimal” amount of federal funding stating that the policies make unreasonable demands based on the amount of money offered. This is causing either a heavier local tax burden or the removal of “fringe programs” like ESL, Special Education, para-educators, after school programs, etc (Gryphon, 2005). Another issue with funding is that schools that are marked as failing are likely to be shutdown. These schools are typically servicing lower income minority students who, as mentioned above, are not achieving as well as other students in more affluent areas. Tied to school closing is also the issue of the rise in charter schools, private schools, and government educational vouchers which allows parents to remove

their students from failing schools, thus removing even more money from public education where it is so desperately needed.

Another argument against HST is that the pressures of the HST environment increase the drop-out rate of students, primarily among minority students (Madaus, 2009). Madaus reported that research on drop-out rates in states with a mandatory high stakes graduation test shows a direct co-relation between the HST environment and drop-out rates. This would contradict the intent of high stakes testing as increased drop-out rates would mean a negative impact on student learning.

School administrators are also faced with a dilemma regarding HST. The current HST environment demands that the school or district produce an increase in student test scores every year. If the school fails to do so repeatedly then the choices of how best to impact student learning is then removed from local leadership and given over to a higher authority. Opponents to HST point to this practice as harmful since removing the decision making process from local leadership can create choices that are made in a vacuum, uninformed about the schools population or community.

Teachers are faced with the dilemma of wanting to provide students with an education that gives both depth and breadth to each topic while also dealing with the amount of material that is required to know to pass the mandated test. Topics that will not be tested are given less class time or are completely removed across all levels of education. Teachers report a significant decrease in the amount of time spent on fine arts, physical education, world languages, and other non-tested material (Madaus, 2009).

This paper will attempt to resolve these arguments and give research based strategies teachers, administrators and students can use to ensure that student learning is positively impacted.

Definitions

This paper will use several terms to describe key ideas and practices in the HST environment. One such term is high stakes testing, which according to David Hursh (2008) is defined as giving standardized tests to students so that the resulting scores can be analyzed by school personnel, politicians, and parents to reward or punish schools. Martin Carnoy (2003) further expands this definition by establishing how high stakes, where the results can reward or punish schools versus low stakes where the results are only used for analysis.

Another definition which will be used in this paper is that of high stakes testing environment. I define this term as the set of responses, pressures, and practices stemming from mandated tests that control the student's ability to graduate, and the use of those test scores for political or public purposes.

I will also use the term narrowing the curriculum which Madaus (2009) defined as the reduction of different subjects taught by the teacher and the focus on test preparation activities. This definition encompasses the reduction in class choices by the removal of electives at the secondary level as well as the reduction in the amount of time elementary teachers spend on non-tested subjects.

The term positive impact on student learning is defined in this paper as an education that covers all subjects equally providing both depth and breadth of topics in a variety of teaching methods that address the needs of a varied student population.

Limitations

This paper is limiting HST to the following definitions: A high-stake test is a standardized state administered test whose result will affect the student's ability to advance, graduate; and the student and teacher are aware of the effects of the results of the test. This paper will not be including standardized assessment tests that are only for the purpose of school assessment in its definition since they have to major impact on the student's educational future like the Iowa tests. I am also limiting the definition to not include tests of option programs like Advanced Placement or International Baccalaureate and not including language assessment tests. I am also not including in the HST definition tests that would place students in specialized classes like honors or remedial. This paper is also limiting its scope to the HST environment in the USA; this is due to how relatively new the HST environment is in the USA and the changes that are taking place due to HST. Other countries which have already existed in HST environments are not included since the HST environment has already been established. I am also not including college prep, graduate admission, or specialized certificates since there is very little classroom prep involved in these tests

Summary

The HST environment the educational community finds itself in is not completely understood by all the members involved. Each level of the educational community, as well as politicians, parents, and students have different ideas of how to positively impact student learning within this environment. This paper will attempt to answer the question of "Does the high stakes testing environment positively impact student learning?" through a critical analysis of available research. This chapter detailed the controversies

and arguments involved with the HST environment, defined key terms that will be used throughout the paper, and set a limitation to the focus of the paper.

Chapter 2 will review the history of the rise of the HST environment, and how the educational community is currently attempting to positively impact student learning within this new environment.

CHAPTER 2: HISTORICAL BACKGROUND

Introduction

The current HST environment is a new phenomenon in the US. Research into how the HST environment effects learning are fairly new but arguments for and against has been around ever since the inception of HST in the US. Chapter one of this paper explained why all members of the educational system, from student to administrator need an answer to the question “Does the current high stakes testing environment positively impact student learning?”. Without an answer to this paper’s question administrators would be unaware of what policies or programs to enact to support learning in this HST environment. Teachers could make instructional decisions that do not support learning, and students would be unaware of how to best affect learning in this new environment. Chapter one also detailed the limit of this paper and detailed some of the controversies surrounding the question. This chapter will give a brief history of how the HST environment took hold in US schools and the changes that have taken place in the educational system due to this environment. The rise of standardized testing, state standards, and mandated graduation tests will be traced to their current format, as will educational laws and policies enacted by the US government which helped to usher in the HST environment.

The Rise of Standardized Testing

In the 1970s American students had their first encounter with standardized tests. These tests were nothing like the current high stakes tests students face today. These original tests were minimum competency tests that measured students ability to perform the bare minimum required to be a functioning citizen. There was no mandated

accountability attached to these tests. The data gathered was used merely as an assessment by administrators and politicians. In the 1980s teacher bonuses were linked to student test scores on these minimum competency tests; teachers in New York State can earn up to \$3000 for high student test scores (Madaus, 2009).

Florida adopted these minimum competency tests as a graduation standard early on. 1981 was the first year a student was denied a high school diploma due to not passing the state test. This decision was held up in both the state and federal courts. At first Florida administrators reported significant gains due to the requirement but soon the results reached a plateau while dropout rates among impoverished and minority students increased (Amrein & Berliner, 2002)..

In 1984 a second step towards the current HST environment was taken when President Reagan's education secretary introduced a state by state comparison of educational systems and test prep scores. This solidified the use of test scores as a valid comparable benchmark (Madaus, 2009). As states began to rely on the standardized tests as a guide for instruction politicians changed the minimum requirement tests to the maximum of what students should be able to accomplish. Thus the "low bar" the test originally tested for became the "high bar" teachers tried for (Amrein & Berliner, 2002).

The failure of minimum competency testing in the late 70's and early 80s and America's failure to keep up with Japan and Western Germany in the world market once again drew the public eye to education and brought the U.S. another step closer to HST as we now know it. In 1983 the National Commission on Education released a report called *A Nation at Risk*. This report pointed a very large finger at what it saw was a failed American education system. It called for reform if America was going to keep up with

the world and suggested that standards should be raised both at the high school level and at the college level. The report also called for specific amounts of English, math, and science credits in high school; and for the need of HST to ensure that students were meeting the standards set forth by the government (Jorgensen & Hoffmann, 2003).

Other countries, like Japan, have always been pointed out as extreme due to their testing policies and the impact those testing results have on their students' lives. Family stress, deviant behaviors, and high amounts of academic stress have been held up as negative effects caused by this high stakes testing environment (Saito, 2006). Japanese students have also been held up as "the ones to beat" or the ones that the United States need to do better than in terms of academic achievement (Harper, 2001). In the political arena U.S. schools and the quality of their graduates have always been held up in comparison with those of other countries because of the ever increasing demand for higher educated and more capable workers. Monitoring the quality of students, how they rank versus other countries and ensuring that the US come out on top has lead politicians to want hard evidence they can rely on when making policy changes (The National Commission on Excellence in Education, 1983). Also making its mark on political policies is the finding of how wide the achievement gap is between white students and the majority of minority students (KewalRamani, Gilbertson, Fox, & Provasnik, 2007). This has prompted policy makers to want more control over the individual classroom and change the meaning of excellence to what they can see in numbers (United States of America, 2002).

In 1997 the Individuals with Disabilities Education Act or IDEA was passed requiring that students with disabilities be tested the same as students without disabilities

and that their scores be reported to the federal government. This requirement was intended to guarantee equal education and resources for students with disabilities rather than have them ignored in the classroom because their test scores wouldn't matter. The 2004 reauthorization of IDEA reiterated the belief that students with disabilities should be performing at the same level as students without disabilities (Madaus, 2009).

The current HST environment was firmly established when the United States government passed the No Child Left Behind Act of 2001. This Act gave the US government the power to set educational standards and attach or deny federal funding to the results of a state assessment tool. States required the assessment of students and that states provide the resulting scores to the federal government (United States of America, 2002). Since then 26 states have passed legislation requiring students to pass the state-mandated test to graduate from high school (Madaus, 2001). The US government reauthorized NCLB several times adding and amending to it but never changing the focus off of the HST environment. NCLB is currently under reevaluation until 2010.

Changes to the School Environment

The current HST environment has had a profound impact on how educational administrators, teachers, and students approach learning. All parties involved have reported changes that have an impact on student learning.

Teacher reported changes in amount of test preparation, narrowing of the curriculum, and an increase in pressure felt. Teachers reported the narrowing of the curriculum happened in two forms, the first was a shortening of time spent on non-tested subjects in the elementary level and the removal of elective classes from students who had not passed the state test at the secondary level. Teachers at all levels also reported

spending increased amounts of class time on test preparation activities such as pre-testing and drilling students on how to answer the questions on the state test. They also reported an increase in the amount of district or school level standardized tests given to students to evaluate student readiness for the state test (Clarke, Shore, Abrams, Miao, & Li, 20003; Pedulla, Abrahms, Madaus, Russell, Ramos, & Miao, 2003).

Teachers reported the increase in pressure felt from administrators, parents, and the media was due to the HST environment. One source of this increased pressure was changes in state or district policy that link teacher pay or jobs to student achievement caused an increase in job dissatisfaction and an increase in the number of teachers leaving the teaching profession. Teachers also reported increased pressure due to school test scores being reported in the media as a comparative marker between schools. Schools that do not reach the state standard in student scores are labeled as failing and the teachers viewed as incompetent (Clarke, Shore, Abrams, Miao, & Li, 20003; Pedulla, Abrahms, Madaus, Russell, Ramos, & Miao, 2003).

School administrators (principals, vice-principals, district staff) also reported a narrowing of the curriculum due to the removal of elective classes in favor of more remedial classes for students who had not passed the state test. This narrowing happened either by their own decision, viewing more time spent in tested classes as beneficial to student learning, or by district and state decisions which determined the classes the schools had to offer. Administrators also reported the changing of locus of control. When a school did not demonstrate a positive impact in student learning through increased test scores district or state administrators used state and federal laws to make decisions for the school about what programs they offered, what teachers they employed,

and what classes are taught (Acker-Hocevar & Touchton, 2001; Singh & McMillan, 2002).

Students reported changes in increase in stress, and number of dropouts due to the HST environment. State laws mandate students pass a variety of standardized tests in order to earn a high school graduation diploma. Students report an increase in pressure due to a one-time assessment determining their ability to graduate. They also report an increase in the amount of students dropping out, primarily non-white students due to fear of not being able to pass the mandated graduation test. Another reported change is student scores on state tests have increased. Several states report an increase in students passing the mandated graduation every year. Politicians and pro HST groups mark this increase as a successful change and proof that the HST environment has a positive impact on student learning (Madaus, 2009).

Summary

The current HST environment is a new phenomenon in the United States of America. Political leaders and an ever increasing competitive global market demand that American students be at the forefront of educational success. The report *A Nation at Risk* created a concern about the failure of American schools and politicians across multiple presidencies have tried to find a way to push American students to the top. This push has created the standards movement and given rise to mandated state tests which are now tied to graduation requirements in most states, and in other states the resulting scores determine the fate of teachers and programs that schools can provide. These new requirements for students, teachers, and administrators alike have created the current HST environment. Administrators, teachers, and students respond differently to this

environment, each in ways that may or may not positively impact student learning. Chapter three will provide a critical analysis of the available research on how schools changed in the HST. The chapter will analyze three main facets of education which affect student learning, administration, teachers, and students. This analysis provides a window into how student learning is affected by the HST environment.

CHAPTER 3: CRITICAL REVIEW OF THE LITERATURE

Introduction

The United States educational community has recently found itself in a HST environment with very little knowledge or understanding of how to positively impact student learning in such an environment. Teachers, administrators and students find themselves facing pressures from multiple fronts. Politicians want the American educational system to produce a competitive work force and use student test scores to measure the effectiveness of the schools. These test scores are used to determine the level of funding schools will receive and if schools do not improve scores then they face the possibility of being shutdown. The media and parents use the same scores as a comparison tool to determine if a school is failing and if students should be transferred to a non-failing school. Students face a state mandated test that will be the sole deciding factor in whether they receive a graduation diploma or not. With all these new pressures the expectation that student learning is positively impacted remains, but without an informed understanding of how the HST environment affects student learning any decisions made are done so in a void. This paper has previously explored the rationale for answering the question “Does the HST environment positively impact student learning?” in chapter one. Chapter two detailed the rise of the current HST environment and the changes in US schools.

This chapter will provide a critical analysis of the available research on how the current HST environment is impacting student learning. Examining the changes and decisions made by administrators, teachers, and students in this HST environment will help the educational community to see if the HST environment is positively affecting

student learning. This chapter will first analyze the research done on how teachers are responding to the HST environment. It will then cover administrator responses and then student responses.

Teachers

Narrowing of the Curriculum

Narrowing of the curriculum is one of the major changes in the classroom since the advent of the HST environment. The following studies will analyze how teachers made decisions that narrowed the curriculum due to the HST environment.

In a study of 1009 Colorado teachers Grace Taylor, Lorrie Shepard, Freya Kinner, and Justin Rosenthal (Taylor, Shepard, Kinner, & Rosenthal, 2002) found that the respondents reported a narrowing of the curriculum to match the new state test. They surveyed 809 teachers and conducted phone interviews with 200 others. These teachers reported that in response to an increase in pressure to have students perform on the state test they removed most field trips, lab work, and focused less on science and social studies. The focus of the curriculum changed to involve more test prep and basic skills.

A strength of this study is that it provides a look into what teachers are experiencing. This teacher level view of changes made in the HST environment is crucial to seeing if student learning is positively affected. The changes made by teachers have a daily impact on students. Any changes to the curriculum should be made with the students' education in mind. This research shows that decisions made by teachers in a HST environment about the curriculum are in response to the demands of the test, not the needs of the students. A weakness of this study is its limitation to the state of Colorado, since it does not take into account the different HST policies of different states. Other

literature in this section will analyze how the HST environment is affecting student learning in other states. Taylor et al. were also not very transparent in their check back methods which could have led them to make conclusions that did not agree with what the teachers felt. Though this study does have a few weaknesses it serves as a good starting point for an analysis of this change.

Menken (Menken, 2006) conducted a case study of a New York School district's English language program focusing on the changes to the program since No Child Left Behind passed and New York became a HST environment. She conducted interviews with staff and students, performed field observations, and analyzed the test scores of the schools involved. She found two major changes in their language programs. One change made was teachers changed the language that English language learner students (ELL) are taught in. In some schools, where possible, students were taught all subjects in their native language, and in other schools staff were teaching ELL students only in English. The second change, and the change which was common across all schools involved, was teachers reported that the curriculum had narrowed. The teachers had removed much of the curriculum which was not tested. Subjects like Science and Social Studies were given less of a priority while subjects that were on the test, like math, reading, and writing were given more class time by the teacher.

This study, like the previous one, gives us a close up view of what changes teachers make while in an HST environment. It also took into account student voices which corroborated the teachers' view that the curriculum had narrowed. This double check is crucial in qualitative studies as it supports the evidence provided. Having students voice the same narrowing of the curriculum that teachers did gives weight to

Menken's findings. This study suffered from the same flaw as the previous study in that it might not be generalizable since it was only focused on one state. Teachers in other states might have different responses than the ones in New York did, but this paper will show this change is common across most schools.

Yeh (2005) focused his research in the state of Minnesota, where he studied four school districts, each of a different socioeconomic status. Yeh focused on the state of Minnesota primarily because of its HST environment. The four school districts were made up of 1 large urban, 1 small urban, 1 sub-urban, and 1 semi-rural. These districts were chosen to represent the diversity found in the educational school system.

Yeh conducted focused interviews with teachers and administrators on the changes they made to curriculum due to the HST environment. He found that teachers had changed the curriculum to meet the demands of the state test. The curriculum contained less of a focus on science and social studies and more on mathematics, reading and writing since that was how the state test was structured. The teachers also admitted to teaching more basic skills and less problem solving skills. One change that had a definite positive impact on student learning is that most of the teachers reported they were more focused on students than before the HST environment was in place. Teachers evaluated student strengths and needs on a more detailed level and adjusted their teaching methods to match those needs. Because of the link between student success on the state test and the teacher's evaluation most of the teachers reported taking more time to evaluate what the students needed in order to succeed.

Yeh's study gives us a great window into teacher changes to student learning in response to the HST environment. Yeh performed check back interviews with the

teachers to verify his conclusions. Teachers confirmed Yeh's conclusions about the narrowing of the curriculum and the increased focus on student needs. Yeh concluded that the HST environment positively impacts student learning as long as pressure is not put on teachers to raise test scores. Yeh attributed the narrowing of the curriculum as a negative change due the pressure felt by teachers to raise test scores which should be avoided. The main limitation of the study, which is the same limitation as the previous studies and a general weakness of many qualitative studies, is that the study is only looking at schools in the state of Minnesota. Responses to HST could vary depending on state policies and training, but since the previous studies found similar changes we can feel safe believing Yeh's findings.

Another study which focused on specific states and found similar findings was one done by Clarke and her colleagues (Clarke, Shore, Abrams, Miao, & Li, 20003). Clarke et al. focused on the states of Kansas, Michigan, and Massachusetts since the stakes related to the state test varied. In Kansas the results of the test only affected the teacher while in Michigan and Massachusetts the results of the test affected both student and teacher with more serious consequences in Massachusetts. Clarke used interviews with 360 teachers and administrators at K-12 schools of varying socio-economic makeup. Like in Yeh's study the teachers in this study responded that the curriculum had narrowed to match what was being tested. What was different was that the narrowing of the curriculum happened more at the elementary level and was mostly reported in the high stakes states. Very few teachers in Kansas reported narrowing of curriculum. Clarke attributed this to the low stakes associated with the test in Kansas and the lack of pressure those teachers felt. The level of the stakes in Massachusetts were comparable to those

Yeh found in Minnesota. Yeh's conclusion that the narrowing of the curriculum was the result of the pressure to raise test scores is supported in Clarke's study.

The difference in the level of stakes in Clarke's study shows a clear link between the changes made by teachers in a HST environment. It helps us to see that teachers are narrowing the curriculum in response to pressure to the HST environment. States with low stakes testing did not narrow the curriculum like those in high stake states.

Changing Teaching Methods and Test Preparation

Another change teachers made to the classroom, and thus to student learning in the HST environment is a change in their teaching methods to include more test prep and more direct instruction.

Landman's (2000) case study of a Massachusetts high school history department gives us insight into the pressures and attitudes that teachers reported and the resulting change in classroom instruction. This study took place in 2000; three years before passing the state test would be a requirement for graduating high school. Landman conducted interviews with history teachers during the fall and spring terms and focused on how teachers responded to new policies given by the state and local school district in preparation for the state's test. The teacher's responses were mostly negative due to changing their established curriculum to one focused around the test and the change in their teaching methods to match the questions and format of the mandated state test. Landman's study is a perfect starting point for this analysis since it shows the teachers teaching methods before HST took effect and how teachers changed those methods in anticipation of the HST environment. Comparing this study to Clarke's (Clarke, Shore, Abrams, Miao, & Li, 2003) which was done in 2003 lets us see that in some schools the

teachers' fears had been realized. Clarke found that teachers had changed their teaching methods to resemble the questions on the state test. Teachers used question and answers similar to the state test to ensure that students would be comfortable with the test format and would have the skills required to pass the test. One thing to worry about Landman's study is that the interviews could be emotionally charged since most of the teachers were invested in the curriculum that they had. We can't be sure if the negative attitude because of having to change didn't affect their responses. We also can't be sure that the changes in curriculum aren't coming from the new district mandated curriculum.

McMillan (2003; 2000) conducted two separate studies, each with a slightly different focus but with similar findings. In the first study McMillan examined the relationship between HST achievement and teaching styles. He interviewed 79 5th grade teachers about what teaching methods they used and compared those methods to student achievement scores. McMillan found that direct instruction was mostly used in the subjects that were included on the state test, mainly math and reading. Direct instruction was used because of the amount of material the teachers felt they had cover to prepare the students for the state test. Teachers reported feeling they had too much material and too little time to spend on methods that did not get through the curriculum quickly. On its own this study does not suggest that teachers have changed their teaching methods, but in conjunction with McMillan's second study it is a strong indicator that teachers are feeling pressure to change their teaching methods to cover all of the material on the state test.

In the second study McMillan focuses on how teachers have changed their testing and grading style based on the HST environment. McMillan sent out surveys to teachers about how they changed their testing and grading habits since the onset of the HST

environment. Based on those surveys he conducted 20 case studies with respondents selected to create a varied sample. Four person interview teams met with each teacher and observed their classes. They found that teachers changed their testing to be more like the state test, meaning they used less essay and problem solving questions and more multiple choice. The teachers stated the reason for change was to prepare the students for the types of questions that were going to be on the test. They stated that without the pressure to have students succeed on the state test they would not have made changes to their testing and grading policies.

On their own, both studies suffer from being based on the perceptions of the teachers rather than on a combination of data. As in Clarke's study the responses could have been tainted by the negative feelings teachers reported in response to the pressure they are feeling from parents, state officials, and district staff. This weakness is also a key component in these studies as it was in the studies previously analyzed in this chapter. In each study where teachers reported an increase in pressure due to the HST environment they also reported negative feelings and attitudes. These negative feelings, though possibly biasing the responses are a factor that needs to be taken into account.

Pedulla and others conducted a national survey of teachers across the United States (Pedulla, Abrahms, Madaus, Russell, Ramos, & Miao, 2003). 4195 teachers, representing a mix of K-12 schools, returned the survey. After analysis of the responses Pedulla et al. found that 83% of the teachers in a HST environment reported changing their teaching methods to focus more on basic skills, while 68% of schools in a low stakes testing environment reported the same change. 43% in high stakes and 17% in low stakes environments also reported an increase in the amount of time spent on material

covered by the test and a decrease in the material not covered by the test. These changes were identified by the respondents as being directly related to the state test. Like McMillan's study these responses are not backed up by third-party observations but Pedulla's study does add to the mounting evidence that teachers are responding to the HST environment by changing their teaching style.

Increase in Stress

Teachers are also report an increase in stress due to the HST environment. Wilson and Corbett (Wilson & Corbett, 1991) studied teachers' responses to HST in two very different states, Pennsylvania with a low stakes testing environment and Maryland with a high stakes environment. By comparing the two states Wilson and Corbett hoped to find if teachers responded differently to the two environments. They first conducted interviews with school staff in 12 districts then used that information to create a survey which they sent to all of the schools in Pennsylvania and Maryland. 55% of the Pennsylvania districts responded as did 95% of the Maryland districts. Among the findings, many of which were the same as the previous studies mentioned, was the revelation that teachers reported an increase in stress.

In Pennsylvania teachers reported an increase in stress due to public distribution of the school rankings, and using the school's test ranking as an indicator of the school's effectiveness. Teachers reported viewing the test not as an tool to help the students but as a political tool to compare schools. In Maryland teachers and superintendants reported feeling an increase in pressure because they thought the writing tests were trying to achieve a level of performance higher than necessary for normal competency. They also viewed the citizenship test as requiring information that was too specialized. In

Pennsylvania the teachers responded negatively to this pressure while in Maryland the teachers turned that pressure into a positive focus on students. The difference in the responses to pressure was attributed by Wilson and Corbett to the difference in the level of stakes between the two states.

Wilson and Corbett's study has several strengths. The dual look at levels of stakes allows us to see how teachers are responding differently. It also benefits from a multi stage design where the researchers were able to reassess their questions and perform check backs. The onsite interviews also allowed them to establish the validity of the teachers comments. The only issue of concern is that the stakes in Maryland changed during the course of the study. This could have led to inconsistencies in teacher responses which might have confused the results.

Pedroza (1998) conducted a case study of a school along the Texas Mexico border which serviced a high population of migrant and immigrant students. She found that both the staff and the administration felt an increase in pressure due to the requirement of students having to pass a high stakes test. This pressure led to changes in district and school policies but did not lead to any changes in instructional strategies which is a major difference from the previous studies. One area of concern is that the focused population could lead to findings not generalizable to other populations.

Valli, and Chambliss (2007) found different results in their case study of a 5th grade classroom. They observed a teacher at different times during a school year. This teacher taught two different reading classes, one for students who had passed the state test and another for students who had not or were at risk of not passing. They observed that the methods used in the latter class were different in that the teacher focused more on

basic skills, using more direct instruction and not using research based methods of teaching, which the teacher used in the other class. The teacher admitted that the change in teaching method was in response to the pressure she felt to help the students pass the test. This study's one weakness is that Valli and Chambliss never checked back with the teacher as to the exact nature of the change in teaching methods. Their personal bias towards HST, which they state they felt they were able to overcome, could have clouded their judgment.

All three of these studies examined different populations and found differences in their responses to HST, but one thread in common was the increase in pressure felt by the teachers. Their individual situations, district policies, level of student achievement and other factors contributed to differences in what they did with that pressure. This increase in pressure was also found by Monsaas and Engelhard (1991) in their interviews with 186 teachers in Western Georgia. The teachers reported an increase stress due to the pressure they felt to have students pass the state test. Much like the previous studies the amount of pressure they reported feeling was tied to the level of the stakes involved. In this study the differences reported was between the socioeconomic statuses of the students. Students from higher level socioeconomic families tend to have higher levels of achievement than students from lower socioeconomic families. Teachers of lower socioeconomic students reported more test prep than the teachers of students in higher socioeconomic conditions.

This same finding was reported by Moon and her colleagues in a mix method study about the responses teachers and students are having to HST (Moon, Brighton, Jarvis, & Hall, 2007). The researchers used a national survey, interviews, and field

observations to collect data. They interviewed 1289 elementary teachers, 415 middle school, and 393 high school teachers from across the US, as well as 21 focus groups including students. After evaluating the collected data they found that both the teachers and the students reported increased levels of stress due to HST. Like Monsaas' study, this study found that teachers of students of lower socioeconomic status reported more stress than teachers of students of higher socioeconomic status. They also found that teachers were changing their teaching their teaching methods like the previously mentioned studies.

On its own this study would not inspire enough confidence to totally believe its findings. The large response rate of the survey coupled with actual field observations increases the confidence in this study. The only limitation to this study was that they did not perform check backs with the teachers or students after they developed their findings. When taking this study into consideration with the others presented so far these findings are supported and form an overlapping pattern.

This pattern is again confirmed in a qualitative study by Shepard and Dougherty. (1991). Shepard and Dougherty created a multipart survey and submitted them to 3rd, 5th, and 6th grade teachers in 100 schools in two school districts. The focus of the survey was about pressure felt because of HST, changes in teaching practices, amount of time spent doing test prep and what the teachers were using the test results for. Only 44% of the surveys were returned but the findings from those surveys match those discussed so far. Shepard and Dougherty found that teachers were reporting an increase in the amount stress due to pressure from the media, parents, and district administration. The teachers

reported changing their teaching style to include more basic skill instruction, more time on test prep and less time on subjects that were not tested.

This study has a few concerns that need to be addressed. Firstly the low response rate might mean that only teachers who had negative feelings about HST responded. Also, Shepard and Dougherty did not perform any in person field observations so the actualities of the responses were not confirmed. A last concern was the limitation of the survey to only two school districts. This could limit the generalizability of the findings, but as we have seen in other studies (Monsaas & Engelhard, 1991; Valli & Chambliss, 2007; Pedulla, Abrahms, Madaus, Russell, Ramos, & Miao, 2003) this is not the case.

Caskey (2006) studied urban, rural, and sub-urban schools in Northern Kentucky. 17 middle schools in 6 counties were surveyed about how their teaching methods have changed in response to the HST environment. Caskey found that teachers changed their teaching methods to include more direct instruction and less research based methods. Caskey also found that teachers were reporting an increase in stress due to pressure to have students pass the state test. The teachers also responded to this pressure by narrowing the curriculum. Caskey's study reflects all of the teacher responses presented so far. Despite being limited to one state this study is still generalizable as it has the same findings as all of the previous studies. A strength of the study was the look at the different types of school environments. By taking into account urban, sub-urban, and rural schools it ensures that the findings are not localized to one set population.

A study that did not find the same findings was one by Volger (2006). Volger used a survey of high school English 2 teachers in Tennessee. He had one-hundred and sixty nine teachers respond. These teachers responded that they felt an increase in

pressure but most were not changing their teaching style. The teachers reported that they were still using methods they thought were best. The only change they reported was an increase in time doing test prep activities with the students. Compared to the other studies this one stands out from the group. In other studies (Pedulla, Abrahms, Madaus, Russell, Ramos, & Miao, 2003; Clarke, Shore, Abrams, Miao, & Li, 20003; McMillan, 2003) even when there was a difference in stakes or in socioeconomic status teachers reported changing their instructional practices. This might be a result of the study's weakness which is that it does not address the state's or district's policies concerning the state test. More information about the policies involved and a closer look at this study would be required before claiming this as solid counter proof.

Administration

Administrative changes to schools due to the HST environment are as varied and complex as those made by teachers and students. This next section will examine these responses.

Locus of Control

One of the changes that school administrations made is the change of the locus of control. The following studies will analyze how the locus of control is changing in schools depending on their level of achievement in HST.

DeBray, Parson, and Woodwortl. (2000) conducted two case studies analyzing a high and low performing school in both the states of New York and Vermont. At the time of the study the state of New York had high stakes policy linked to student graduation and promotion in place, while Vermont had tests in place and reported their results in the local newspapers but did not use those results to determine students'

scholastic fates. The high performing schools in New York and Vermont both reported that they had local control of how and what they taught rather than having to follow a district policy. Both schools identified this local control as having a direct effect on their students since they were able to make decisions based on individual student needs.

DeBray et al. contrasted this local control to that of a district curriculum where choices are made without intimate knowledge of the students. The low performing schools reported that due to their under achievement control of classes offered and decisions about staff had been removed from the school.

A major flaw of this study was the lack of transparency. The methodology of how the data was collected and how the sites were chosen were not revealed. Though the study does reveal it's bias at the beginning in stating that they are approaching the data through the lens of Abelman, and Elmore's school-site accountability theory.

These same factors were also found in a study done by Zellner and Jinkins (2001). Their study used similar methods, in that they used interviews with teachers and principals from high school, middle school, and elementary schools. These schools were chosen because they were in urban and rural high poverty areas and had high achievement scores. The staff at those schools reported that they attributed the increase in test scores to leadership communities that they created at their schools. These leadership groups were made up of teachers that worked together with the principals to focus attention on those students that needed help. Teachers tracked students across disciplines, created a strong connection to the student's home and made an effort to ensure every staff member in the school had the same goals and philosophy. Both studies give us clear insight one strategy used by schools to help students succeed and are

supported by multiple other studies which found the same results. (DeBray, Parson, & Woodwortl, 2000; McMillan, Teacher Classroom Assessment and Grading Practices Decision making, 2000) Zellner's study did not list how the interviews were conducted leaving us to guess.

The goal of improving test scores has helped school staff rally together in a common goal. Singh and McMillan (2002) examined pairs of high schools, middle schools, and elementary schools in Virginia where there had been an increase in scores on the Virginia Standards of Learning test over a span of two years. The schools were also selected based on the criteria of having identified as participating in staff development in a principal survey. They conducted group interviews of the middle school and elementary school teachers and individual interviews of the high school teachers and of all the principals. A total of 27 people were interviewed. The interviews were not recorded but the two interviewers took extensive notes. The interviews began with the interviewees being asked to explain what they thought contributed to the increase in scores at their schools and then asked about those practices they identified.

All of the interviewees stated that the main factor which led to higher test scores was a unified dedication and commitment by all the school staff to do whatever was needed to improve student learning. This took the form of collaborative groups among teachers, the teachers focused on an attitude of student success, and the principal became a strong supporter of the teachers. Teachers also identified key factors as being sharing ideas, and resolving problems together.

Singh's study has one major cause of worry. The interviews with most of the staff were conducted in a group setting. This could have led to the silencing of differing

opinions, especially those who felt that the school's success in increasing test scores had nothing to do with the collaboration of the staff. It was also not very transparent in that they did not let us see their bias and did not list ways that they checked back or had peer reviews of their findings.

Increase in Stress and Pressure

Another change that school administrators reported was the increases in pressure to have students pass the state test. Reed et al. (Reed, McDonough, Ross, & Robichaux, 2001) interviewed 26 principals in south Florida about how they are responding to the HST environment. Two teams of researchers conducted the interviews and then turned to notes over to other researchers to analyze the notes. From those they found a difference in the responses due to the school's level of achievement. Principals in higher performing schools reported less pressure to have teachers change their teaching style and felt freer to let teachers use the method of their choice. Principals in lower performing schools reported an increase in pressure. This increase led to them narrowing the selection of offered classes to make room for more classes focused on the state test. They also reported that teachers and students were feeling an increase in stress.

This study is beneficial in that it gives us a look into how principals in different circumstances are responding to HST. By looking at schools achieving and not achieving we can see what the different responses are. A weakness of the study was that Reed had a few principals in schools where the students were not achieving report that they were not feeling any increase in pressure or stress. Reed did not take this data into account when discussing the findings.

An increase in pressure and stress was also found by Schleisman (Schleisman, 1999) in a study about a school district in Minnesota. Schleisman interviewed administrators, teachers and students with the focus on what the responses to HST were. Like in Reed's findings (Reed, McDonough, Ross, & Robichaux, 2001) the administrators reported an increase in stress and pressure. They responded to that pressure by changing the classes offered and increasing the amount of after school programs to help students learn. On its own this study would not be too trustworthy since the limitation of the study to one school district in one state can put the generalizability of the findings. When taken into account with other studies (Zellner & Jinkins, 2001; Reed, McDonough, Ross, & Robichaux, 2001; DeBray, Parson, & Woodwortl, 2000) a generalizable pattern forms. One issue with the study was that the researchers approached the study with a hypothesis of what they would find. While a hypothesis is fine in scientific tests it could taint the findings of a qualitative study.

Using Test Data

With the onset of the HST environment there is an increase in the amount of data about student achievement that administrators, teachers, and parents have access to. The use of that data is another change that research has found.

Diamond and Spillman (2002) conducted case studies of 4 Chicago urban elementary schools chosen to represent a variety of high and low achieving schools. They interviewed the staff at those schools and attended leadership meetings, staff development meetings and supervisions of teaching practice. Diamond and Spillman found that the student test scores were being used by the state to rank the schools. Schools were assigned a grade A-F depending on how many students had passed sections

of the state test. This grading was then published in local papers and used to determine if schools needed to be put on probation because of low performance or receive rewards due to high performance.

At the school level the data was used in differing ways depending on the school's ranking. Higher ranked schools viewed the data as a tool to make changes in their school to help the whole child. Lower ranked schools saw the test data as a way to find which students were just below the failing mark so they could focus on those students and get off of probation. (Diamond & Spillman, 2002)

This study gives a view of both state and school responses to HST as well as differences in responses based on achievement level. This varied view is beneficial in seeing the whole picture. Unfortunately Diamond and Spillman were not very transparent in their methods and did not report on any check backs or other methods of checking their results.

Schleisman (Schleisman, 1999) in the study mentioned above also found similar results to Diamond and Spillman (Diamond & Spillman, 2002). With the state test scores that were provided by the state the school involved in the study started tracking students to measure their yearly progress and put them into appropriate classes. The school administration grouped students of similar achievement into classes so they would be able to focus on similar issues. The respondents also reported using the data to determine what classes to offer. Elective options were removed to be replaced by classes that focused on subjects that the students had trouble with on the state test.

Narrowing of the Curriculum

Just as teachers reported a narrowing of the curriculum in the studies mentioned previously (Clarke, Shore, Abrams, Miao, & Li, 20003; Menken, 2006; Yeh, 2005) administrators are also reporting a narrowing the curriculum in response to HST.

Reed et al. (Reed, McDonough, Ross, & Robichaux, 2001) reported that in their interviews the administrators had narrowed the curriculum of the school by removing elective classes and adding more remedial classes that focused on the subjects that their students were having difficulty with on the state test. This same finding was also reported by administrators in Zellner and Jinkins' (Zellner & Jinkins, 2001) study as well as in Schleisman's (Schleisman, 1999). Reed et al. (Reed, McDonough, Ross, & Robichaux, 2001) reported slightly different findings. In their study it was reported that the narrowing of the curriculum only happened in the lower achieving schools. Schools that had a higher achievement level reported very little to no narrowing of the curriculum. Singh and McMillan (Singh & McMillan, 2002) found similar results, in that schools with a high achievement level on the state test reported very little narrowing of the curriculum. This could be because schools with a higher achievement level are reporting less pressure and are not under threat of being put on probation.

Staff Development

In house staff development has been another change by administrators in the HST environment.

Acker-Hocevar and Touchton (2001) studied Florida schools that were marked as failing or on probation by the state. They interviewed 10 elementary principals and conducted on-site observations at the schools. They observed that the principals were involved with the teachers. The administrators were working with the teachers to find the

best instructional practices based on the student achievement data. The administrators had also setup instructional leaders among the teachers to help them find the best ways to teach their students. Other programs the administrators were involved in were staff development activities. The principals themselves were attending these activities to be involved and help the staff become better teachers. The principals were also holding more staff meetings to ensure that all staff was working together.

When the administrators questioned about these programs responded that all of those programs were in response to pressure felt to increase student test scores. The programs were setup to help alleviate the pressure teachers were feeling and avoid teacher burnout, which the administrators reported as increasing due to HST.

This study though not very generalizable due to being limited to Florida schools that are failing is supported by the other studies mentioned in this paper. These same findings were reported by Singh and McMillan (Singh & McMillan, 2002) and DeBray et al. (DeBray, Parson, & Woodwortl, 2000). These studies help to support Acker-Hocevar and Touchton's (Acker-Hocevar & Touchton, 2001) findings. They help to construct a pattern of evidence of how administrators are responding to the HST environment.

Another study that found similar results was one by Munoz (2002). Munoz studied one school district in Kentucky and the administrative changes it made to Limited English Proficient (LEP) programs. Since Kentucky became a high stakes test the district they observed had developed staff development activities to help teachers find ways to reach students who were not passing the state test. The district also organized a common goal and worked to ensure that all teachers were working together. A flaw in this study was that the researchers did not cite how they went about their observations or data

collection. Neither did they check back with the administrators to verify the accuracy of their findings.

Students

The last set of research this paper will analyze is the body of research concerning the changes students experience in the HST environment.

Increase in Student Dropouts

Potter (1992) conducted a quantitative analysis of the test scores of students in South Carolina between 1984 and 1990 to see if the change from low stakes to high stakes affected student achievement. Potter found that overall student achievement scores had increased, a 3.2% increase in reading scores and a 7.9% increase in mathematics. Potter also found that drop-out rates and the amount of students being retained stayed the same. What had changed was the proportion of non-white male students who dropped out and were retained increased. Potter concluded that this meant that the HST environment caused deleterious effects for specific populations.

Potter's analysis of South Carolina test scores provides a good starting place for the analysis of student dropouts. It shows us that some students are responding to the higher stakes with improved test scores but others are not having the same success. Specifically it helps to identify which populations are not being best served by HST. One weakness of the study is that the correlation between HST and the increase of non-white dropouts is not proved by the data but merely conjectured. The increase in non-white dropouts and retention could have some other cause.

Another quantitative study which found similar results was done by Reardon, Galino, and Claudia (2002). They obtained data from the National Educational

Longitudinal Survey, an administrative survey, from 1988. They found an association between the presence of an 8th grade graduation requirement test and the increased probability of dropping out. Rather than looking at ethnicity as a factor like Potter (Potter, 1992) did Reardon and Galino looked at the difference between socioeconomic status, grade point average, and achievement level. They found that students of lower socioeconomic status, lower grade point average, and lower achievement level are more likely to dropout in their early high school years.

Like Potter's study the findings of Reardon, Galino, and Claudia are not completely supported by the data. Reardon, Galino, and Claudia do admit this flaw but when taking into account both studies a connection between increased dropouts and HST can be seen.

Increase in Pressure and Stress

One change that is similar across teacher, administration, and student responses to HST is an increase in pressure. Students feel an increase in pressure to perform which causes an increase in stress. The following studies will show this.

Garcia and Calhoun (2002) conducted a qualitative study of ELL students in four California high schools. They had the students fill out surveys, held individual interviews and focus group interviews. The respondents reported that the curriculum had narrowed and that teachers were using more direct instruction and drilling practices. They also reported an increase in the pressure they felt to pass the state test. This increase in pressure was resulting in an increase in the amount of stress they felt. The students reported that the teachers' constant focus on the state test and the use of direct instruction contributed to the amount of pressure and stress.

This study is an important window into the student experience and what they are going through due to HST. This study looked at several aspects of the student school experience ensuring that there were no aspects missing. This study would be very generalizable save for it only being limited to ELL students in California. A broader view of the student experience would be required for this study to stand on its own.

Another study finding an increase in student stress was done by Johnson, Duffett, Foleno, Foley, and Farkas (2001). They conducted a national random phone survey of students, parents, and teachers. They found that students were attending more summer school classes, studying harder, being pre-tested more often, and were feeling more pressure from their teachers. Teachers and parents reported that they felt that HST was beneficial to help students focus more. The increase in stress and pressure that students were feeling was related to the HST environment that they found themselves in.

Comparing this random sample study to Garcia's (Garcia & Calhoun, 2002) study a connection can begin to be drawn between HST and an increase in pressure and stress that students are feeling. Having the two different populations report the same findings gives credence to both studies.

Lattimore (2005) conducted a case study of 3 students (2 male, 1 female) from a low socioeconomic status urban Ohio high school. These students did not pass the mathematics portion of the state test, and did pass other parts of the test. They had been diligently working to fulfill their personal goals, were involved in extra-curricular activities, and had goals for their futures. Lattimore conducted interviews with them and observed them in school three times a week for 16 weeks. To ensure accuracy of his findings Lattimore performed check backs and triangulation. The students reported that

they felt pressure because they had not passed the mathematics portion of the state test and that they felt pressure from their math teachers who they felt were not willing to help them succeed.

Lattimore admits that these findings might not be generalizable to all populations but the direct voices of the students should raise concern that this same situation is happening to other students. This is confirmed when we take this study into account with the other studies presented above (Garcia & Calhoun, 2002; Johnson, Duffett, Foleno, Patrick, & Farkas, 2001). Much like the pressure felt by teachers and administrators the increased pressure students are feeling is directly related to HST.

Changes in Achievement Scores

The final student response that will be considered in this paper is how student achievement scores are affected by the HST environment.

Marchant, Paulson, and Shunk (2006) conducted a quantitative study of the NAEP test scores of students across 49 states (South Dakota was not included) and included the District of Columbia. They found that when looking at a single year in an HST environment there was not improvement in the achievement scores of students in reading, math, or math. When they analyzed a four year spread of students in an HST environment there was an increase in the students' achievement scores. They correlated this increase in achievement scores to the students being in an HST environment with a p value of less than .001.

The sample size of this study and the variety of the sample makes the findings of this study very trustworthy. The only negative aspects of this study was that they did not

control for some factors that have been shown to affect student achievement, family income and parent education levels.

The results of Marchant et al.'s (2006) study were also found by Potter (1992). Potter found that achievement scores had increased after students had been in an HST environment. These two studies work to give us a view that students are responding to HST by reaching higher levels of achievement on the state tests.

Summary

The onset of the HST environment in American schools has been the source of many different responses and changes made by students, teachers, and administrators. The responses have varied depending on the populations served and the level of the stakes involved. Understanding what these responses and changes are is essential to figuring out if the current HST environment positively impacts student learning. The literature analyzed in this chapter has built a case of evidence about the changes that are occurring in the HST environment. Teachers made changes to the classroom by narrowing the curriculum, changes to their teaching methods, and they also reported an increase in the amount of pressure as did administrators. Administrators reported changes in the locus of control, an increase in staff development, and an increased use of test data to make educational decisions. The research on student responses to the HST environment showed an increase in the dropout rate, particularly among minority students, an increase in student test scores, and an increase in the amount of pressure felt.

Chapter four will analyze this evidence in the hopes of finding an answer to this paper's question. It will use this analysis to identify the implications for the classroom,

and provide suggestions for further research based upon the unanswered questions of the analysis.

CHAPTER 4: CONCLUSION

Introduction

Changes in the political and educational climate in the United States have prompted leaders to want more accountability and increased results in student achievement. State and federal leaders have responded to this accountability with the creation of the standards movement and the requirement that students pass a standardized state test in order to graduate from high school. Another change to this increased demand for accountability is the linkage of teacher pay, administrator jobs, and school control to student test scores. These changes make up the definition of a high stakes testing environment.

Chapter one analyzed the rationale for answering the question “Does the High Stakes Testing Environment Positively Impact Student Learning?” by examining the controversies and implications of this question. Chapter two examined the history of this paper’s question by detailing the events that led up to the current HST environment and the changes that teachers, administrators and students have made in response to the HST environment. Chapter three provided a critical analysis of the available research into the changes to the educational system since the onset of the HST environment. Teachers made changes to the classroom by narrowing the curriculum, changes to their teaching methods, and they also reported an increase in the amount of pressure as did administrators. Administrators reported changes in the locus of control, an increase in staff development, and an increased use of test data to make educational decisions. The research on student responses to the HST environment showed an increase in the dropout

rate, particularly among minority students, an increase in student test scores, and an increase in the amount of pressure felt.

This chapter will summarize the findings of the literature analyzed in the previous chapter and attempt to answer this paper's guiding question. Chapter four will also examine how those findings apply to the classroom experience and give recommendations for future research based on questions left unanswered by the research or this paper.

Summary of the Findings

All three groups of respondents reported an increase in stress due to pressure to have students pass the state-mandated test. This common thread is an important finding in the search for an answer to this paper's question. This pressure was reported as the impetus for the changes made in the HST environment (Acker-Hocevar & Touchton, 2001; Clarke, Shore, Abrams, Miao, & Li, 2003; Garcia & Calhoun, 2002). Teachers and administrators reported narrowing the curriculum due to pressure and students reported feeling this narrowing of the curriculum which increased their stress levels and led to increased dropout rates, especially among non-white populations. Teachers also reported changing their teaching methods to non-research based methods because of the pressure to prepare students for the same situations and types of questions that they would find on the state mandated test. (Landman, 2000; Menken, 2006) In states with low stakes testing or where student test scores had little impact on teachers and schools the amount of pressure was reported as significantly lower. In those same states the narrowing of the curriculum did not happen as it did in states with a HST environment (Clarke, 2003). Using the definition of a positive impact on student learning as a

education that equally covers all topics both in depth and breadth of topics in a variety of teaching methods that address the needs of a varied student population it is reasonable to conclude that the HST environment does not positively impact student learning. The narrowing of the curriculum and the changes in teaching styles removes a variety of topics and novel approaches that would positively impact student learning.

Administrators worked to reduce the pressure teachers felt by organizing staff development activities that would help the teachers learn research based teaching methods and help them find ways to teach the students the skills and knowledge needed to pass the state test. This response was also fueled by the pressure felt because of the HST environment but the pressure was funneled through a positive response that would positively impact student learning (Acker-Hocevar & Touchton, 2001, Singh & McMillan, 2002, DeBray, Parson, & Woodwortl, 2000).

Another change made to schools in the HST environment is the use of student data to determine how to craft interventions and what subjects need to be taught. In Diamond & Spillman's (2002) study they found in schools already succeeding at increasing student test scores those same schools viewed the resulting student data as a valuable tool that was to be used to guide their instruction. In schools not increasing student scores, or schools where students were predominantly failing to meet the state standard the student tests scores were viewed as a tool to shame them and black-mark the school. Schleisman (1999) also found increased use of student data to make decisions on which classes to offer. Schleisman found this decision making translated into a removal of electives from student schedules and an increase in the amount of remedial or test preparation classes offered. Viewed through the lens of these decisions and changes the

HST environment does positively impact student learning. The use of data to focus on the needs of students and responding to those needs is a central part of the best practices of teaching.

This change in how the HST environment positively impacts student learning further complexifies the answer to this paper's question. The studies in chapter three that focused on the student experience help to clarify the true answer to this paper's question. Students reported the same increase of stress and pressure felt that some of the teachers and administrators reported. This increase in academic pressure was listed as the central cause of an increase in student dropouts (Potter, 1992, Reardon, Galino, & Claudia, 2002, Garcia & Calhoun, 2002). Potter (1992) found students who remained in school increased their test scores, a finding that was corroborated by Marchant et al. (2006). The increase in pressure felt by the students was the major factor in whether or not the HST environment positively impacted student learning.

This pressure seems to be the key to most of the responses. When considering schools that were already achieving student success on the state-mandated test they reported very little if any stress and did not have the same responses as low performing schools. Without this pressure most of those responses might not have been reported at all. Teachers at high achievement schools reported little to no narrowing of the curriculum and administrators felt the high stakes gave them a goal to pursue rather than a burden. (DeBray, Parson, & Woodwortl, 2000) The presence of increased pressure from various sources on administrators, teachers, and students seems to determine if the HST environment positively impacts student learning. The conclusion can then be drawn from the research that for the HST environment to positively impact student

learning then the decrease or removal of pressure is required.

Most of the research analyzed was qualitative which gives a personal view point that is not found in quantitative research. This personal viewpoint helped to get to the root of the responses to the HST environment by letting the respondents give voice to their actions. The variety of the populations in the literature and the consistency of the findings created a cohesive pattern of evidence that helped to find the answer to this paper's question.

Implications for Teaching

The current HST environment by its very definition is a high stakes environment, meaning that pressure will be inherently increased. Managing this pressure or removing unneeded sources of additional pressure will be required to ensure that the HST environment positively impacts student learning.

Administrators can manage this pressure by promoting staff development activities that focus on team building and how to use test data to create meaningful interventions and decisions in their schools. Working in teams, either grouped by content or grade level, will help teachers find support and communicate about the needs of their students. Professional learning communities, mentoring programs, or data teams can help to alleviate stress and pressure by providing a goal and community support.

District leaders can help administrators by not removing the locus of control from the schools. By guiding rather than forcing decisions, district leaders can work with schools that are not helping students succeed and still let local administration make decisions based on their local knowledge. Keeping control of what classes are taught and what programs to offer lets school administrators work with teachers, parents, and

students to determine the services needed how to serve those needs. The removal of those decisions renders local administration powerless, increasing the stress and pressure felt.

Teachers can help to manage the stress and pressure felt in their classroom by not making the state test the center of the class. Teachers can focus on the standards and learning goals required to pass the test without constantly reminding students about the upcoming test. Using novel and various methods for teaching rather than only direct instruction can give students a variety of activities that do not narrow the curriculum in negative ways.

Suggestions for Further Research

There are several questions left unanswered by this paper due to lack of research, and the limitation of the paper's question. One of these questions is how to best reduce the amount of stress in a HST environment. As this paper has shown the current HST environment increases the amount pressure and stress felt by all members of the educational community which negatively impacts student learning. Research needs to be done into effective strategies to counter act this increased pressure and stress across all levels of education.

Another question that begs further research is what is the optimal level of stakes to attach to testing. Not all states are in a HST environment, and nor all high stakes equal. Finding the correct balance of how much impact student test scores should have on teachers, schools, students, and administrators would help to remove any extreme situations that are adding to the amount of stress and pressure, but maintain the accountability required to push all involved to excellence.

Conclusion

The US educational system has gone through several reforms and will undoubtedly go through many more. The current wave of reform focuses on high stakes testing and attaching accountability policies to the resulting test scores. These accountability policies vary state per state and have different effects depending on the school. The issue further complexifies depending on the amount of pressure and stress felt by the administration, teachers, and students. In schools where the pressure and stress are minimally felt the HST environment positively impacts student learning and the opposite is true of schools where there is an increase in the amount of pressure and stress reported. This paper concludes that the HST environment positively impacts student learning when the amount of pressure and stress is reduced. An increase in stress and pressure tends to elicit negative responses and attitudes from all level of education, thereby negatively impacting student learning. In the absence of increased stress and pressure the HST environment focuses teaching on the state standards, promotes increased focus on student needs and increases student scores on mandated state tests. Helping teachers, administrators, and students manage and alleviate the increased pressure and stress which seems to be inherent in the HST environment is an area of further study that still needs to be researched.

REFERENCES

- Acker-Hocevar, M., & Touchton, D. (2001, 04). Principals' struggle to level the accountability playing field of florida graded "D" and "F" schools in high poverty and minority communities. Retrieved June 30, 2009, from ProQuest.
- Amrein, A., & Berliner, D. (2002, March 2008). High stakes testing, uncertainty, and student learning. Retrieved April 13, 2009, from Education Policy Analysis Archives: <http://epaa.asu.edu/epaa/v10n18/>
- Carnoy, M., Elmore, R., Siskin, L., Rhoten, D., Chabran, M., Debray, E., Parson, G.,...Luschel, T.F.(2003) *The new accountability:High schools and high stakes testing* New York:RutledgeFalmer
- Caskey, M. (2006). The perceived impact of assessment demands on middle grades instructional practices. Retrieved January 5, 2009, from RMLE Online.
- Clarke, M., Shore, A. R., Abrams, L., Miao, J., & Li, J. (20003, 01 00). Perceived effects of state-mandated testing programs on teaching and learning: findings from interviews with educators in low, medium, and high stakes states. Retrieved June 27, 2009, from ProQuest.
- DeBray, E., Parson, G., & Woodwortl, K. (2000). Patterns of response in four high schools under state accountability policies in Vermont and New York. Retrieved April 16, 2009, from ERIC Database.
- Diamond, J. B., & Spillman, J. P. (2002). High stakes accountability in urban elementary school: Challenging or reproducing inequality? Retrieved May 10, 2009, from ERIC Databse.
- Garcia, P., & Calhoun, D. (2002). An examination of the correlates to achievement on

the California high school exit exam. Retrieved January 03, 2009, from ERIC Database.

Gryphon, M. (2005, May 06). Utah stands up for the children: Why more states are telling D.C. educarts to take a hike. Retrieved February 23, 2009, from Reasononline: <http://www.reason.com/news/show/32920.html>

Harper, J. (2001, 11). Some thoughts on why japanese students are better than U.S. students on international mathematics assessments. Retrieved August 05, 2009, from NCTM.com: <http://www.nctm.org/resources/content.aspx?id=1560>

Hursh, David (2008) *High stakes testing and the decline of teaching and learning: The real crisis in education*. Lanham, MD:Rowman & Littlefield Publishers, Inc.

Johnson, J., Duffett, A., Foleno, T., Patrick, F., & Farkas, S. (2001). Reality Check 2001. Retrieved October 10, 2008, from ERIC Database.

Jorgensen, M. A., & Hoffmann, J. (2003). History of the No Child Left Behind Act 2001 (NCLB). *Pearson Assessments* Retrieved from <http://www.pearsonassessments.com/NR/rdonlyres/D8E33AAE-BED1-4743-98A1-BDF4D49D7274/0/HistoryofNCLB.pdf>

KewalRamani, A., Gilbertson, L., Fox, M. A., & Provasnik, S. (2007). Status and trends in the education of racial and ethnic minorities. Retrieved July 05, 2009, from National Center for Education Statistics: <http://nces.ed.gov/pubs2007/minoritytrends/index.asp>

Landman, J. (2000). A state-mandated curriculum, A high stakes test: One Massachusetts high school history department's response to a very new policy context. Retrieved June 29, 2009, from ProQuest.

- Lattimore, R. (2005). African American students' perceptions of their preparation for a high stakes mathematics test. Retrieved October 10, 2009, from ERIC Database.
- Maduas, G. (2001). The adverse impact of high stakes testing on minority students: Evidence from 100 years of test data. Retrieved April 20, 2009, from ERIC Database.
- Maduas, G., Russell, M., & Higgins, J. (2009) *The paradoxes of high stakes testing: How they affect students, their parents, teachers, principals, schools, and society*. Charlotte, NC: Information Age.
- Marchant, G. J., Paulson, S. E., & Shunk, A. (2006, November 20). Relationships between high stakes testing policies and student achievement after controlling for demographic factors in aggregated data. Retrieved January 25, 2009, from Education Policy Analysis Archives.
- McMillan, J. (2000, April). Teacher classroom assessment and grading practices decision making. Retrieved June 29, 2009, from ProQuest.
- McMillan, J. (2003). The Relationship between instructional practices of elementary teachers and student scores on high stakes testing. Retrieved January 29, 2009, from ERIC Database.
- Menken, K. (2006, July). Teaching to the test: How no child left behind impacts language policy. Retrieved October 09, 2008, from ERIC Database.
- Monsaas, J. A., & Engelhard, G. J. (1991). Attitudes toward testing practices as cheating and teacher testing practices. Retrieved November 20, 2008, from ERIC Database.

- Moon, T. R., Brighton, C. M., Jarvis, J., & Hall, C. J. (2007). State standardized testing programs: Their effects on teachers and students. Retrieved June 29, 2009, from Pro Quest.
- Munoz, M. (2002). High stakes accountability environments: Its impact on the administration of English language learner programs. Retrieved February 21, 2009, from ERIC Database.
- Nichols, S. L., & Berliner, D. C. (2007). Collateral damage: How high stakes testing corrupts America's schools. Cambridge: Harvard Education Press.
- Pedroza, A. (1998, April). Bordering on success: Mexican American students and high stakes testing. Retrieved May 19, 2009, from ERIC Database.
- Pedulla, J. J., Abrahms, L. M., Madaus, G. F., Russell, M. K., Ramos, M. A., & Miao, J. (2003, March). Perceived effects of state-mandated testing programs on teaching and learning: Findings from a national survey of teachers. Retrieved April 13, 2009, from ERIC Database.
- Potter, D. (1992, April). Higher standards for grade promotion and graduation: Unintended effects of reform. Retrieved June 30, 2009, from ProQuest.
- Reardon, S. F., Galino, & Claudia. (2002). Do high stakes tests affect students' decisions to drop out of school? Retrieved April 29, 2009, from ERIC Database.
- Reed, C. J., McDonough, S., Ross, M., & Robichaux, R. (2001). Principal's perceptions of the impact of high stakes testing on empowerment. Retrieved May 19, 2009, from ERIC Database.
- Ripley, A. (2008, November). Rhee tackles classroom challenge. Retrieved February 25,

2009, from Time.com:

<http://www.time.com/time/magazine/article/0,9171,1862444,00.html>

Saito, Y. (2006). Consequences of high stakes testing on the family and school in

Japan. Retrieved June 17, 2009, from Journal of Education Policy:

http://eng.kedi.re.kr/upload_data/kedi_jrn/Journal_Yoshitaka%20Saito.pdf

Schleisman, J. (1999). An in-depth investigation of one school district's response to an

externally-mandated high stakes testing program in Minnesota. Retrieved

February 24, 2009, from ERIC Database.

Shepard, L., & Dougherty, K. C. (1991). Effects of high stakes testing on instruction.

Retrieved May 05, 2009, from ERIC Database.

Singh, J., & McMillan, J. H. (2002). Staff development practices in schools

demonstrating significant improvement on high stakes tests. Retrieved October

04, 2008, from ERIC Database.

Spring, J. (2008). *The American school: From the puritans to no child left behind*. New

York: McGraw-Hill.

Taylor, G., Shepard, L., Kinner, F., & Rosenthal, J. (2002, 02). A survey of teachers'

persepectives on high stakes testing in Colorado: What gets taught, what gets lost.

Retrieved June 30, 2009, from ProQuest.

The National Commission on Excellence in Education. (1983, April). *A Nation at Risk:*

The Imperative for Educational Reform. Retrieved January 15, 2009, from U.S.

Department of Education: <http://www.ed.gov/pubs/NatAtRisk/index.html>

United States of America. (2002, January 08). *No child left behind*. Retrieved January

10, 2009, from U.S. Department of Education:

<http://www.ed.gov/nclb/landing.jhtml>

Valli, L., & Chambliss, M. (2007). Creating classroom cultures: One teacher, two lessons, and a high stakes test. Retrieved January 10, 2009, from ERIC Database.

Viadero, D. (2000, May 03). High stakes tests lead debate at researchers' gathering.

Retrieved June 05, 2009, from Education Week:

<http://www.edweek.org/login.html?source=http://www.edweek.org/ew/articles/2000/05/03/34aera.h19.html&destination=http://www.edweek.org/ew/articles/2000/05/03/34aera.h19.html&levelId=2100>

Volger, K. E. (2006). Impact of an exit examination on English teachers' instructional practices. Retrieved July 29, 2009, from University of Southern Carolina:

<http://www.usca.edu/essays/vol162006/vogler.pdf>

Wilson, B. L., & Corbett, H. D. (1991). Two state minimum competency testing programs and their effects on curriculum and instruction. Retrieved July 05, 2009, from ProQuest.

Yeh, S. S. (2005, October). Limiting the unintended consequences of high stakes testing.

Retrieved July 5, 2009, from Education Policy Analysis Archives.

Zellner, L., & Jinkins, D. (2001). Consequences of high stakes testing on the literacy programs of high performing learning communities. Retrieved March 04, 2009, from ERIC Database.