

2013

Teacher Attitudes: The Effects of Teacher Beliefs on Teaching Practices and Achievement of Students with Disabilities

Mary Klehm

University of Rhode Island, mary.klehm@Chariho.k12.ri.us

Follow this and additional works at: https://digitalcommons.uri.edu/oa_diss

Terms of Use

All rights reserved under copyright.

Recommended Citation

Klehm, Mary, "Teacher Attitudes: The Effects of Teacher Beliefs on Teaching Practices and Achievement of Students with Disabilities" (2013). *Open Access Dissertations*. Paper 2.

https://digitalcommons.uri.edu/oa_diss/2

This Dissertation is brought to you by the University of Rhode Island. It has been accepted for inclusion in Open Access Dissertations by an authorized administrator of DigitalCommons@URI. For more information, please contact digitalcommons-group@uri.edu. For permission to reuse copyrighted content, contact the author directly.

TEACHER ATTITUDES: THE EFFECTS OF TEACHER BELIEFS ON
TEACHING PRACTICES AND ACHIEVEMENT OF STUDENTS WITH
DISABILITIES

BY

MARY KLEHM

A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY

IN

EDUCATION

UNIVERSITY OF RHODE ISLAND

AND

RHODE ISLAND COLLEGE

2013

DOCTOR OF PHILOSOPHY DISSERTATION

OF

MARY KLEHM

APPROVED:

Dissertation Committee

Major Professor Minsuk K. Shim, Ph.D.

David Byrd, Ph.D.

Paddy Cronin Favazza, Ed.D.

Kalina Brabeck, Ph.D.

RIC: Alexander Sidorkin, Ph.D.

Dean, Feinstein School of Education – RIC

URI: Nasser H. Zawia, Ph.D.

Dean, The Graduate School – URI

UNIVERSITY OF RHODE ISLAND

AND

RHODE ISLAND COLLEGE

2013

ABSTRACT

Many students with disabilities are not meeting proficiency in the general education setting and achievement scores disaggregated by disability status show that students with disabilities are often not meeting adequate yearly progress targets established by states. A survey was developed to collect data from 218 general and special educators at the middle school level to describe and analyze trends in teacher attitudes and practices that may be affecting the educational experience and achievement of many students with disabilities. The results of these analyses provide information regarding the attitudes of teachers toward the ability of SWD and the fairness and validity of high-stakes testing. Significant differences were found between general and special education teachers' expectations for students with disabilities to benefit from inclusive instruction. Teacher attitude toward the ability of students with disabilities to benefit from inclusive instruction, teacher classification, and the amount of teacher training were all found to be predictors of the use of evidence-based practice. The attitude of teachers toward the ability of students with disabilities to learn and achieve higher level thinking was found to predict proficient achievement scores for students with disabilities on the New England Common Assessment Program (NECAP) achievement test. Finally, differences were found in teacher attitudes toward the ability of students with disabilities to learn and achieve higher level thinking and teacher use of evidence-based practice by content domain.

ACKNOWLEDGMENTS

I would like to thank my Major Professor, Dr. Minsuk K. Shim, for her knowledge, effort, and assistance through all phases of the program and research. I would also like to thank each of my committee members: Dr. Paddy Cronin Favazza, Dr. David Byrd, and Dr. Kalina Brabeck, for their expertise and commitment to the project. Without my committee members, the results of this dissertation would not have been possible. To all my committee members I extend my sincerest gratitude.

I must also acknowledge my family, Blair, Amanda, Joseph, and Ruth, as well as my parents William and Virginia, and my brother Bill, for their encouragement and contribution to my ability to complete my research. I also thank the teachers who took time out of their busy schedules to participate in the study. Lastly, I would like to thank the many students who have allowed me to be a part of their lives.

TABLE OF CONTENTS

ABSTRACT	ii
ACKNOWLEDGMENTS	iii
TABLE OF CONTENTS	iv
LIST OF TABLES	vi
LIST OF FIGURES	viii
CHAPTER 1	1
INTRODUCTION	1
CHAPTER 2	7
LITERATURE REVIEW.....	7
CHAPTER 3	59
METHODOLOGY	59
CHAPTER 4	73
FINDINGS AND ANALYSIS.....	73
CHAPTER 5	92
CONCLUSION	92
APPENDICES	105
APPENDIX A: Survey Design: Teacher Attitudes toward High-Stakes Testing and Students with Disabilities	105
APPENDIX B: High-Stakes Testing and Students with Disabilities: A Teacher Attitude Survey (HST-SWD).....	108
APPENDIX C: Informed Consent for Anonymous Research Form	116
APPENDIX D: Letter of Authorization	118

APPENDIX E: Frequency Histograms of Scales Used for Analyses	120
BIBLIOGRAPHY	125

LIST OF TABLES

TABLE	PAGE
Table 1. Demographic Information from Participating Schools.	60
Table 2. Factor Loadings of Teacher Use of Evidence-based Practice.....	67
Table 3. Factor Loadings of Teachers’ Attitudes toward the Fairness and Validity of Assessing SWD using HST.....	68
Table 4. Factor Loadings of Teachers’ Attitudes toward the Ability of SWD.....	69
Table 5. Reliability of Scales Used in Analysis.....	70
Table 6. Additional Factor Loadings of Teachers’ Attitudes toward the Ability of SWD using 2 Scales of Items 1-4.....	70
Table 7. Frequency of Responses of Teacher Attitudes toward the Ability of SWD.....	74
Table 8. Frequency of Responses of Teacher Attitudes toward the Fairness and Validity of Using HST to Assess SWD.....	77
Table 9. MANOVA for Teacher Attitude Scales.....	83
Table 10. MANOVA for Teacher Attitude Items.....	83
Table 11. Summary of Multiple Regression Analysis for Variables Predicting Frequency of Use of Evidence-based Practice.....	86
Table 12. Summary of Multiple Regression Analysis for Teacher Attitude and Practice Variables Predicting Proficiency of SWD on the New England Common Assessment Program (NECAP).....	87
Table 13. Descriptives of Teacher Attitude toward the Ability of SWD to Learn and Achieve Higher Level Thinking by Content Domain.....	88

Table 14. ANOVA for Teacher Attitude toward the Ability of SWD to Learn and Achieve Higher Level Thinking by Content Domain.....	89
Table 15. Descriptives of Teacher Use of Evidence-based Practices by Content Domain.....	90
Table 16. ANOVA for Teacher Use of Evidence-based Practices by Content Domain.....	90

LIST OF FIGURES

FIGURE	PAGE
Figure 1. Frequency Histogram of Teacher Use of Evidence-based Practices Scale.....	120
Figure 2. Frequency Histogram of Teacher Attitude toward the Fairness and Validity of Assessing SWD using HST.....	121
Figure 3. Frequency Histogram of Teachers' Attitudes toward the Ability of SWD to Meet Proficiency in HST.....	122
Figure 4. Frequency Histogram of Teachers' Attitudes toward the Ability of SWD to Learn and Achieve Higher Level Thinking.....	123
Figure 5. Teachers' Attitudes toward the Ability of SWD to Benefit from Inclusive Instruction.....	124

CHAPTER 1

INTRODUCTION

Historical and recent legislation regarding high-stakes testing (HST) have had a large impact on the teaching and learning environments for students with disabilities (SWD). The reauthorization of the Elementary and Secondary Education Act (ESEA) was introduced on January 3, 2001 as an Act to close the gap, so that no child is left behind. The purpose of this policy is described as ensuring that all children have a fair, equal, and significant opportunity to obtain a high quality education and reach, at a minimum, proficiency on challenging State academic achievement standards and state academic assessments (NCLB, 2001). *No Child Left Behind* legislation mandates that all but the most severely disabled students take common standardized assessments, such as the New England Common Assessment Program (NECAP) at each grade level. All students must pass with proficiency, but no modifications to the test are allowed. If the student is provided with modifications, no credit is given.

This reality may be leading educators to believe that all students must be taught in the same way if they are to be assessed with the same instrument. If modifications are not permissible for assessments, some may question allowing modifications or differentiation during instruction. This appears to be in direct contrast to the requirements for individualization laid out in previously passed and recent legislation. The Individuals With Disabilities Education Act (IDEA, 2004), formerly known as the Education of All Handicapped Children of 1975 (EHCA), mandates the requirement of educating all students in the least restrictive environment with same age peers to the greatest degree possible. The law further requires that

individualized education plans based on individual student's present levels of performance and the student's strengths and needs be implemented. It is possible that some students may be capable of learning standardized curriculum, but access to instruction may be blocked or demonstration of knowledge may be impossible due to lack of differentiation based on specific needs.

Statement of the Problem

Many studies have shown that students perform in the manner that their teachers expect them to perform. The phenomenon of behaving and achieving in ways that confirm other's expectations is known as the Pygmalion effect (Brehm & Kassin, 1996). Longitudinal studies support the self-fulfilling prophecy hypothesis that teacher expectations can predict changes in student achievement and behavior beyond effects accounted for by previous achievement and motivation (Jussim & Eccles, 1992). Teacher expectations may also be a factor in the education and achievement of SWD as it has shown to be a factor in so many studies of students without disabilities (Rist, 1970; Brophy and Good, 1970; Brophy & Good, 1974; Crano & Mellon, 1978; Humphreys & Stubbs, 1977; Williams, 1976; Brophy, 1983; LaVoie & Adams, 1973; Rosenthal, 1997). However, there are few studies that examine teacher attitudes regarding the ability of SWD to meet proficiency and to understand how teacher expectations affect their instructional behaviors and the achievement of SWD.

Rosenthal's (1997) affect-effort theory suggests that if a change in a teacher's level of expectations of the intellectual performance of a student occurs, (a) a change in the affect shown by the teacher toward that student will occur, and (b) a change in the level of effort given by the teacher in teaching the students will occur. For

example, if the change in the teacher's level of expectation is positive, the favorable affect shown toward the student will increase and the effort expended on the student's learning will increase as well. Rosenthal theorizes that the increase in teaching effort reflects the teacher's belief and expectation that the student is capable of achievement, so the effort expended is worth it because it will likely lead to more learning.

It has been widely reported for several years that there are large achievement gaps between the achievement of students with disabilities (SWD) and students without disabilities (SWOD) (Chudowsky, Chudowsky, & Keber, 2009; Harr-Robins, Song, Hurlburt, Pruce, Danielson, Garet, and Taylor, 2012). It appears that after many years of inclusive programming for SWD, many students are not making the progress that is necessary to meet proficiency. The answer to the question of why SWD are unable to meet proficiency seems to be baffling to so many and the solution, so far, is elusive. Are SWD not making sufficient progress within the general education setting? Are inclusive programs not meeting the needs of SWD (Mclesky & Waldron, 2002)? Is it that they are making progress, but they are unable to show their knowledge due to unfair or invalid tests due to construct-irrelevant variance resulting from an individual's disability? The American Educational Research Association, American Psychological Association, & National Counsel on Measurement in Education (1999) make recommendations for assessing SWD using HST, but are these recommendations followed? Are teachers using evidence-based practices to educate SWD or is the pressure to teach to the test causing teachers to teach in ways that have not been proven effective? To maximize learning, instruction must be student-centered and designed with each student's present levels of performance, strengths and needs,

learning styles, and interests in mind (Lawrence-Brown, 2004; Levy, 2008; Rock, Gregg, Ellis, & Gable, 2008; & McTighe & Brown, 2005). Do teachers have the resources and training to effectively educate the diverse population of students that are included in general education classes? Mclesky & Waldron (2002) suggest that teachers may not be against inclusion, but against poorly implemented inclusive programs. These are all important questions worthy of investigation, especially when the stakes are so high for SWD.

This study describes of the attitudes of 218 middle school general and special education teachers in a public school setting toward the ability of SWD to meet proficiency and the fairness and validity of HST. Educational decisions are made based on proficiency assessments that have long term impact on students' lives. For example program placement, promotion, and high school graduation are now dependent on proficiency scores. This study examines the present condition of teacher attitudes and practices more descriptively first to better understand teachers' expectations regarding the ability of SWD to meet proficiency on HST. In addition, teachers' attitudes related to fairness and validity of using HST to assess the achievement of SWD are explored. Finally, this study investigates how teacher attitudes affect the use of evidence-based practices and also affect student achievement.

Research Questions

Recent state and national legislation has focused attention and interventions on ensuring that all students have equal access to quality education and highly qualified educators. In an effort to determine whether SWD are receiving equitable treatment

and equal access to a quality education, this study will examine the following research questions:

- 1) To what extent do teachers believe that SWD have the ability to meet proficiency on HST? Based on the literature review, it is hypothesized that most teachers do believe that SWD can learn and acquire skills and knowledge, but they may not hold high expectations for SWD to be able to meet proficiency on high-stakes tests.
- 2) To what extent do teachers believe that HST are a fair opportunity for SWD to show achievement?
- 3) To what extent do teachers believe that HST yield valid achievement ratings of SWD? It is hypothesized that teachers do not think that assessing SWD with HST is a valid measure of their progress. Further, it is hypothesized that most teachers do not think decisions based on HST are fair to SWD.
- 4) Are there any differences in expectations between general and special education teachers regarding SWD and HST? It is hypothesized that there are significant differences in the expectations of the academic success of SWD between general and special education teachers.
- 5) What is the relationship between teacher attitudes and teacher practices?
- 6) What is the relationship between teacher attitudes, teacher practices, and the achievement of SWD? Does it vary by content domain? It is also hypothesized that teacher attitudes toward the ability of SWD to show proficiency on HST do affect teacher practice and student achievement.

The ultimate goal is to improve the achievement of SWD by adding to the knowledge of how teacher expectations and attitudes affect teacher practices when preparing SWD for HST. The survey method was chosen to collect data to describe and analyze trends in teacher attitudes affecting the educational experience of many students with disabilities. Teachers spend the most time educating and assessing students with and without disabilities. They have a wealth of knowledge regarding current educational and assessment practices. The results of this study may help to improve the education and achievement of SWD, thus improving the lives of many. The study generates knowledge that will help to inform decisions regarding the education and assessment of SWD.

The following chapter includes, a review of the literature related to teacher attitudes toward the ability of SWD, evidence based practices to instruct and assess SWD, issues related to fairness and validity of using HST to assess SWD, and reports of the current state of assessing SWD with HST. The methods used will be described in chapter 3. The results will be reported in chapter 4, and conclusions will be discussed in chapter 5.

CHAPTER 2

LITERATURE REVIEW

A review of the literature in the most relevant areas to the study was conducted. First, teacher expectations as related to student outcomes will be discussed. Next, teacher attitudes toward students with disabilities (SWD) and toward the ability of SWD to meet proficiency on high-stakes testing (HST) will be explored. The validity of using HST to measure the achievement of SWD and the fairness of using the results of HST to make decisions regarding program placement, and promotion will be discussed. Then, an investigation of best teaching practice will be used to identify evidence-based instructional methods that have proven successful in educating SWD. Finally, the current state of assessing SWD using HST will be explored to determine the present conditions of assessment practices.

The Self-fulfilling Prophecy and Expectancy Effects

The term “self-fulfilling prophecy” was first used by Robert K. Merton (1948) to describe expectancy effects, where a false evaluation of a situation or person causes a new behavior which makes the originally false perception come true. There have been many studies and much debate in the area of whether this phenomenon exists. The following review of the literature reveals that expectancy effects do exist and follow specific patterns in the area of teacher expectancy of students’ achievement. However, little research exists regarding the effects of teacher expectancy on the teaching practices used with SWD or on the achievement of SWD.

Darley and Fazio (1980) offer a complex model of teacher expectancy effects. First, the teacher develops expectations based on student characteristics, documented past behavior, and observations. These expectations affect the teacher's interactions with the student. If the student views the actions as related to factors specific to themselves, the student will expect similar treatment in the future. Next, the student will respond to the teacher's behavior in ways that confirm the teacher's expectations. This is especially likely if the teacher's behaviors are aligned with the student's self-image or are accepted by the student. Student behaviors that confirm the expectations are likely to be attributed to the student characteristics and qualities of the student, allowing the teacher to maintain the expectation that has been formed. If student responses do not confirm the expectation, situational factors are likely to be seen as the cause and are not seen as evidence that the initial expectations are incorrect. The more the student has responded with behavior that has confirmed the teacher's expectations, the more likely the student's self image will change toward the teacher's expectation of them.

Rosenthal (1997) defines interpersonal expectancy effects as "the unintentional expectations that experimenters, teachers, and authority figures bring to experiments, classrooms, and other situations" (p. 1). Many studies have been conducted to measure this phenomenon, also known as the Pygmalion effect. Results consistently show that mediation of expectation is often through unintended nonverbal behavior and can have significant impact on the individual to whom the expectation is communicated (Rosenthal, 1997).

Affect-effort Theory

Rosenthal's (1997) affect-effort theory suggests that if a change in a teacher's level of expectations of the intellectual performance of a student occurs, (a) a change in the affect shown by the teacher toward that student will occur, and (b) a change in the level of effort given by the teacher in teaching the students will occur. For example, if the change in the teacher's level of expectation is positive, the favorable affect shown toward the student will increase and the effort expended on the student's learning will increase as well. After more than 40 years of researching the subject of expectancy, Rosenthal theorizes that the increase in teaching effort reflects the teacher's belief and expectation that the student is capable of achievement, so the effort expended is worth it because it will likely lead to more learning.

In the well-known Pygmalion in the Classroom study, Rosenthal and Jacobson (1968) found that the students in the experimental group where the teachers had been led to expect more intellectual growth showed a significantly greater improvement in test scores than the students in the control group. Brophy and Good (1970), in an extension of Rosenthal and Jacobson's work, found that students for whom teachers held high expectations scored higher on classroom performance and achievement tests, and received more praise and less criticism than low expectation students. Results also indicated that high expectation students initiated more classroom interactions and were treated more favorably by teachers. LaVoie & Adams (1973) found that children who are motivated to achieve, cooperative, dependable, and able to demonstrate self control were rated by teachers to have more academic ability and would likely achieve

more vocational success. Overall, children with good conduct were rated more academically capable, regardless of physical attractiveness or sex.

Jussim & Eccles (1992) explain the social constructivist perspective as the power of beliefs to create reality. For example, children become what their parents and teachers expect them to become. This concept is very important in investigating the relationship between teachers' expectations and student outcomes. Research shows that teachers develop their expectations for students at the beginning of the school year (Brophy, 1983; Rist, 1970) and students often fulfill their teachers' expectations (Brophy & Good, 1974; Crano & Mellon, 1978; Humphreys & Stubbs, 1977; Williams, 1976). Longitudinal studies support the self-fulfilling prophecy hypothesis that teacher expectations can predict changes in student achievement and behavior beyond effects accounted for by previous achievement and motivation (Jussim & Eccles, 1992).

An example of this is Rist's (1970) study where after only eight days of Kindergarten, the teacher made placement decisions based on socio-economic status and expectations of student ability. Differential treatment did affect student behavior and achievement for the three years students were observed. He also found that the process of teaching more to high expectation students widens the gap and therefore creates a real difference in performance which becomes larger over the years. Rist (1970) suggests that if a child's achievement is on a continuum determined largely by teacher expectations, then high teacher expectations will bring the student to the highest level of achievement on their personal continuum of potential achievement. He further suggests that "there is a greater tragedy than being labeled as a slow learner

and that is being treated as one... (as this will) have implications for the future lifestyle and value of education for the child” (p. 299). This finding may be true for all students including SWD. Although this study focused on teacher expectation of low SES students, SWD may also be seen as having a different status as students without disabilities (SWOD). Therefore, the treatment and instruction of SWD may be similar to the low SES children in Rist’s (1970) study.

Woodrock & Vialle (2011) examined preservice primary school general education teachers’ responses to and expectations of students with learning disabilities (LD) in Australia. The results of the study show that as the students’ ability levels decrease, the preservice teachers’ feedback becomes more positive and sympathy toward the student rises, but the expectation of future failure increases. Also, as the students’ effort increases, the feedback becomes more positive, the teachers’ frustration decreases, sympathy increases, and expectation for future failure decreases. The results also show that the preservice teachers were able to report that low ability and low effort were clear causes for the failure of students without LD on tests, but they did not make the connection between low ability and low effort to the failure of students with LD, as the learning disability was seen as a mediating, uncontrollable, and stable cause for failure. This was interpreted as the teachers wanting to be kind to those they viewed as having limitations, but it contributed to a negative attribution cycle where failure is believed to be due to internal and uncontrollable causes such as ability. Implications are suggested that teacher training programs raise preservice teachers’ awareness of the specific needs of students with LD and help them

understand the indirect messages that they send to students with LD may lead to attitudinal changes that can help students with LD achieve (Woodrock & Vialle, 2011).

Hornstra, Dennessen, Bakker, van den Bergh, & Voeten, (2010) examined teacher attitudes toward dyslexia and the effects of teacher attitudes on teacher expectations and the achievement of students with dyslexia. The researchers collected data on the implicit attitudes of teachers toward dyslexia using a newly developed evaluative priming task to assess automatic evaluative responses to words associated with dyslexia. A self-report questionnaire of teacher attitudes was used to collect explicit measures of teacher attitudes toward dyslexia. Results showed that on average, teachers had a slightly negative implicit attitude toward dyslexia. However, the mean score on the explicit measure showed teachers report highly positive attitudes toward dyslexia. Thus, the results of the two measures showed quite different results. The implicit attitude measure was found to predict the teachers' achievement ratings of students as well as the spelling achievement of the students with dyslexia. The explicit measure did not predict any of the outcome measures. Hornstra, et al., (2010) suggest that teachers may be unwilling to explicitly report negative attitudes toward dyslexia, as this may be seen as socially undesirable. Teachers with more negative implicit attitudes toward dyslexia did give students with dyslexia more negative ratings of writing achievement and the difference in the spelling achievement of students with dyslexia was larger from the reference group of students without disabilities when the teachers had more negative implicit attitudes toward dyslexia. Although the underlying process remains unclear, the results were interpreted to suggest that teachers' attitudes must somehow be communicated to

students and this affects the students' achievement. These findings suggest that teachers may have negative attitudes that they may not be aware of, but are affecting the achievement of students with dyslexia. Hornstra, et al., (2010) suggest that teachers' implicit attitudes may affect fast and intuitive reactions, such as where the teacher must deal with many students at once and often has to react fast. This is when non-verbal behavior may be playing a mediating role between teacher attitude and the achievement of students with dyslexia. Therefore, there is a need for greater awareness of how negative attitudes of teachers of inclusive classrooms may be affecting the education of students with dyslexia, qualitatively or quantitatively (Hornstra, et al., 2010). More research is needed to determine if this phenomenon is occurring internationally.

Expectancy Models

Rosenthal's (1997) meta-analysis of 479 interpersonal expectancy effect studies confirms that the phenomenon exists. However, questions remain regarding identifying the variables that moderate and mediate expectancy effects. Moderator variables include "pre-existing variables", such as age, sex, and personality. The present study investigated if moderator variables may include disability status. Mediating variables are the ways in which expectations are communicated.

Four Factor Theory. Using 31 studies of mediation, Harris and Rosenthal (1985) designed a "four factor theory" of the mediation of teacher expectancy effects. The meta-analysis was a proposed summary of the results of the studies into four ways teachers communicate expectancy and the importance of each of the factors on

interpersonal expectancy effects. The 4 factors include climate (affect), input (effort), output (encouraging greater responsiveness), and feedback. The highest correlation between expectation and expector's behavior were found to be related to climate (.23) and input (.26). Similarly, the highest correlation was found between behavior of the expector and response of the expectee in the same areas of climate (.36) and input (.28). This led the author to conclude that teachers appear to give more instruction and teach more warmly to students for whom they hold higher expectations. Rosenthal (1997) calls for more research to determine the benefits of selecting and training for climate and input in teaching.

In a related study, Park, Singer, & Gibson (2005) found that some students with severe disabilities respond correctly more often when teachers use positive and enthusiastic affect. Park et al. (2005) claim to have made the first attempt to examine how teacher affect, child affect, and the interaction between the two influence instruction for children with severe cognitive disabilities. Further research is needed to determine if these results hold true for students with less severe disabilities and over a larger scale.

In his review of literature and research studies involving the self-fulfilling prophecy, Brophy (1982) suggests that a deeper understanding of the effects of self-fulfilling prophecy in an educational setting must not only include the teachers' expectations for the students' ability to achieve, but also teacher behaviors that communicate their expectations and teacher beliefs about the appropriate curriculum, effective instruction, and motivating students based on their expectations.

Implications from the review indicate that it is not appropriate to ignore individual

differences and maintain unrealistic expectations, as this may lead to inappropriate instruction and reduce rather than improve achievement.

Brophy (1982) further suggests that instruction for students should be individualized to maximize achievement. Instruction for some students should not be judged on the extent to which it is identical to the instruction of high achievers. Specifically, teachers can minimize negative and maximize positive expectancy effects if they follow these recommendations: monitor students progress and alter expectations based on present performance rather than past history; set goals in terms of minimally acceptable standards rather than maximum limits of performance; individualize instruction and give feedback relating to continuous progress rather than comparisons to other students; feedback should be informative rather than evaluative; when implementing interventions, diagnose the learning difficulty and break down the task or reteach in a different way rather than repeating the same instruction; encourage students to achieve as much as they can rather than trying to protect students from failure or embarrassment (Brophy, 1982).

Therefore, research shows teacher expectation does affect teacher practice and student achievement. The probability is that the students' performance will move in the direction of the expectation (Brophy & Good, 1974; Rosenthal, & Jacobson, 1968; Rist, 1970). Teacher awareness of this phenomenon may help teachers to guard against the affects of negative expectations and use the rewards of positive expectations to help students reach their highest level of achievement. This information may be particularly useful in the education of SWD. More research in this area is needed.

Teacher Attitudes toward SWD

Many factors affect teaching and learning. The context of the classroom is often influenced by teacher attitudes. What are the factors that influence the teachers' attitudes? A review of the literature regarding teacher attitudes toward SWD and including SWD in their classrooms will facilitate an understanding of the interaction of teacher attitudes and the education of SWD.

Wittrock (1986) suggests that teaching influences student cognition and students' thinking mediates learning and achievement. "Research on student thought processes examines how teaching or teachers influence what students think, believe, feel, say, or do that affects achievement" (p. 297). He investigated if student achievement changed in response to the student cognitive and affective processes altered by the teacher. The research indicates that if these changes occurred in students' thinking, then the self-fulfilling prophecy would occur. He further reports, students' academic self-concepts are affected by expectations. Wittrock (1986) writes, "...the belief that it was futile to pursue success in school contributed more than any other comparable variable to the variance of achievement" (p.299). The attitudes that students have acquired about their own achievement and the feelings of control they have over their ability to improve their performance or destiny within the school system appear to be powerful cognitive processes that mediate learning and affect school achievement.

As inclusion becomes increasingly the norm for students with mild disabilities, instruction for SWD is becoming more likely to be the responsibility of

general education teachers. Cook (2001) suggests that students with mild disabilities, who appear most similar to nondisabled peers, may be making fewer academic gains and progress in inclusive settings. One explanation is that teachers may expect students with mild disabilities to attain proficient performance and behavior standards with little to no support, differentiation, or modification of instruction. Cook's (2001) research compared the attitudes and expectations of teachers toward students with mild/hidden and severe/obvious disabilities included in the general education classes. Based on their attitudes toward students, teachers were asked to nominate three students to prompts associated with the attitudes of attachment (pleasure to teach), concern (teacher effort is needed to make the difference), indifference (presence in class is often overlooked), or rejection (teachers have "given up" on students due to behavioral, social, or attitudinal problems). Results show that teachers reported their attitude towards students with obvious disabilities was significantly more often indifference. However, students with hidden disabilities were nominated by their teachers to the rejection category significantly more frequently. Very few students with either overt or hidden disabilities were chosen by their teacher for the attachment category. Cook (2001) writes, students in the rejection category are rarely provided with instructional feedback in response to incorrect answers, but are criticized by teachers more and are called on less to participate in activities such as reading aloud. Teacher comments in follow-up questions as part of a test- re-test reliability trial indicate that teachers nominated students with obvious disabilities to the indifference category because they did not know how to meet the educational needs of these students. Teachers may lower expectations for some students and if they do not feel

that they have the capacity to meet their needs, they may also feel that “educational progress for their students with severe and obvious disabilities is beyond the scope of their responsibilities” (Cook, 2001, p. 211).

Ward, Montague, and Linton (2003) found that administrators and special education teachers were more likely to be in favor of inclusion of students with disabilities in general education classes and general education teachers were less likely to favor SWD in the general education classes. In addition, they found that administrators and special education teachers were also more likely than general education teachers to hold high expectations for SWD. They also found that 75% of general education teachers and 80% of special education teachers felt that the state tests were not a good measure of student achievement. Moreover, their data showed that 80% of general education teachers, and 88% of special education teachers did not think state assessments reflect the quality of their instruction. However, special education teachers were significantly more likely than general education teachers to report state testing requirements do affect inclusion practices and decisions. The results also led the authors to conclude that state test preparation efforts seem to be presented in a “one size fits all” method of instruction (p. 14). Inclusion without specialized instruction may be of little value to students who benefit from an approach based on their strengths, needs and present levels of performance. With teacher and school effectiveness as judged by state assessments under such public scrutiny, the authors suggest that efficiency in covering the material may take precedence over teaching all children in a way that they may access the instruction in the general education setting (Ward, Montague, and Linton, 2003). Finally, the researchers

suggest that using state assessments for accountability purposes may have diminished the desire or ability of educators to provide education for SWD in the least restrictive environment (Ward, Montague, and Linton, 2003). Educators also may be less willing to accept SWD in their classes if they feel they don't have the resources to educate SWD to a level of proficiency, as this will bring their test scores down, particularly if their evaluations or compensation depends on the test scores of their students.

In their investigation of teacher perceptions regarding curricular and instructional adaptations during the development of inclusive programs, Mclesky & Waldron (2002) suggest that teachers may not be against the inclusion of SWD in their classrooms, but they may be against poorly implemented programs of inclusion where students make little meaningful progress due to the quality of instruction for these students in general education classes. These researchers found that when the school districts were very supportive and provided district level consultants and inclusion coordinators to assist in the development and implementation of service delivery for SWD in general education classes, teachers reported that they were in favor of program adaptations in the following areas: Curriculum Content and Instructional Adaptations, Expectations for Students, Grading System, Grouping Patterns, and Teaming, Collaboration, and Co-teaching. (Mclesky & Waldron, 2002). Further, elementary students with mild disabilities needs could be best met using the general education curriculum, as long as the curriculum could be modified to increase the relevancy for each student and the instructional techniques could be modified or differentiated. Teachers reported that they were able to "focus on the high points" and recognized that not every student could be proficient in every part of the curriculum

(p. 45). In many cases teachers may be afraid to modify the curriculum, and may argue that all students have to pass the high-stakes tests, but teaching every standard quickly in a way that is not relevant to a student is not productive or effective. In the study, examples of modifying instructional techniques include, using more hands-on activities, more oral activities and fewer paper and pencil tasks, more cooperative activities, and frequent re-teaching of skills that students failed to master. In the area of teacher expectations, expectations were based on the individual student. Teachers were more often able to gain an understanding of the individual and view students as human beings, see strengths, and focus on what they can do. This was contrasted with the previous view of expectations being the standards. Some teachers reported that they didn't expect enough out of SWD. These lower expectations may have been transmitted to the student resulting in a low-self concept or low sense of self efficacy. During this process the teachers reported a change in their frame of reference from a medical model where students were to be fixed and then allowed into general education classes to a curriculum focus on collaboration. After having worked in a supportive environment and feeling that they have permission to alter the curriculum, teachers reported that SWD are doing things that they never would have expected (Mclesky & Waldron, 2002).

Therefore, it is important to understand teacher attitudes, feelings and fears toward adding SWD into their classrooms. Students do appear to receive clear messages regarding their expected performance within the classroom. To avoid the Pygmalion effect or situations where SWD needs are simply ignored, quality inclusive programs must be implemented in a climate of high levels of district support, with

professional development opportunities to build teacher confidence and capacity, and where opportunities for collaboration are provided.

Teacher Attitudes toward the Ability of SWD

Hurwitz, Elliot, & Braden (2007) found that teachers' judgments of performance were more accurate on classroom tests with which the teachers were more familiar than standardized tests and also more accurate for SWD. Although SWD on average performed lower on both types, teachers consistently underestimated the performance of students with disabilities. Effective instructional practices are contingent on the teachers' accurate judgment of students' present levels of performance, including skills and knowledge. If judgments of student performance are inaccurate, instruction may be inappropriate for SWD leading to lower levels of student achievement. Results also showed that student test performance was a significant predictor of the accuracy of teacher judgments with low student performance related to more inaccurate judgments of performance. An interesting element of this study was that 0% of the expected scores of SWD were overestimated by teachers predicting scores on large-scale assessments, whereas 52% were underestimated (Hurwitz, Elliot, & Braden, 2007). This shows that low-performing students, who may benefit most from accurate teacher judgments to inform instruction, were more likely to be judged inaccurately.

Ellins and Porter (2005) studied departmental differences in high school teachers' attitudes towards special education needs in England. Their findings indicate that teachers of core subjects, such as English, math, and science, had less

positive attitudes than their colleagues teaching non-core and untested subjects. Results of comparing a teacher attitude scale to student test scores indicated that SWD made the least progress in science where teachers' attitudes were the least positive. Responses to a survey indicated that teachers did not report that they were totally confident in being able to meet the needs of SWD and in many cases teachers' responses indicated that they should not have to. Teacher focus on the difficulties of SWD was interpreted as indicating that teachers may still rely on the medical model where deficits are seen to be within the child and not with instruction. The researchers also suggest that the effect of the current testing initiatives was seen to put additional pressure on teachers which may have caused an adverse effect on teacher attitudes and outcomes for SWD. Further research is called for to determine if departmental differences in attitudes toward the needs of SWD are widespread and linked to student outcomes (Ellins and Porter, 2005).

Teacher Attitudes toward Accommodating Disability in the Classroom

There have been some attempts to measure the relationship between teacher attitudes and practices in the area of accommodating disability in the classroom. The results of research studies are presented here.

In an attempt to address the recent increase in the enrollment of students with disabilities in postsecondary settings and the challenges faculty face adopting inclusive teaching practices, Lombardi & Murray (2010) developed a survey instrument to measure faculty member's attitudes and beliefs regarding disability, disability laws, support services and instruction. The Expanding Cultural Awareness

of Exceptional Learners (ExCEL) focuses on all SWD rather than a specific population with a specific disability type. Their findings suggest that teacher attitudes and perceptions toward disability and their willingness to accommodate and implement Universal Design principles can be reliably assessed. Results indicated more positive attitudes toward providing accommodations and implementing Universal Design principles among faculty who are female, non-tenured, housed within the College of Education, or had prior disability-focused training experiences. Faculty responses also revealed that faculty in Education reported greater fairness in providing accommodations and greater knowledge of disability law than faculty in other colleges, such as Arts and Sciences, Architecture and Allied Arts, and Music and Dance, and greater adjustments to course assignments than faculty in Arts and Science and Business (Lombardi & Murray, 2010).

Biddle (2006) conducted a voluntary survey of 89 secondary science teachers from three counties in Pennsylvania. Forty-two percent of teachers indicated that they had less than positive attitudes toward inclusion, as opposed to only forty percent who reported positive attitudes. Results also indicated a direct correlation between teachers' attitudes toward inclusion of students with learning disabilities (SWLD) and the use of accommodations. Negative attitudes toward inclusion were directly related to infrequent use of effective accommodations and teachers with more positive attitudes reported more frequent use of effective accommodations (Biddle, 2006).

Tredor, Morse, and Ferron (2000) investigated the relationship between teacher effectiveness and teacher attitudes toward including SWD in general education classes. A survey of highly effective and typical teachers revealed that the typical

teachers marked more items that indicate characteristics or behaviors of children that were unacceptable and that would cause them to resist inclusive placement of SWD. The typical teachers also marked almost twice as many items as critical to students' success and adjustment in the classroom. Conversely, the highly effective teachers marked fewer items unacceptable and fewer items as critical for success in their classrooms. The findings of Tredor, Morse, and Ferron (2000) contradict previous findings of a similar study where effective teaching was defined by the process-product model and improvement of scores on academic achievement tests. Under those circumstances, findings indicated that more effective teachers would be less tolerant and more resistant to student behaviors that inhibit smooth implementation of academic lessons (Gersten, Walker, & Darch, 1988). When effective teaching is defined as practices that the best teachers are using in the classroom, including affective and social development, the results show a more positive relationship between effective teaching and attitudes toward including SWD in general education classes (Tredor, Morse, and Ferron, 2000).

Teachers' Attitudes Regarding High-Stakes Testing and Students with Disabilities

In an effort to better understand the inclusion of students with disabilities in federally mandated assessment programs and to investigate beliefs and practices related to assessment of students with disabilities, Crawford and Tindal (2006) conducted a survey of 1,201 Special Education Teachers and 625 Principals regarding the Oregon Statewide Assessment Program. Their findings lead to possible implications which may assist educators in improving the assessment process. The study revealed that teachers knew what they were supposed to do, bring all students to

proficiency, but did not know how to do it. Both principals and teachers scored higher on knowledge and accessibility of scores and data and lower on the ability to make use of test data to inform instruction. Federal policy such as NCLB requires that educators teach all students no matter what their background or capacity. The premise of the law is that with appropriate supports and instruction, students who were once overlooked can make substantial achievement gains (Crawford and Tindal, 2006). Inclusion of all students gives educators the opportunity to document gains and inform instruction. A majority of special education teachers reported that the curriculum for students with disabilities is more demanding and more similar to the curriculum for general education students than it was previous to NCLB (Olson, 2004).

When asked if assessment scores accurately reflected test performance, only 20% of teachers believed statewide test results frequently or always reflected student performance (50% occasionally true/ 30% rarely). However, 44% of principals believed that tests reflect student performance (Crawford and Tindal, 2006). Also, accessibility and clarity of the state policy regarding assessment of students with disabilities may not be clear. Crawford and Tindal (2006) also report a significant difference in the availability of information between teachers and administrators. The results of their survey show 66% of teachers and 75% of administrators thought policy regarding participation of students with disabilities was frequently or always clear. Alarming, 20% of teachers thought the information regarding assessment of students with disabilities was only occasionally clear.

Crawford and Tindal (2006) reported that 30 % of teachers felt the test results were frequently or always useful in guiding instruction, where 60 % of principals

agreed with that statement. Similar findings have been reported by other researchers. Taylor, Shepard, Kinner, & Rosenthal, (2003) surveyed teachers regarding their perceptions of the Colorado Student Assessment Program (CSAP). Only 9% of teachers agreed that the Colorado State Assessment Program gives important feedback about how well they are teaching the curriculum. In a similar study Vogler (2002) surveyed teacher perceptions of the Massachusetts Comprehensive Assessment (MCAS). His results indicate that only 3 out of 40 (7.5%) of teachers believe that the Massachusetts Comprehensive Assessment system was useful in guiding instructional changes. Is the data not useful or do the teachers struggle to make use of the data? It appears that teachers continue to struggle with finding the meaningfulness of these measures. There are two possible reasons for this dilemma. Either the test information is not helpful in designing instruction for SWD, or the test information is helpful, but teachers need to better understand how to use the data diagnostically.

Further study of the subject by DeBard and Kubow (2002) found 87% of teachers and 86% of administrators in one district felt that statewide proficiency testing was overwhelming for students with disabilities. Additional research revealed that teachers were concerned about the stress placed on students with disabilities to complete the state assessments (Crawford, Almond, Tindal, & Hollenbeck, 2001).

Connections may need to be made between what is taught and what is tested by providing teachers with clear and explicit descriptions of the constructs behind the test questions. This may improve teachers' ability to use the information from standardized tests to improve instruction. Capacity building in this area through professional development for those most closely related to teaching and testing of

SWD may also be beneficial. Finally, consideration of strategies to reduce stress for teachers and students may be necessary. However, a central question still needs to be addressed. Why do so few teachers report that high-stakes testing is an accurate assessment of student performance?

Therefore, the context of the classroom created by the teacher's attitudes affects access to appropriate instruction, acquisition of skills and concept, assessment, and thus the achievement of SWD. In a culture of HST, teachers may feel pressured to teach all students at the level of the state standards in order to prepare all students for the tests. When this proves to be difficult, teachers may reject or feel indifferent to SWD, especially if they do not have the training or resources to specialize instruction and meet the needs of SWD. This may lead to lowering expectations for some SWD. If judgments of student performance are inaccurate, instruction may be inappropriate leading to less growth and achievement of SWD. Negative attitudes toward inclusion were found to be related to less frequent use of accommodations. However, effective teachers were found to be more accepting of SWD in their classrooms. Teacher attitude research findings indicate teachers may not be opposed to inclusion, but to poorly implemented inclusive programs and assessment systems. Professional development, time for collaboration with specialists, planning time to accommodate and modify lessons and assessments, and a culture of school support are factors that may increase positive teacher attitudes and the successful teaching and assessment of SWD within inclusive programs.

Evidence-based Instructional Practice

If effective teachers are more accepting of SWD in their classrooms, what are the practices that allow them to be successful in teaching and assessing SWD? This section will focus on the teacher practices that have been proven successful and the frequency of use of evidence-based practices with SWD.

The Disability Dilemma

“A difference is just a difference until cultural consensus makes it a problem” (Fosnot, 1996, p. 151). Reid and Valle (1996) suggest that categorization of students as disabled positions learners as incompetent. However, the provision of special education services is contingent upon qualifying under a specific disability category. Once labeled, students may be taught in ways that confirm their failure to learn. Often SWD are taught in segregated settings with other like-labeled students at a slower pace. The curriculum is often watered down and composed of repetitive, low level tasks (Reid & Valle, 1996). The opportunity for group work, creative, high level, constructive thinking is not always available or part of instruction. Reid and Valle (1996) argue that SWD are naturally active learners who learn in the same way as all students do, through life sustaining processes. True access to the curriculum allows for multiple entry points in line with students’ present levels of performance, strengths and needs and learning styles.

Increasing achievement through research proven practice

A review of the literature indicates that differentiated instruction is not only best practice to use when instructing SWD, it is also a means to achieve maximum

learning outcomes with all students including students working at grade level and students identified as gifted. Tomlinson (2000) identifies seven basic beliefs that are necessary for successful implementation of differentiated instruction (DI). (a) recognition that same-age students have a wide variety of life circumstances, past experiences, and ability or readiness levels; (b) these differences necessitate adjustments to the content and pace of instruction; (c) student learning is maximized when they receive support from the teacher through activities that challenge them to perform slightly above what they can demonstrate independently; (d) student learning is heightened when the content they are learning is connected to their real-life experiences; (e) authentic learning opportunities enhance student learning; (f) each student must feel respected and valued for learning to occur; and (g) the ultimate goal of education is to recognize, promote, and progress the abilities of each individual. The benefits of using DI to teach a common curriculum are particularly evident in the following research studies.

In their study designed to improve reading achievement, Baumgartner, Lipowski, & Rush (2003) used DI strategies including a variety of reading leveled materials. The results indicated a significant improvement in reading levels of students in all three targeted classrooms and an increase in the comprehension strategies used by students. The authors assert that DI in basic phonological processing and word recognition skills must be taught with materials that match the student's reading or readiness levels rather than trying to teach decoding and comprehension using grade level materials only.

Hess (1999) in Baumgartner, Lipowski, and Rush (2003) concluded that not only do students have differing strengths, they also differ in their reading readiness, interests, and learning profiles. Therefore, students at different developmental levels may need to work on different tasks leading them to approach the standard being addressed rather than performing the same task at another level, but still meaningless to them. DI includes different learning products to match individual readiness, interest, and learning styles.

Combining standard based and DI. Examining the literature and successful examples of models, it is clear that both standards-based and DI are necessary parts of special and regular education teachers instructional methods. Standards-based curriculum and assessments are necessary to ensure all students are provided access to quality instruction. To maximize learning, instruction must be student-centered and designed with each student's present levels of performance, strengths and needs, learning styles, and interests in mind (Lawrence-Brown, 2004; Levy, 2008; Rock, Gregg, Ellis, & Gable, 2008; & McTighe & Brown, 2005).

Researchers have discovered much regarding how children learn. McTighe & Brown (2005) suggest, students construct meaning, rather than receiving it passively; learning must be guided by generalized principles to be applicable and appropriate for different populations; students must develop an understanding of problems by thinking in terms of core concepts or big ideas; superficial coverage of many topics in the domain is not effective in developing true understanding of concept; feedback is a basic student need and mandatory in the learning process; each individual student

learns and achieves in different ways; and as a survival organ, the brain must be engaged by its learning environment, not threatened or ignored by it.

McTighe & Brown (2005) also suggest that pressure from school districts on teachers to meet the NCLB continuous improvement targets has resulted in teacher stress and a variety of instructional practices in contrast with what educational research confirms are requirements for promoting genuine student engagement, understanding, and achievement. Urgency to achieve adequately yearly progress has driven some districts to employ practices that are counterproductive to learning. Curriculum is often too broad and fails to focus on core or essential information necessary for deep understanding among all students. This focus solely on curriculum may lead to some students learning little to nothing at all. Aligning standards-based common curriculum and assessment with DI so that they are employed together may better guide equal access to learning opportunities (McTighe & Brown, 2005).

Teacher Practice Research

Bulgren, Marquis, Deshler, Schumaker, and Lenz (2006) surveyed 70 high school teachers who taught classes including SWD and low achievers to investigate teachers' views of their roles and practices, curricular demands, and their views and use of research-based practices and standards. Participants in the study indicated that planning time was limited, and the most common assessment methods used were unit tests. Responses showed that although teachers were willing to make accommodations, they did not indicate a high degree of accommodation use in instruction. Teachers also reported that for SWOD they put more emphasis on the mastery of content knowledge, but when teaching SWD the concentration was on

mastery of basic skills. Students with LD were also more often perceived as having deficits in higher level thinking skills, such as manipulation of content and transferring and applying knowledge. This may indicate that the focus of instruction is different and different levels of knowledge and thinking are exposed to and demanded from SWOD and SWD. Teachers also perceived that SWD had more learning deficits than SWOD and low achievers and indicated that they had lower expectations for SWD than for either other group. Responses indicated that teachers believed that SWOD were more likely to show proficiency on standards than SWD. When asked if they had more planning time, what would be the best way to use it to improve the achievement of SWD, the most frequent response of teachers was working more with students individually or in small groups. Other responses included modifying the curriculum and collaborating with other teachers (Bulgren et al., 2006).

Teachers were asked how often they used instructional practices that have proven effective for SWD. Responses indicated that rural and suburban teachers are more willing than urban teachers to improve the curriculum through accommodations and modifications. When asked which techniques they used most to adapt instruction, teachers in all schools reported the use of interactive questioning and varied presentational techniques (Bulgren et al., 2006).

In the area of assessment methods used to determine student mastery, The most commonly reported assessment, unit tests, were modified with the mean ratings of rural teachers, $X= 5.0$, suburban teachers, $X= 5.54$, and urban teachers, $X= 4.35$ on a 7 point Likert scale from 1 (not at all) to 7 (always). Teachers also reported that effort and participation are factors considered when grading (Bulgren et al., 2006). This

may explain why students may be passing a class, but not meeting proficiency on assessments or high-stakes tests

Bulgren, et al., (2006) also examined teacher expectations for student success in mastery of content to determine the importance of all students mastering content. Teachers reported that approximately 63% of the content taught in class to be critical for student success. However, a majority of teachers indicated that 50% of students had to demonstrate that they had only mastered 50% of the curriculum before they would re-teach the content that was not mastered. Only 7% of teachers reported that they would re-teach if less than 50% did not understand the content to the level of mastery. This indicates that the lowest functioning students are often not required to reach the level of mastery before the teacher moves on to the next concept (Bulgren et al., 2006).

When asked to list the most common research-based practices that they implemented in their classrooms, teachers reported using “cooperative learning” and “group discussions and activities” most frequently. This revealed that over 25% of what teachers referred to as examples of researched-based practices related to grouping practices. Only 8% of teacher indicated that they used direct instruction, 6% used graphic organizers, 2.7% used questioning techniques, and 2% reported using “brain-based teaching”, “project-based teaching”, hands-on activities”, “silent reading”, and “individualized instruction” (Bulgren et al., 2006, p. 54).

The results of this study indicate that the research-based practices listed previously (Tomlinson, 2000; McTighe & Brown, 2005) are not always used when

instructing and assessing SWD. The research studies presented here indicate that SWD are often required to work on lower level thinking skills and expectations for achievement are also lower for SWD than for SWOD. Teachers often indicate that they would like to use research-based practices when instructing SWD, but class size and lack of resources, such as time and opportunities for collaboration with special educators make it difficult.

Validity of Assessing the Achievement of SWD with HST

As previously discussed, many teachers report that HST are not a good measure of the achievement of SWD (Crawford and Tindal, 2006; Taylor, et al. 2003; Vogler, 2002). In the *Standards for Educational and Psychological Testing*, the American Educational Research Association, American Psychological Association, & National Counsel on Measurement in Education (1999) make the following statements concerning the valid testing of individuals with disabilities:

Standard 10.1: In testing SWD, test developers, test administrators, and test users should take steps to ensure that the test score inferences accurately reflect the intended construct rather than any disabilities and their associated characteristics extraneous to the intent of the measurement (p. 106).

Standard 10.2: People who make decisions about accommodations and test modification for individuals with disabilities should be knowledgeable of existing research on the effects of the disabilities in question on test performance. Those who modify tests should also have access to psychometric expertise for doing so (p. 106).

The first standard relates to the possibility of construct-irrelevant variance resulting from an individual's disability. The second standard refers to the possibility that little may be known about the effects of a disability on an individual's performance on a particular type of test. These issues will be addressed in this section of the literature review, as outcomes associated with the current assessment policy may cause some to question the validity of assessing SWD with HST.

In a report investigating the accountability system in Rhode Island, The Thomas B. Fordham Institute (2009) found that the accountability system in Rhode Island developed in response to NCLB is working to identify schools with high tests scores that mask low-performance for a particular group of students by disaggregating data by subgroup such as race, income, and special education. If particular groups of students are identified as not benefiting from the current educational system, measures may now be taken to identify and address the issues. However, data collected from 18 elementary schools and 18 middle schools from various states around the nation by the Thomas B. Fordham Institute (2009) indicated that all but one school with enough qualifying SWD failed to meet proficiency targets. The authors suggest that deeper considerations for these populations may need to be included in future assessment policy (Thomas B. Fordham Institute, 2009).

Recommendations for HST

In their position statement on high-stakes testing, the American Educational Research Association (AERA, 2000) has suggested 12 recommendations based on professional consensus concerning sound and appropriate test use in education and

psychology. The seven that are most relevant to this study are: (1) High-stakes decisions should not be made on the basis of a single test score. (2) When testing is used for individual student accountability or certification, students must have had a meaningful opportunity to learn the tested content and cognitive processes. (3) High-stakes tests must be validated for each intended use. (4) The negative side-effects of a high-stakes assessment program must be fully disclosed to policy makers. (5) The accuracy of achievement levels must be established for each subgroup. (6) Students with disabilities must be appropriately attended to. (7) The intended and unintended effects of the testing program must be continuously evaluated and disclosed.

High-stakes decisions should not be made on the basis of a single test score.

Decisions that affect a student's life or educational opportunities should not be based solely on test scores (Katsiyannis, Zhang, Ryan, & Jones, 2007). In 2000, twenty-three states required students to pass an exit exam to receive a high school diploma. Further, thirteen states use standardized tests to determine which students are promoted or retained (The Disability Rights Advocates, 2001). HST should be validated for use with SWD before being implemented, as the tests may assess a characteristic of the disability and not the ability of the student. Katsiyannis et al. (2007) suggest clarifying the assumptions underlying HST requirements before considering the results valid for SWD.

Fuchs & Fuchs (1993) describe an alternate assessment methodology, response to intervention (RtI), which may be more useful in measuring the achievement of SWD. Their research suggests that academic gains measured frequently over the course of one year in the areas of reading and math can be described as increasing with a linear

and predictable trajectory over time allowing for data to be used to drive instruction and increase learning in the area of targeted skills. The current HST systems use a single standardized test score which provides limited information, especially when describing change or evaluating instructional programs (Fuchs & Fuchs, 1993).

Alternate assessment (AA). Amendments to IDEA (2004) mandated that all states are legally required to have in place an AA for SWDs who are disadvantaged by an assessment system. SWD may not be fairly assessed if they are not provided with an AA regardless of the accommodations provided. Accommodations may not be enough to ensure a valid assessment on a test that assumes that all students are reading, writing, and learning in the same manner. Many SWD do not need a different set of standards, as they are working on the same content or curriculum standards, but they do require instruction and assessment that best meets their needs. Some states limit use of AA to students with severe developmental disabilities, but this is insufficient to address the needs of *all* SWD. AA should be aligned with the general curriculum standards and may be appropriate for students other than *only* students with significant intellectual disabilities (Disability Rights Advocates, 2001).

Accommodations. SWD who can benefit from reasonable accommodation must be provided with it in order to remove barriers to accessing questions or demonstrating knowledge. Most recent studies have focused on determining the differential effect of the testing accommodation on students with and without disabilities to determine if the accommodation provides an unfair advantage or changes the task or construct being assessed. Also, a focus has recently emerged on aligning the testing accommodation to the individual needs of the students rather than investigating an accommodation for

many different individuals with varying strengths, needs, present levels of performance and diagnoses of disabilities (Kettler, Niebling, Mroch, Feldman, Newell, Elliot, Kratochwill, & Bolt, 2005; Tindal and Fuchs, 1999; Fletcher, Francis, Boudousquie, Copeland, Young, Kalinowski, & Vaughn, 2006). However, students with recommendations for accommodations from their teachers often do not show a “differential boost” in performance scores (Fuchs, Fuchs, Eaton, Hamlett, & Karns, 2000).

Addressing Validity in Participation Decisions regarding SWD and HST

Destefano, Shriner, & Lloyd (2001) used a pretest/posttest design to measure the impact of training for teachers on teacher knowledge about the participation of SWD in large-scale assessments and accommodation decisions for SWD, accommodations for hypothetical SWD, and accommodation decisions made for actual students the following year. After training had occurred, posttest results indicated that teachers felt more confident in their ability to make decisions regarding accommodations for SWD and there was a stronger relationship among participation, accommodation, curriculum and instructional needs of SWD.

The study was designed to examine the participation, accommodation, and reporting of SWD taking the Illinois Standards Achievement Test (ISAT) and to evaluate the intervention training given to teachers and administrators on decision making regarding participation and accommodations for SWD. The training consisted of training special education teachers and administrators to use a “six scenarios” model that guided assessment of the access a SWD had to the general education

curriculum before participation and accommodation decisions are made. Special educators must then be knowledgeable about the state standards, because decisions about participation in assessment should be based on whether the student received instruction in the content areas assessed and whether the assessment provides a valid measure of the student's curriculum (Thurlow, Seyfarth, Scott, & Ysseldyke, 1997).

Results indicated that training did lead to more appropriate participation and accommodations for SWD on the large –scale assessment. Fewer SWD took the ISAT without accommodation, 47% in year 1 and 22% in year 2 (post-training). During year 2 more students participated in alternate assessment, 17% in year 2 as opposed to only 9% in year 1. An interesting finding was that before teacher training occurred, 86% of SWD with individualized goals that were not based on the standards did participate in the ISAT (only 44% with accommodations). After the training, SWD with these non-standard, student-specific goals participated in alternate assessment more, 41% in math and 36% in reading. When asked to reconsider participation and accommodation decisions made the year before training, teachers changed 43% of their previous decisions. Teachers would have amended their decisions to include more accommodations, partial rather than full participation, and recommended alternate assessment as the method of assessment for more students. Results suggest that after training, teachers' decisions regarding participation did show a stronger connection to general education access and decisions regarding accommodations were more linked to student needs. Accommodations for “target skills” that would interfere with the validity of the assessment, such as reading the reading test, were significantly reduced (Destefano et al., 2001).

Pressure to Increase Proficiency Interfering with Validity of HST Reporting

Schute, Villwock, Whichard, & Stallings, (2001) followed the reading scores of 461 students with learning disabilities in one district for 5 years (1993 to 1998) during the implementation of a state-mandated accountability plan including a large scale testing program. The purpose of the study was to examine the participation, achievement levels, and progress of SWD on the North Carolina End of Grade (EOG)-Reading test in grades 3 through 8. Findings revealed that the number of SWLD included in the testing program increased by 11% across the 5 year study and by 1998 almost all SWLD were included in the general education testing program. The district's mean reading performance for students with learning disabilities improved and the percent of SWLD that scored in the proficient range in reading increased from 38.9% to 60.5%. However, approximately 40% of SWLD had difficulty meeting the states proficiency standards in reading and the gap between the mean scores of SWD and SWOD remained large at the completion of the study. During the two years of the study that growth standards were in effect, the average growth of SWLD in grades 4 and 5 showed growth that did meet the standard. Growth for individuals across grades was shown to vary considerably. Schute, et al. (2001) discuss one possible reason for the improved performance of SWLD. As the pressure to increase proficiency of all students increased, educators and agencies may have identified students for special education with higher reading scores who would not have been considered low enough for special education services in the past. During the implementation of high-stakes testing, there was a 20% increase in the identification of SWLD. This leads to the invalid conclusion that SWLD had the reported improved reading achievement, where

in actuality the group considered SWLD had changed not the scores. The researchers suggest a combination of large scale assessments and curriculum-based data offers a more reliable and valid measure of progress for SWD to address the higher performance expectations and progress within general education (Schute, et al., 2001).

In the previous study, the state also planned to include the results of large scale testing into decisions regarding promotion in other grades. The implementation of these promotion requirements would put approximately 40% of SWLD at risk for grade retention at schools where higher levels of proficiency for SWD are reported. However, these decisions may be made based on invalid assessment practices (Schute, et al., 2001). The implications for SWLD in other districts and in other states implementing such plans may be even worse.

The development of expected progress for SWLD was based on two major concerns: generally poor academic outcomes for SWD and the lack of accountability measures that focus on outcomes (Schute et al., 2001). The extent to which SWD meet the general education standards is the major criterion for evaluating special education services at the individual, school, and district level, regardless of the appropriateness. With the focus of evaluating special education changing from process to outcome, it will be important that assessments are designed to reliably and validly represent the achievement of SWD at a level that matches the decisions that will be made.

Alternatives to Large Scale Testing that May Increase Validity

Large scale assessment data and curriculum-based measures may complement each other in improving the validity of special education outcomes and accountability. Curriculum-based measures would make a powerful contribution in allowing frequent progress monitoring and individualized decision making (Deno, Fuchs, Marston, & Shin, 2001; Schute et al., 2001; Fuchs & Fuchs, 1996). A model using both types of assessments may allow for cross validation of progress on the large scale assessments, given concerns regarding the reliability of HST and whether gains on HST represent true gains in achievement (Koretz, 1996; Mehrens, 1998).

School performance measures may differ in their focus. Standards based on level of performance require their students to reach an established level of proficiency or skill. Standards based on growth require students to have made an established amount of progress during a given time period. Growth based performance measures may provide advantages that performance measures do not, due to the ability of growth measures to be constructed in a way that controls for initial differences in student performance. This may offer a more accurate measure of a school's or teacher's contribution to student progress (Schute, Villwock, Whichard, & Stallings, 2001). The current NCLB accountability system provides one measurement of a school's performance in a given year and will hold 100 percent of all students to a single standard of proficiency by the 2013–14 school year. Rather than one measure of performance, growth models tend to measure change in the individual student's performance over 2 or more years. Due to many SWD scoring well below the grade level standards, accountability measures that are able to detect modest improvements

in student achievement are useful in assessing the growth of SWD (McDonnell, McLaughlin, & Morison, 1997). By 2009, 15 states had been approved to use growth models in their accountability systems (Ahearn 2009).

However, the push to evaluate the growth of all students using the same standards and a single assessment tool may hinder the actual usefulness of the assessment data collected. If the results are not valid, there is no point in testing. Pressure to bring all students to a level of proficiency that may have been determined for SWOD and without adequate consideration for SWD may lead to practices and administration procedures that invalidate the test or data collected from the test. Multiple measure and cross validation procedures may help to increase the validity of assessment scores. More research is needed in using HST to assess the achievement of SWD.

Fairness

In the *Standards for Educational and Psychological Testing*, the American Educational Research Association, American Psychological Association, & National Counsel on Measurement in Education (1999) make the following statements concerning fairness in testing and test use:

Standard 7.1: When credible research reports that test scores differ in meaning across examinee subgroups for the type of test in question, then to the extent feasible, the same forms of validity evidence collected for the examinee population as a whole should also be collected for each relevant subgroup (p. 81).

Standard 7.10: When the use of a test results in outcomes that affect the life chances or educational opportunities of examinees, evidence of mean test score differences between relevant subgroups should, where feasible, be examined for subgroups for which credible research reports mean differences for similar tests...An investigation should be undertaken to determine that such differences are not attributable to a source of construct underrepresentation or construct-irrelevant variance. (p. 82).

Standard 7.12: The testing or assessment process should be carried out so that test takers receive comparable and equitable treatment during all phases of the testing or assessment process (p. 84).

Standard 7.1 calls for a separate, parallel analysis of data for members of subgroups where difference in score meaning exist. An example of standard 7.10 is where graduation or promotion decisions are based on test outcomes that produce different outcomes for subgroups such as SWD, and Standard 7.12 cautions against bias during any part the assessment process (AERA, 1999).

Equitable Resources and Opportunities to Learn

Katsiyannis et al. (2007) assert that it is unfair to hold students accountable unless they have actually been taught the material/constructs being tested. SWD might require more advance notice and substantial opportunities to prepare. Four to six years is considered necessary before HST consequences are attached to assessments. Individualized Education Plans (IEP) goals must be aligned with curriculum. Also, to be considered fair, SWD must be provided with equal access to

educational programs. Katsiyannis et al. (2007) recommend ensuring fair testing requirements while maintaining accountability for all students.

When standardized tests are introduced to reform or change current practice, opportunities to access appropriate instruction consistent with the changes should be provided before consequences are enforced. When testing is used for individual student accountability or certification, it must be shown that the tested content has been incorporated into the curriculum, materials, and instruction students are provided before high-stakes consequences are imposed for failing test scores (Katsiyannis et al., 2007). The instruction given to SWD is often focused on Individualized Educational Program (IEP) goals created for them by their teachers, parents, service providers and local educational agencies based on their strengths, needs, and present levels of performance. Educational focus may not be on state standards. When a requirement to pass a statewide exam is imposed in this situation, with little advanced notice and limited time to acquire the tested skills, it likely sets up SWD for failure (O'Neil, 2001). This appears to be unfair treatment of SWD.

In 1992, when North Carolina implemented an End of Grade Test in Reading Comprehension and Mathematics (EOG-Reading and EOG-Mathematics) students were required to successfully pass the EOG-Reading and Mathematics at the eighth grade level in order to be eligible to receive a high school diploma. For SWD, decisions to participate in the assessments were part of the IEP process. However, if a student did not take the test, he/she was removed from the standard course of study. This resulted in ineligibility for a high school diploma (Schute, et al., 2001). Should the determination that a student will take an alternate assessment automatically

disqualify that student from receiving the standard course of study and graduating from high school? Is this decision fair?

Fairness of Decisions Based on High-Stakes Testing to Assess SWD

Newly implemented laws have created a dilemma for states, requiring them to raise standards for all students while ensuring fairness and equitable treatment under the law. The Indiana Civil Liberties Union filed a case on behalf of seniors with disabilities who were denied a high school diploma based on high stakes testing. They claimed that the state had implemented the law too quickly, especially for SWD, and based their case on fairness. An Indiana Supreme Court judge ruled against granting an injunction that would have prevented the state from withholding the high school diploma from over 1,000 seniors with disabilities who failed the state's newly implemented Graduation Qualifying Examination. The judge found that although these seniors with disabilities had met all other requirements, the law requiring them to pass the exam before receiving a diploma was fair and should be upheld (O'Neil, 2001).

In the case of *Brookhart v. Board of Education* (1983), the court found that denial of diplomas to SWD who did not pass the test was not an attempt to deny free, appropriate, public education (FAPE). These students can be held to the same standards, but additional opportunities to prepare for the assessment and exposure to the material being tested are crucial to ensure the rights of students are not denied. Other court cases regarding the Constitutionality of mandatory exit exams have affirmed this idea. In the case of *Debra P. v. Turlington* (1981), the court found that

adding a new requirement without sufficient notice and educational opportunities did deny students' rights (Katsiyannis et al., 2007).

In 2001, eighteen states required students to pass a mandatory standardized assessment as a graduation requirement. Currently, most states require such exams that are also called, "exit exams", "competency exams", or "certification exams". These tests are considered high-stakes because of the consequences they carry and the decisions that are made based on them.

A student who does not receive a diploma is placed at a tremendous disadvantage. Career options may be limited, as a high school diploma is a requirement for college acceptance, enlistment in the military, and most jobs that provide adequate salary. People who have not earned their high school diploma or GED earn on average 19% less per hour than those who have (O'Neil, 2001). High-stakes testing could have the largest effect on SWD who may already face restricted options due to the nature of their disabilities. These students may have difficulty demonstrating their true capacities. This needs to be considered when assessing SWD, especially when the repercussions of failing are so broad and lasting.

If all students are required to pass exit exams, many SWD will leave high school without a diploma and their lives will be impacted. This may be particularly true in states, such as RI where a new set of standards is being adopted, the CORE Standards College and Career Readiness. In Massachusetts and New York, the focus of such exams may be changing from minimum competency to college preparedness,

as well. Such a transformation may raise achievement for those who can meet the challenge, but lead to failure of many.

After a review of research and legislation, O’Neil (2001) makes three recommends to ensure the fairness of high-stakes testing. States should avoid making decisions based on a single criterion. This will allow SWD to demonstrate knowledge and proficiency in diverse ways, such as through grades, course test scores, or other factors. States should also give adequate notice before implementing high-stakes testing and take care that students are not tested on material that they have not been taught. O’Neil (2001) suggests that assessments should be inclusive, motivating and challenging for SWD, but constructed and administered in a way that is not “injurious, inequitable, or unfair to them” (p. 188). This may help to ensure that high school diplomas issued to SWD are equally respected and achievements are not discounted.

Equally Effective and Fair Alternatives to HST

Albrecht & Joles (2003) report that students with high-incidence disabilities, such as speech and language disorder, emotional disturbance, learning disability, and mild mental disability, are significantly less likely to meet proficiency on HST than SWOD. These disparate results raise the question of the whether the test is fair to SWD. It is recognized that some accommodations are allowed on HST, however, IEP teams do not always identify the appropriate accommodations for SWD and current testing practices do not always allow the accommodations and modifications listed in the students IEP that are routinely implemented in the classroom to allow SWD to access the curriculum. They further assert that the use of a single high-stakes test to

assess the proficiency of SWD is discriminatory, as acceptable alternatives to HST that meet the requirement for accountability for high standards of achievement and provide equal access to opportunity for SWD in a nondiscriminatory and fair way do exist (Albrecht & Joles, 2003).

The Office of Civil Rights described disproportionate adverse impact from high-stakes testing as where a statistical analysis shows the failure rate of a particular group of students is significantly higher than would be expected from a random distribution of scores (U.S. Department of Education, 2000). Federal law guarantees equal opportunity, not equal results. However, when a group of students performs differently and the educational decisions based on test scores show significant disparities in the kind of benefits awarded to students based on race, gender, or disability, testing practices should be examined (U.S. Department of Education, 2000). Such consideration may ensure that high-stakes testing is educationally and legally fair for SWD.

Until the fairness of using high-stakes testing to measure the achievement of SWD is determined caution should be taken regarding high-stakes decisions. Further investigation of the effects of allowing standard and non-standard accommodations and modifications and expanding the use of alternate and multiple measures (portfolios, videotaping, and curriculum-based measures) of assessment are needed. Analysis of the data regarding the outcomes and consequences of HST for SWD must continue to be analyzed, including graduation/ dropout rates, completion of high school without a diploma, and postsecondary outcomes as compared to SWOD.

A Different Perspective from the Research on the Consequences of HST for SWD

Ysseldyke, Nelson, Christenson, Johnson, Dennison, Triezenberg, Sharpe, & Hawes, (2004) suggest that in addition to ensuring SWDs have an opportunity to learn and providing supports needed to enhance learning, findings from their study include that raising expectations for SWD can have positive results. High expectations can lead to increased participation with more careful consideration of individualized accommodations. It may also lead to improved instruction, which may lead to improved performance. DeStefano, Shriner, & Lloyd (2001) found that if test participation decisions precede curriculum and instructional decisions, educators and parents encourage greater access to the general education curriculum supported by changed attitudes about student abilities. In reference to higher standards, Ysseldyke et al., (2004) report that raised expectations for students with disabilities is resulting in better performance, sometimes surprising parents and educators. Twenty percent of states report that SWD are getting a more rigorous education and 12% of states report higher expectations for SWD which may help defeat the self-fulfilling prophecy for some SWD (Thompson and Thurlow, 2001).

Intended consequences of test results are to have an effect on the curriculum, instructional strategies, and interventions to improve the learning of all students and target professional development support for teachers and administrators, where needed. Unintended consequences for student who cannot demonstrate proficient performance on high-stakes test may include (a) more referrals for special education services, (b) lowered expectations, (c) focusing instruction only on items assessed in state tests, (d) using materials made for test preparation without differentiation, (e)

eliminating options for diverse elective courses to provide intensified instruction in areas of weakness identified by testing, and (f) the determination if a student will graduate from school with a standard education diploma (Thurlow & Johnson, 2000).

Using research and data to inform decisions regarding SWD and HST is best practice, but few data on raised expectations, increased participation, and performance of SWD currently exist. The research on the consequences of HST for SWD is somewhat contradictory. It seems to indicate that careless implementation of HST programs for SWD can result in unfair practices and life changing consequences. However, when participation decisions include adequate time and opportunities to learn the tested material, multiple measures of realistic goals, alternate assessment methods, and the use of discretion in using large scale testing to make high-stakes decisions, expectations for the achievement of SWD may be raised and education may be more equitable. More research that documents the intended and unintended consequences of HST and SWD is needed so that we have a solid base of research.

Recent Reports on the Current State of SWD and HST

Harr-Robins, Song, Hurlburt, Pruce, Danielson, Garet, and Taylor (2012) prepared an interim report for The National Center for Education Evaluation and Regional Assistance and the Institute of Educational Sciences of the U.S, Department of Education, based on the latest information collected from their study of the inclusion of SWD in school accountability systems. The purpose of their study was to provide information to inform policy about the education of SWDs by examining their inclusion in school accountability systems, the use of school practices that may relate to their educational outcomes, and SWD's achievement in relation to school

accountability status. The data and findings reported are based on four school years from 2005-2006 to 2008-2009. Descriptive state and school level data was reported from a range of 37 to 40 states and 58,397 to 61,401 schools depending on the data available.

During the 2008-2009 school year, 35 percent of public schools were accountable for the performance of the SWD subgroup. Minimum subgroup size ranges from 5-100 between states, with RI setting accountability at a minimum of 45. This represents only 58 percent of tested SWDs in those states. In the same 40 states with available data, 62 percent of middle schools were accountable for SWD performance, while 31 percent of elementary schools and 23 percent of high schools were accountable (Harr-Robins et al. 2012).

In order to examine the percentage of schools that missed Annual Yearly Progress (AYP) due to the performance of SWD, data from 37 states were analyzed. Among schools accountable for the SWD subgroup performance, 26 percent missed AYP because of SWD performance and other reason(s), and 14 percent missed AYP solely because of SWD performance in the 2008–09 school year. Combined, the schools failing to meet AYP due in part or in whole to the performance of SWD educated almost half of tested SWDs attending SWD-accountable schools in these states (Harr-Robins et al., 2012). Therefore, when using standardized tests as a measure in only the schools held accountable for the performance of SWD, nearly half failed to educate SWD to proficiency in reading and math or make adequate growth toward proficiency.

In the 2008–09 school year, 6.5 million students with disabilities (SWDs) ages 3 to 21 received special education services in the United States, making up 13 percent of the total public school enrollment (Harr-Robins et al. 2012). SWDs are a diverse group, but average proficiency rates are much lower than the average proficiency rates for their non-disabled peers. Chudowsky, Chudowsky, & Keber (2009) in their recent study for The Center on Education Policy found that the gaps between SWDs and non-disabled students in proficiency rates on state tests in reading and mathematics exceeded 30 percentage points in the 2007–08 school year in 28 of the 43 states analyzed.

Differences in state assessments and inconclusive data make it difficult to obtain a clear picture of achievement for students with disabilities. States may currently administer two or three types of assessments to these students—the regular state test (with or without test accommodations) and one or two types of alternate assessments (AA)—each with its own definition of proficient performance. Many states have yet to demonstrate that alternate assessments for this group are reliable and that interpretations of their results are valid. In addition, the percentage of students with disabilities tested with alternate assessments varies widely from state to state and year to year, and states differ as to whether and how they report the results (Chudowsky et al., 2009).

Current Methods of Alternate Assessments for SWD

The regulations of the Elementary and Secondary Education Act (ESEA) did allow for variations across the states in the inclusion of SWDs in the school accountability system, but did not address the issue of using different types of

assessments for SWDs. However, the U.S. Department of Education provided some guidance in its 2003 regulations for the choice of assessments for students with severe cognitive disabilities. In addition to taking regular state assessments with or without certain accommodations, there are three types of alternate assessments for SWDs: alternate assessments based on alternate achievement standards (AA-AAS), alternate assessments based on modified achievement standards (AA-MAS), and alternate assessments based on grade-level achievement standards (AA-GLAS). The Department of Education data shows that 7.9 percent of all SWDs in tested grades across the nation took an AA-AAS in the 2007–08 school year (Harr-Robins et al. 2012). No data was reported on the frequency of SWD taking the AA-MAS or AA-GLAS.

There is no limit on the number of students who can be tested with alternate assessment, but there are district- and state-level limits on how the scores can be used to determine AYP. The Department of Education’s 2003 regulations, permit states to count the scores of students scoring proficient or above on AA-AAS toward AYP determination of schools or districts, but the number of such scores counted for AYP determination may not exceed 1 percent of all students in the tested grades at the district level. All 50 states use this “1 percent rule” of flexibility to determine whether schools or districts meet their AYP standards (Harr-Robins et al. 2012). It appears that despite the lack of limitation on the number or percentage of students that may take AA, the limit on the number of students’ score that may count toward AYP may be preventing all students who could benefit from AA to have that option.

Validity and Fairness of Accommodations and Alternate Assessment

In 2010, results of the twelfth survey of all 50 states by the National Center on Educational Outcomes (NCEO) at the University of Minnesota provide information on trends and emerging issues regarding standards-based education reform and the achievement of students with disabilities. Findings include that nearly half of the states did not disaggregate assessment results for SWD who were English language learners. Most states did report monitoring and collecting data on the participation of students on their regular assessment with accommodations through directly observing the administration of the assessment. Seventy-five percent of states reported that the validity of accommodations used in their state was examined by researching literature or completing an analysis of data. However, more than 80 percent of states reported one or more difficulty in ensuring that accommodations specified on student Individualized Education Programs (IEPs) were carried out on test day. The most frequently reported problem included arranging for trained readers, scribes, and interpreters, and ensuring that test administrators knew which students should receive specific accommodations (Altman, Lazarus, Quenemoen, Kearn, Quenemoen, & Thurlow, 2010).

Results from the previous 2010 study also include that more than 25 percent of the states had decided not to develop an alternate assessment based on modified achievement standards (AA-MAS). Representatives from many states that had developed AA-MAS reported that an existing grade-level test was changed rather than designing an entirely new test. The most frequently made changes included simplifying vocabulary, reducing the length of the test, and shortening reading

passages. Six states planned to use only multiple choice items. These approaches were similar to those listed in 2007, except that a smaller percentage of states indicated that they planned to use non-traditional items or formats. States used a variety of strategies and methods to design their AA-MAS. The most frequent approach was to keep the test specifications the same for the AA-MAS and the regular assessment. Eleven states used stakeholder panels. Few states reported that a consultant or test company provided content targets and no validity information was reported for the new AA-MAS assessments (Altman et al. 2010). Despite the call for more students taking alternate assessments based on grade-level achievement standards (AA-GLAS) (Albrecht & Joles, 2003; Destefano, Shriner, & Lloyd, 2001), or multiple measures of achievement (Deno, Fuchs, Marston, & Shin, 2001; Schute et al., 2001; Fuchs & Fuchs, 1996) no data was reported to indicate that this is happening.

In January of 2012, the National Center and State Collaborative (NCSC), including Rhode Island and 18 other states, reported at their Alternate Assessment Consortia, that the United States Department of Education Office of Special Education Programs had awarded a \$45 million grant to the NCSC to develop new alternate assessments for students with the most significant cognitive disabilities. They present an outline and timeline for their goals of producing technically defensible assessments linked to alternate achievement standards and based on the new Common Core State Standards (CCSS), incorporating evidence-based instruction, and developing professional development programs to assist educators in implementing the new online NCSC assessment delivery system. These appear to be excellent goals; however, the report focuses on improving the assessments for only students with the

most significant cognitive disabilities. No reference to improving assessment for other students with disabilities was made (NCSC, 2012).

Conclusions from Literature Review

Numerous research studies affirm that teacher expectations do, in fact, affect student learning, but few studies address expectation effects specifically on SWD or compare the expectations of general and special education teachers. Research findings in the area of the effects of teacher attitudes on teacher instructional practice for SWD indicate negative attitudes toward inclusion were found to be related to less frequent use of accommodations. However, effective teachers were found to be more accepting of SWD in their classrooms. Teacher attitude research findings indicate teachers may not be opposed to inclusion, but to poorly implemented inclusive programs and assessment systems. Further, teachers report that research-based practices are not commonly used to instruct SWD due to lack of professional development, time and resources. Teachers report they have lower expectations for SDW than for SWOD and often require lower levels of thinking of SWD. Would research-based practices increase if teachers' expectations of SWD increased? More research is needed to determine if these variables are related.

When asked about HST, research findings show 75% of general education teachers and 80% of special education teachers felt that the state tests were not a good measure achievement for SWD. Data also showed that 80% of general education teachers, and 88% of special education teachers report that state assessments do not reflect the quality of instruction (Ward et al., 2003). This is not surprising due to the

lack of validity demonstrated when using HST to assess SWD. Due to evidence in the lack of validity of assessments and suspected inequity of instruction for SWD, the fairness of decisions based on HST is questionable at best.

The most recent data collected for 40 states for the U.S. Department of Education revealed the system designed to ensure accountability for all students represents only 58% of SWD in state accountable subgroups. Schools that educated almost half of SWD failed to meet AYP. Is this due to poor instruction, invalid and unfair assessments, or are SWD unable to demonstrate their knowledge under the current system? More awareness of the option for SWD to take AA based on grade level achievement standards (AA-GLAS) may help to provide valid assessments of the achievement of SWD if proper validation in test design and administration existed. Most troubling was the finding that 80% of states report that they cannot ensure that accommodations listed on students IEPs are implemented with fidelity or at all on the day of the assessment (Altman et al., 2010). More research is needed in the area of teacher attitudes toward the ability of SWD to meet proficiency on HST and teacher attitudes toward the validity and fairness of the current assessment system. Research is also needed on the effect of teacher attitudes on teaching and assessment practices and on student achievement. This study will attempt this using the methods described in the following chapter.

CHAPTER 3

METHODOLOGY

This study employed a quantitative method using a survey instrument to examine teacher attitudes and practices and their relationship with achievement for students with disabilities. The methods of procedure and analysis used are described here.

Participants

The participants for this study were Rhode Island's (RI) general and special education middle school teachers in the public school setting. There are 52 middle schools and 3,180 teachers working in middle schools in RI (RIDE.ri.gov). In order to gain a representative sample, schools were stratified into three categories based on the percentage of students eligible for subsidized lunch as a proxy for their socioeconomic status (SES); low, middle, and high SES. Two schools from each stratum were selected. Table 1 shows the demographic information for the six schools selected. In addition to the percentage of students eligible for subsidized lunch, the percentage of students receiving special education service and percentage of students from various ethnic and racial backgrounds were also examined. Table 1 also provides information regarding if proficiency targets were met for SWD and state ratings of participating schools.

The average of the six schools in the areas of percent eligible for subsidized lunch, percent of students receiving special education service, and percent of students from minority racial/ethnic backgrounds approximate the state averages, but in each

area the achieved sample of participating schools' average is lower than the state average. This may be due to large differences in the demographics between high and middle SES schools and low SES schools, especially in the areas of subsidized lunch and minority status. Two schools were much higher than the state average in the percentage of students receiving subsidized lunch and the percentage of minority racial/ethnic background, whereas the other four schools had a lower percentage in each of these categories, making the whole sample slightly higher in SES and representing schools with fewer minorities than the state average.

Table 1. Demographic Information from Participating Schools

School	Participants	Percent of Students (2011-20012) School Year				District per pupil Expenditure (\$)	School Classification 2011-2012	Sp. Ed. Proficiency Target Met?	
		Eligible for Subsidized Lunch	Special Education Service Received	Minority Racial/Ethnic Background	AYP Status 2010-2011			Reading	Math
School 1	35	11%	16%	9%	11,090	Met AYP	Typical	YES	YES
School 2	18	14%	11%	6%	16,778	Met AYP	Typical	*	*
School 3	29	18%	11%	2%	15,102	Met AYP	Typical	NO**	NO**
School 4	63	22%	7%	9%	15,783	Met AYP	Leading	YES	YES
School 5	25	54%	16%	19%	15,711	Caution	Typical	NO	YES
School 6	48	64%	18%	55%	18,738	Met AYP	Typical	YES	NO
School Average		31%	13%	17%					
State Average	N/A	44%	16%	36%	N/A	N/A	N/A	NO	NO

* Student group has too few students for evaluation.
 ** Student group has fallen short of target due to participation rate (Below target of 95%).

Most of the participating schools were clustered around the state average (16%) in the area of percentage of students receiving special education service; with the exception of one middle SES school that was considerably lower (7%). With these differences, there is limited generalizability of the findings as the sample is not an

exact representation of the population. Response rates ranged from 32% to 75% at the participating schools. The average participation rate for all six schools is 57%. This process yielded approximately 218 teachers who participated in the survey.

Teachers participating in the survey were asked if they have students with disabilities in their classrooms. Ninety-seven percent responded that they did. When asked to identify which diagnoses of disability students in their classrooms have, 81% reported that they taught students with specific learning disabilities, 44% taught students with an intellectual disability, 25% taught students with a hearing impairment, and 17% taught students with a visual impairment. Additionally, 58% reported teaching students with speech/language impairment, 42% taught students with serious emotional disturbance, and 11% taught students with an orthopedic impairment. Also, 65% of teachers reported teaching students with autism and 34% taught students with other health impairments. Sadly, 7% of teachers reported that they were not sure which diagnosis of disability students in their class had.

Survey Instrument

The High-stakes Testing and Students with Disabilities: A Teacher Attitude Survey (HST-SWD) was designed with items including teacher demographics, teacher expectations toward SWD on HST, teacher attitudes toward the validity and fairness of assessing SWD with HST, and teacher instructional practices. In designing the actual survey, the first step was to clearly and completely define the problem or phenomenon to be investigated. Asking the right questions is of the greatest importance in collecting appropriate data that will lead to the answers that we seek.

Beginning with the basic research questions, a hierarchical approach was used. Starting with the most general questions and ending with the most specific, led to questions that are most pertinent to the study and address the basic research questions under investigation.

The survey items were based on relevant research studies (See Appendix A). For items relating to teacher attitudes, a four-point Likert scale was used with the following choices: 1. Strongly Disagree, 2. Disagree, 3. Agree, and 4. Strongly Agree. Eight items ask teacher demographic characteristics, such as content area, education, experience, and special education training. They were used to see whether teacher attitudes and practices differ based on their characteristics. Teacher expectations toward the ability of SWD to meet proficiency on HST include 5 items based on research and theory regarding teachers' attitude toward the ability of SWD (Thomas B. Fordham Institute, 2009; DeBard and Kubow, 2002; Crawford, Almond, Tindal, & Hollenbeck, 2001; Reid & Valle, 1996). Seven items were also designed to examine teachers' attitudes regarding the ability of SWD to achieve proficiency on HST through inclusive instruction (Tomlinson, 2004; Lawrence-Brown, 2004; Levy, 2008; Rock, Gregg, Ellis, & Gable, 2008; Rosenthal, 1997; McTighe & Brown, 2005).

Six items were used to investigate teacher attitudes toward fairness of using HST to assess SWD and nine items were used to examine teacher attitudes toward the validity of using HST to assess SWD (Disability Rights Advocates, 2001; AERA, 2000; Fuchs & Fuchs, 1993; Fuchs, Fuchs, Eaton, Hamlett, Karns, 2000; Kettler, Niebling, Mroch, Feldman, Newell, Elliot, Kratochwill, & Bolt, 2005; Fletcher, Francis, Boudousquie, Copeland, Young, Kalinowski, & Vaughn, 2006). Finally,

seventeen items were designed to assess the frequency of teacher use of evidence-based practice. A four-point continuous response scale was used with the following choices: 1. Daily, 2. 1-2 times a week, 3. 1-2 times a month, and 4. Never. Items were phrased positively and negatively to attempt to control for response bias. However, the items were coded so that higher scores indicate more positive teacher attitudes toward the ability of SWD to achieve and more frequent use of evidence-based practice.

For construct validity, the entire survey was reviewed by a panel of experts that consisted of university researchers in special education and methodology. A focus group of special education and general education teachers was also used to determine if any of the questions were ambiguous and to ensure that the format was clear. A pilot study was used to collect data on the effectiveness of the survey and the time necessary to complete the survey. The data were also analyzed for reliability and validity of the survey instrument. Thirty-one teachers participated in the pilot study. Based on focus group discussion and pilot study, survey item revisions were made to facilitate participant understanding. See Appendix B for the final survey instrument. Group achievement data disaggregated by SWD was also collected from the InfoWorks LIVE! A Rhode Island Education Data Initiative (Infoworks.ride.ri.gov, 2012).

Procedure

The High-Stakes Testing and Students with Disabilities: A Teacher Attitude Survey (HST-SWD) was distributed to general and special education teachers at the

selected schools at a predetermined time when staff was meeting. The purpose of the survey was explained and teachers were told that participation was completely confidential and voluntary. The Informed Consent for Anonymous Research Form used is located in Appendix C, and the Letter of Authorization for principal consent is located in Appendix D. A raffle for one \$25 gift card to Lakeshore Learning at each school was used as incentive for participation. Data was also collected on the test scores of the special education population within each school in the areas of reading, math, and science from the InfoWorks LIVE! A Rhode Island Education Data Initiative (Infoworks.ride.ri.gov, 2012).

The following research questions were examined:

- 1) To what extent do teachers believe that students with disabilities have the ability to meet proficiency on high-stakes assessments?
- 2) To what extent do teachers believe that high-stakes tests are a fair opportunity for SWD to show achievement?
- 3) To what extent do teachers believe that high-stakes tests yield valid achievement ratings of SWD?
- 4) Are there any differences in expectations between general education teachers and special education teachers regarding the ability of SWD to meet proficiency on HST?
- 5) What is the relationship between teacher attitudes and teacher practices? Does the relationship vary by teacher training and experience?
- 6) What is the relationship between teacher attitudes, teacher practices, and the achievement of SWD? Does it vary by content domain?

Data Processing Procedures and Procedures of Data Analysis

For research questions 1-3, descriptive statistics were used to collect information regarding teacher attitudes toward SWD's ability to meet proficiency on HST and their beliefs regarding the validity and fairness of such assessments. For research questions 4-6, inferential statistical methods were used to draw conclusions about teacher attitudes and practices, and student achievement based on information collected from the sample and published percentages of SWD meeting proficiency.

Reliability was examined using Chronbach's alpha on the full instrument ($\alpha = .770$) and for all items used for the analysis and creation of the teacher attitude and practice scales ($\alpha = .806$). The few cases of missing data were not replaced, as the intent was to keep the results as accurate to the self-reported attitudes and practices of the teachers as possible. Some outliers were present, but they were not seen to significantly affect the data or results.

In addition, since items were categorized by theoretical framework, an Exploratory Factor Analysis (EFA) was conducted to examine validity and determine whether survey items empirically represent distinctive constructs. Principle Component Analysis with Varimax rotation was employed. Other rotation methods were used and all yielded similar results, indicating that the factor structure was strong and consistent. Factor structures with different numbers of factors were examined and a four-factor structure presented the most appropriate model both conceptually and empirically.

The quality of measurement increases if data collected from items measuring the same construct are merged together as one indicator of the construct (Shim, Felner, Shim, & Brand, 2000). Therefore, scales were created using multiple items that loaded together to represent each construct under investigation. The four factors were converted into the following scales: teacher use of evidence based practice (Factor 1), teachers' attitudes toward fairness and validity of assessing SWD using HST (Factor 2), teachers' attitudes toward the ability of SWD to meet proficiency on HST (Factor 3), and teachers' attitudes toward the ability of SWD to benefit from inclusive instruction (Factor 4). See Table 2, 3 and 4 for factor loadings. Fairness and validity were previously considered separate constructs, but the items were so closely related through factor analysis that the decision was made to merge the two. The items designed to measure teacher attitude toward ability emerged as the two separate factors measuring teachers' attitude toward the ability of SWD to meet proficiency and the ability of SWD to benefit from inclusive instruction, as mentioned above. Some items were dropped due to multiple loadings or to improve the reliability of the scale.

Additional EFA and further examination of the component plots resulted in splitting one of the factors into two scales. This process yielded 5 scales to be used to analyze the data to obtain valid and reliable results. The scales used and the reliability of each scale are listed in Table 5. The teacher attitude scales were designed from the coded items, where higher scores indicate more positive attitudes toward the ability of SWD to achieve, and the teacher practice scales were designed so higher scores indicate more frequent use of evidence-based practice.

Table 2. Factor Loadings of Teacher Use of Evidence-Based Practice

Scale	Item	Factor 1 Loadings	Average Loading on Other Factors
Teacher Use of Evidence-based Practice			
I use resources to devise lesson accommodations appropriate for students with disabilities.	32	0.744	-0.024
Each individual student is provided with different modes of instruction based on his or her needs.	35	0.732	0.036
I give students with disabilities meaningful feedback regarding their performance.	33	0.697	0.036
I adjust the content of lessons to accommodate individual differences.	39	0.677	-0.004
I adjust the pace of instruction to accommodate individual differences.	40	0.64	-0.013
I plan lessons based on IEP goals.	28	0.627	-0.039
I provide extra support to students with disabilities so they can move toward proficiency.	44	0.609	0.049
I look for resources on evidenced based practices for students with disabilities.	31	0.607	0.01
I connect the content students with disabilities are learning to their real-life experiences.	42	0.601	0.082
I give students with disabilities meaningful feedback regarding their behavior.	34	0.594	-0.01
I teach lessons that make students with disabilities feel respected and valued as learners.	43	0.557	0.135
I involve students with disabilities in hands on learning activities, such as using manipulatives in math.	30	0.503	-0.044
I challenge students with disabilities to perform slightly above what they can demonstrate independently.	41	0.398	0.052
Average Loading		0.614	0.02

As mentioned previously, factor 3, teachers' attitudes toward the ability of SWD to meet proficiency on HST, was divided into 2 scales using items 1 and 2 and items 3 and 4. The decision to use two subscales was made both conceptually (two different aspects of teacher attitudes) and empirically (improved reliability). See Table 6.

Table 3. Factor Loadings of Teachers' Attitudes toward the Fairness and Validity of Assessing SWD Using HST

Scale	Item	Factor 2 Loadings	Average Loading on Other Factors
Teacher Attitudes toward the Fairness and Validity of Assessing SWD using HST			
Using accommodations allows for a more accurate assessment by removing the extraneous variables, the manifestations of the disability, while allowing the construct being assessed to remain unaltered.	18	0.697	0.006
Decisions based on high-stakes testing, such as high school graduation and promotion are fair to students with disabilities.	10	0.659	-0.002
When accommodations are used, effects on testing caused by the characteristics of the disability are eliminated.	17	0.623	0.076
Accommodations are designed to eliminate the effect of the disability on the skills and concepts being tested the assessments.	15	0.615	-0.022
Accommodations or accommodation packages chosen for students with disabilities to use when taking high-stakes testing are individualized (Ex. Reading test questions to a students with decoding difficulties).	14	0.578	-0.038
There is sufficient time for students with disabilities to develop a deep understanding of the concepts covered in the tests.	24	0.567	0.14
Scores generated through high-stakes testing are a valid assessment of the achievement of students with disabilities.	12	0.562	0.059
More students should be given the opportunity to show achievement through multiple measures (RtI Assessments, District wide Assessments, and Major Course Assessments.	7	0.404	-0.08
All accommodations listed in students IEPs are fully defined and implemented with careful precision.	16	0.394	0.001
Average Loading		0.567	0.016

Open ended questions were included in the pilot survey to probe for deeper insight into teachers attitudes toward the ability of SWD to meet proficiency on HST (question 5), teacher attitudes toward using HST to make decisions that affect the education of SWD (question 11), and teacher attitudes toward the validity of using

HST to measure the achievement of SWD (question 20). These questions were changed to a “check all that apply” format based on most frequent responses to the pilot survey items, with an option for “Other, please explain.” for the final survey to encourage responses, as some participants did not respond to the open ended questions in the pilot survey. These questions were used to help interpret the results and findings of the study.

Table 4. Factor Loadings of Teachers' Attitudes toward the Ability of SWD

Scale	Item	Factor 3 Loadings	Average Loading on Other Factors
Teachers' Attitudes toward the Ability of SWD to Meet Proficiency on HST			
Students with disabilities are capable of constructing big ideas in areas of subject content through problem solving.	3	0.711	-0.035
Students with disabilities are able to achieve higher level thinking.	4	0.658	-0.006
Given adequate exposure to standards (skills and concepts) being assessed, students with disabilities can meet proficiency levels on high-stakes assessments.	1	0.625	0.073
High-stakes assessments such as the NECAP are too difficult for students with disabilities.	2	0.597	0.14
Teachers' Attitudes toward the Ability of SWD to Benefit from Inclusive Instruction			
Students with disabilities are able to benefit from my instruction as much as students without disabilities.	27	0.623	0.082
In my school, students with disabilities are engaged by the learning environment, not threatened or ignored by it.	25	0.53	0.052
Students with disabilities are able to understand core concepts.	22	0.524	0.068
Students with disabilities should be educated in the general education setting to the greatest degree possible.	21	0.486	0.02
I have the resources (Ex: time, materials, and professional development) to plan my lessons to address the needs of students with disabilities.	26	0.466	0.221
Average loading		0.526	0.089

Table 5. Reliability of Scales Used in Analysis

Scales	Reliability (Chronbach's Alpha)	Number of Items
Teachers' Attitudes toward the Ability of SWD to Meet Proficiency on HST	0.649	2
Teachers' Attitudes toward the Ability of SWD to Learn and Achieve Higher Level Thinking	0.789	2
Teachers' Attitudes toward the Ability of SWD to Benefit from Inclusive Instruction	0.621	5
Teachers' Attitudes toward the Fairness and Validity of Using HST to Assess the Achievement of SWD	0.773	9
Teacher use of Evidence-based Practice	0.855	13

Table 6. Additional Factor Loadings of Teacher Attitudes toward the Ability of SWD Using 2 Scales for Items 1-4

Scale	Item	Factor 1 Loadings	Factor 2 Loadings
Teacher Attitude toward Ability of SWD to Meet Proficiency on HST			
High-stakes assessments such as the NECAP are too difficult for students with disabilities.	2	0.891	0.044
Given adequate exposure to standards (skills and concepts) being assessed, students with disabilities can meet proficiency levels on high-stakes assessments.	1	0.799	0.277
Teacher attitude toward the Ability of SWD to learn and Achieve Higher Level Thinking			
Students with disabilities are able to achieve higher level thinking.	4	0.093	0.91
Students with disabilities are capable of constructing big ideas in areas of subject content through problem solving.	3	0.219	0.874

The scales based on factor analysis and reliability analysis were used in answering questions 4-6. Question 4 was analyzed using the Multivariate Analysis of Covariance (MANCOVA). Teacher expectation scales were used as dependent

variables. When the multiple dependent variables are intercorrelated, it is recommended to use MANCOVA instead of multiple ANCOVAs to reduce the type 1 error rates (Dillon & Goldstein, 1984). Teaching classification- general or special education was the independent variable of interest for question 4. In addition, teaching experience is used as a covariate here. Using 4 levels- 1-3 years, 4-6 years, 7-10 years, and 10 or more will allow for the influence of teaching experience to be controlled. This test was used to factor off the effect of teaching experience when investigating the effect of teacher classification on teacher expectations. Attitude scores were derived from items that loaded under the same factor and interpreted to define the constructs.

Question 5 was analyzed using Multiple Regression (MR) in examining the relationship between attitudes and practices. Teacher use of evidence-based practices was the dependent variable. Four teacher attitude scales along with teacher classification and special education training were used as predictors. Multiple Regression was used to cover both continuous and categorical independent variables. This method was used to show whether teacher attitudes are enacted in their practices and whether training and teaching role influence practices. Again, attitude and as well as practice scores were derived from items that loaded under the respective factors and interpreted to define the investigated constructs.

To examine question 6, achievement data collected from the InfoworksRI website disaggregated by special education designation was collected. Achievement scores of SWD were used as the dependent variable and predictor variables were teachers' attitudes, and teachers' practices. A Multiple Regression was used to

determine whether attitudes and practices predict student achievement. Analyses of Variance (ANOVA) were used to determine if differences exist in the means of the teacher attitude scales and teacher practice scale between teachers of different content areas.

Before any statistical procedure was applied, the model assumptions were examined. The results of the analyses described here are reported in Chapter 4 and discussed in Chapter 5.

CHAPTER 4

FINDINGS AND ANALYSIS

The results of this study are derived from the survey responses of 218 middle school teachers, 34 of which were special education teachers. Prior to conducting analyses, data were screened for model assumptions. The results and analysis of each of the research questions will be presented here.

Teachers' Attitudes' towards the Ability of Students with Disabilities and High-stakes Testing

Table 7 shows the frequency of responses for nine items regarding teacher attitudes toward the ability of students with disabilities to show achievement. Two items address teacher attitudes toward the ability of SWD to meet proficiency on HST. More than half of teachers surveyed (53.9%) responded that they do not believe SWD can meet proficiency on HST, given adequate exposure to standards. Forty-two percent agreed that SWD can meet proficiency on HST and only 3.7% strongly agreed with the statement. When given the statement, "High-stakes assessment, such as the New England Common Assessment Program (NECAP) are too difficult for students with disabilities", approximately two-thirds of the teachers reported that HST are too difficult for SWD, whereas the remaining one-third believed that HST were not too difficult for SWD.

Table 7. Frequency of Responses of Teacher Attitudes toward the Ability of SWD

Ability of SWD Teacher Attitude (%)	Responses			
	Strongly Disagree	Disagree	Agree	Strongly Agree
Teachers' Attitudes toward the Ability of SWD to Meet Proficiency on HST				
Given adequate exposure to standards (skills and concepts) being assessed, students with disabilities can meet proficiency levels on high-stakes tests.	7.4	46.5	42.3	3.7
High-stakes assessments, such as the NECAP, are too difficult for students with disabilities.	2.9	30	56.7	10.5
Teachers' Attitude Toward the Ability of SWD to Learn and Achieve Higher level Thinking				
Students with disabilities are capable of constructing big ideas of subject content through problem solving.	1.9	21	66.8	10.3
Students with disabilities are able to achieve higher level thinking.	1.4	13.2	72.2	13.2
Teachers' Attitudes toward the Ability of SWD to Benefit from Inclusive Instruction				
Students with disabilities are able to benefit from my instruction as much as students without disabilities.	2.9	19.1	64.6	13.4
In my school, students with disabilities are engaged by the learning environment, not threatened or ignored by it.	1.4	11.8	73.9	12.8
Students with disabilities are able to understand core concepts.	1	14.1	73.3	11.7
Students with disabilities should be in the general education setting to the greatest degree possible.	0.9	13.6	60.6	24.9
I have the resources (Ex: time, materials, and professional development) to plan my lessons to address the needs of SWD.	22.2	43.9	29.7	4.2

However, when presented with the statement, “Students with disabilities are capable of constructing big ideas of subject content through problem solving”, 66.8% of teachers agreed and 10.3% strongly agreed. This means that almost a quarter of teachers reported that SWD are not capable of big ideas through problem solving. Similarly, about 85% of teachers agreed or strongly agreed that SWD are able to

achieve higher level thinking. Therefore, teachers' responses indicated that most teachers do believe that SWD are capable of learning subject content and using higher level thinking skills, but most do not believe that SWD are capable of showing proficiency on the HST. These responses may seem to contradict the first reported, but the responses reflect that the most teachers do think SWD are capable of learning and achieving higher level thinking, but there is something about the test that is making it difficult for SWD to show proficiency.

In order to probe further into teacher attitudes regarding the ability of SWD, five items relating to teacher attitudes toward the ability of SWD to benefit from inclusive instruction were also examined. Seventy-eight percent of teachers agreed that SWD are able to benefit from their instruction as much as students without disabilities (SWOD). It is encouraging that approximately equal numbers of teachers reported that they believe "students with disabilities are engaged by the learning environment, not threatened or ignored by it", "students with disabilities are able to understand core concepts" and "students with disabilities should be in the general education setting to the greatest degree possible" (85 to 87%). The strongest agreement was reached among teachers that, SWD should be in the general education setting to the greatest degree possible, as almost 25% strongly agree. Still about 15% report that they disagreed with placing SWD in the general education setting whenever possible. An astounding two-thirds of teachers reported that they feel that they don't have the resources (Ex: time, materials, and professional development) to plan their lessons to address the needs of students with disabilities, whereas only one-third responded that they do have the resources to meet the needs of SWD. Teacher responses seem to

indicate that the majority of teachers do believe that SWD can benefit from inclusive instruction and should be included in general education classes whenever possible, however, more than 66% of teachers reported that they don't have the resources to meet the needs of SWD.

The data seem to indicate that most teachers have high expectations for student learning, but low expectations for meeting proficiency on HST. Further, most teachers responded that SWD can benefit from inclusive instruction, but many reported they do not have the resources to meet the needs of SWD in their classrooms. When asked why many SWD do not meet the level of proficiency on HST, many teachers responded that HST don't allow SWD to demonstrate their knowledge. Another common response to this open ended question was that modifications that are used in the classroom are not allowed on the state assessments. Out of 192 teachers 93 (48%) did respond to a check list item indicating that the reason many SWD do not meet proficiency on HST is due to limitations in the students' ability.

Teachers' Attitudes towards the Fairness and Validity of Assessing SWD using HST

Items on teacher attitudes toward the validity and fairness of HST were initially considered two separate constructs, as recommended by the American Educational Research Association, American Psychological Association, & National Council on Measurement in Education (1999). However, the decision was made to combine them together based on the results from EFA and reliability analyses along with the conceptual consideration that the fairness of an assessment often includes validity (Katsiyannis et al., 2007). In other words, if using HST to measure the

achievement of SWD was not a valid measure; the decisions made using HST results are not fair to SWD. Table 8 shows the frequency of responses of nine survey items on teacher attitudes toward the fairness and validity of using HST to assess the achievement of SWD.

Table 8. Frequency of Responses of Teacher Attitudes toward the Fairness and Validity of Using HST to Assess SWD

Fairness and Validity Teacher Attitude (%)	Responses			
	Strongly Disagree	Disagree	Agree	Strongly Agree
Teachers' Attitudes toward the Fairness and Validity of Assessing SWD using HST				
Decisions based on high-stakes testing, such as high school graduation and promotion, are fair for SWD.	33.3	53.8	12.4	0.5
There is sufficient time for students with disabilities to develop a deep understanding of the concepts covered on the assessments.	21.9	63.3	13.8	1
More students should be given the opportunity to show achievement through multiple measures (Ex: RtI Assessments, District wide Assessments, and Major Course Assessments).	0.5	2.8	53.2	43.5
Scores generated through high-stakes testing are a valid assessment of the achievement of students with disabilities.	24.9	65.3	9.4	0.5
Accommodations or accommodation packages chosen for students with disabilities to use when taking high-stakes testing are individualized (Ex: Reading test questions to a students with decoding difficulties).	8.7	46.2	41.8	3.4
Accommodations are designed to eliminate the effect of the disability on the skills and concepts being tested on the assessments.	9.6	46.4	43.1	1
All accommodations listed in students IEPs are fully defined and implemented with careful precision.	12	41.6	42.1	4.3
When accommodations are used, effects on testing caused by the characteristics of the disability are eliminated.	17.8	62.5	19.2	0.5
Using accommodations allows for a more accurate assessment by removing any characteristics of the disability from interfering with testing, while allowing the construct being assessed to remain unaltered.	11.3	38.7	47.5	2.5

Teachers' reports indicated that they strongly believe that more students should be given the opportunity to show achievement through multiple measures (97% agreed). In addition, approximately 90% of the teachers reported that they believe that high-stakes testing is not a valid assessment for SWD and the decisions based on HST are not fair for SWD. The majority of teachers (85%) also reported that they believe SWD are not given adequate time to sufficiently learn the material. These were the most prevailing beliefs among teachers. This is a powerful statement that so many teachers believe that decisions based on HST are not valid or fair for SWD.

The majority of teachers (54.9%) reported that they did not think that accommodations chosen for SWD to use when taking HST were individualized or were designed to eliminate the effect of the disability on the skills and concepts being tested on the assessments. More teachers (53.6%) also reported that they disagree that all accommodations listed in the students IEPs are fully defined and implemented. Four out of five (80%) teachers either disagree or strongly disagree that accommodations can eliminate the effects caused by the disability on testing. Teachers responses were split on the item stating, "Using accommodations allows for a more accurate assessment by removing any characteristic of the disability from interfering with testing, while allowing the construct being assessed to remain unaltered." These results show that teachers in general do not think that accommodations can eliminate the effects of a disability on high-stakes test results and construct irrelevant variables may be interfering with the accurate assessment of SWD. However, half of the teachers did report that accommodations did allow for more accurate assessment, possibly as opposed to using no accommodations at all.

Teachers' responses to the open ended questions and checklists are aligned with their responses to the previous results. When teachers indicated that decisions based on HST are not fair, they were asked to indicate why. Teachers responses indicated that 28.8% (53/184) SWD lack exposure to tested concepts, and 39.7% (73/184) reported instruction is not differentiated for SWDs needs. Additionally, 65.9% (122/185) reported that they believe that alternate assessment is not offered to all who need it, and 84.4% (162/192) believed more SWD need to show achievement through multiple measures.

If teachers reported that they did not think HST is a valid measure of the achievement of SWD, they were also asked to indicate why. Teacher responses indicate that 55% (94/170) believed that assessments should be individualized, 61.4% (108/176) reported that accommodations are not effective for SWD, 50.6% (87/172) indicated that assessments are too heavily based on reading, and 50.6% (86/170) believed that adequate accommodations are not provided.

In summary, the majority of teachers reported that they believe HST is not a valid measure of the achievement of SWD. Although teachers were split on whether using accommodations allows for more accurate assessment, the majority of teachers report that believe that accommodations are not individualized or designed to eliminate the effect of the disability on the skills and concepts being assessed. Further, most teachers report that they believe that using accommodations does not eliminate the effect of the students' disabilities on achievement scores. A majority of teachers' responses also indicated that the accommodations listed on the IEPs of SWD are not fully defined and implemented during the assessments. For these reasons, and

due to the widely held teacher belief that HST is not a valid measure of the achievement of SWD, teachers also believed that HST do not give SWD a fair opportunity to show achievement. Therefore, most teachers reported that decisions based on HST are neither valid nor fair to SWD.

Differences in Expectations between General and Special Educators

Question 4 was designed to investigate if there are any differences in expectations between general education teachers and special education teachers regarding the ability of SWD to meet proficiency on HST. A Multivariate Analysis of Covariance (MANCOVA) was used to analyze the data collected from 178 general education teachers and 32 special education teachers using the teacher attitude survey. The four teacher attitude scales: 1) teachers' attitudes toward the ability of SWD to meet proficiency on HST, 2) teachers' attitudes toward the ability of SWD to learn and achieve higher level thinking, 3) teachers' attitudes toward the ability of SWD to benefit from inclusive instruction, and 4) teachers' attitudes toward the fairness and validity of assessing SWD with HST were used as the dependent variables. Due to the intercorrelation among these variables, a MANCOVA was used instead of a separate ANCOVA for each variable, as separate tests may not give the most accurate picture of the data. Also, when separate tests are performed, the chance that one or more of the findings may be due to chance increases. Teaching classification: general education or special education teacher was the independent variable of interest. Teaching experience was used as a covariate to control for the effect of teaching experience when investigating the effect of teacher classification on teacher expectations. Before applying this statistical procedure, model assumptions were

addressed. Normality was checked visually through histograms of the teacher attitude scales. Box's Test of Equity of Covariance Matrices was used to determine if the covariance matrices for the dependent variables were significantly different. The statistic, $F(10, 13373.717) = 0.449, p > .05$ indicates the equality of covariance matrices assumption was met. Levine's Test of Equality of Error Variances was used to examine the assumption that the variance of each dependent variable is the same as the variance of all other dependent variables. This assumption was also satisfied on the scales: teacher attitude toward the ability of SWD to meet proficiency on HST, $F(1, 208) = 1.962, p > .05$; teachers' attitudes toward the ability of SWD to learn and achieve higher level thinking, $F(1, 208) = 1.166, p > .05$; teachers' attitudes toward the ability of SWD to benefit from inclusive instruction, $F(1, 208) = .194, p > .05$; and teachers' attitudes toward the fairness and validity of assessing SWD with HST, $F(1, 208) = .284, p > .05$.

Results indicated a statistically significant difference in the multivariate combination of the subscale scores based on teaching classification, $F(4, 204) = 3.617, p < .01$. Therefore, there are significant differences in attitudes between general education teachers and special education teachers regarding the ability of SWD and the fairness and validity of using HST to assess the achievement of SWD. In order to see where the significant differences are among four dependent variables, univariate multiple comparisons were examined. Results of the univariate tests of separate attitude scales indicated a significant difference exists between the expectations of general and special education teachers in the area of teacher attitude toward the ability of SWD to benefit from inclusive instruction $F(1, 207) = 10.247, p < 0.01$. This shows

that special education teachers had significantly more positive attitudes toward the ability of SWD to benefit from inclusive instruction than general education teachers. Univariate tests did not reveal significant differences between general and special education teachers for attitude toward the ability of SWD to meet proficiency on HST, the ability of SWD to learn and use higher level thinking skills, or teachers' attitudes toward the fairness and validity of assessing SWD with HST, although general education teachers showed higher means on these scales. Table 9 shows the means and standard deviations of the responses of general and special education teachers for the attitude scales. Corresponding F statistics, and effect size (η^2) are also included. Teaching experience was not a significant covariate. That is teaching experience was not significantly related to teacher expectation.

The specific differences between general and special education teachers regarding their attitudes toward the ability of SWD to benefit from inclusive instruction was further investigated by examining the items within the scale. The MANCOVA was repeated using the items within the teacher attitude scale as dependent variables, teacher classification was again used as the independent variable and the covariate of interest remained teaching experience. Results indicated a statistically significant difference in the multivariate combination of the item scores based on teaching classification, $F(5, 191) = 3.978, p < .01$. Results of the univariate tests of separate attitude items indicated a significant difference exists between the attitudes of general and special education teachers in the following areas: SWD are able to benefit from instruction as much as SWOD, $F(1, 195) = 5.405, p < .05$; SWD should be included in the general education setting to the greatest degree possible, $F(1, 195) = 11.143, p <$

.01; and I have the resources (Ex: time, materials, and professional development) to plan my lessons to address the needs of SWD, $F(1, 195) = 7.282$, $p < .01$. Therefore, teachers' responses indicated that special education teachers have more positive attitudes toward the ability of SWD to benefit from instruction as much as SWOD and more positive attitudes toward including SWD in general education whenever possible. General education teachers had less positive attitudes toward having the resources to plan lessons to address the needs of SWD. Table 10 includes statistics for the Teacher Attitude Items. Responses show that both general and special education teachers held similar attitudes towards SWD being "able to understand core concepts" and being "engaged by the learning environment".

Table 9. MANOVA for Teacher Attitude Scales

Teacher Attitudes Scales	Gen. Ed.		Sp. Ed		F(1,207)	η^2
	M	SD	M	SD		
SWD able to meet proficiency on HST	2.34	.605	2.33	.485	.008	.000
SWD able to learn and achieve higher level thinking	2.92	.533	2.81	.550	.640	.003
SWD able to benefit from inclusive instruction	2.77	.420	3.03	.380	10.247**	.047
Fairness and validity of assessing SWD with HST	2.10	.398	2.05	.340	.464	.002

Note. ** $p < .01$ 1 'Strongly Disagree' 2 'Disagree' 3 'Agree' 4 'Strongly Agree'

Table 10. MANOVA for Teacher Attitude Items

Teacher Attitudes Items	Gen. Ed.		Sp. Ed		F(1,195)	η^2
	M	SD	M	SD		
SWD able to benefit from instruction as much as SWOD	2.86	.652	3.16	.523	5.405*	.027
SWD included in the gen. education setting when possible	3.02	.640	3.45	.675	11.143**	.054
Has the resources to plan lessons to address needs of SWD	2.14	.783	2.55	.888	7.282**	.036
SWD able to understand core concepts	2.95	.506	3.10	.651	2.094	.011
SWD are engaged by the learning environment	2.99	.509	2.94	.727	.268	.001

Note. * $p < .05$ ** $p < .01$ 1 'Strongly Disagree' 2 'Disagree' 3 'Agree' 4 'Strongly Agree'

Is there a Relationship between Teacher Attitudes and Practices?

Question 5 was designed to investigate the relationship between teacher attitudes and teacher practices and to examine if the relationship varies by teacher

training and experience. Multiple Regression (MR) was used to examine the responses of 209 teachers and the relationship between teacher attitudes and practices. The teacher practice scale was used as the dependent variable. The four teacher attitude scales, amount of special education training, and teacher classification were the independent variables. MR was chosen because independent variables are both continuous and categorical. Attitude and practice scores were derived from items that loaded under the respective factors and interpreted to define the constructs under investigation. Higher scores on the attitude and practice scales indicate more positive attitudes toward the ability of SWD to achieve and more frequent use of evidence-based practice. To satisfy the regression model assumptions, visual inspection of the histogram representing the teacher practice scale located in Appendix E and the Normal P-Plot of Regression Residual were used to determine normality of the response variable. All skewness and kurtosis measures for all scales used were between +1 and -1, with the exception of a slight positive kurtosis (1.469) indicating a slightly more peaked shape than the normal distribution for teacher attitudes toward SWD capable of learning and achieving higher level thinking (See Appendix E). Also, observations of the response variable are independent of one another.

The Enter method was used to force entry of all variables into the regression equation, allowing information to be gathered on all predictor variables, as sometimes non-significant variables are still interesting. Using this method produced one model showing three variables as significant predictors of the frequency of use of evidence-based practice (teacher classification, teachers' attitudes toward the ability of SWD to benefit from inclusive instruction, and amount of special education training), $F(6, 202)$

= 7.190, $p < .01$. This model shows that 17.6% of the variance in teacher use of evidence-based practice is explained by the predictor variables. The analysis shows that special education teachers reported using evidence-based practice more frequently than general education teachers. This is not surprising, as special education teachers are required to have extensive pre-service training in special education methods and interventions that have been proven successful. What is more interesting here is that teachers who reported having a more positive attitude toward the ability of SWD to benefit from inclusion and teachers who report having had more special education training both use evidence-based practice more often over and beyond the effect of being general or special education teachers. In other words, general education teachers who have more special education training and/or more positive attitudes towards inclusive instruction reported using evidence-based practices more frequently than those with less training. Table 11 provides a summary of the Multiple Regression Analysis for variables predicting the frequency of teacher use of evidence based practices. General education teachers' mean score on the teacher practice scale of 3.31 shows that they use evidence-based practices somewhere between 1-2 times a week (3) and daily (4). Special education teachers' mean score of 3.78 indicates that they use evidence-based practices significantly more closely to daily (4). The range of reported scores is also interesting, as the general education teachers scores ranged from 1.67 (between never and 1-2 times a month) to 4 (daily) and the special education teachers scores ranged from 3.17 (between 1-2 times a week and daily) to 4 (daily).

Table 11. Summary of Multiple Regression Analysis for Variables Predicting Frequency of Use of Evidence-Based Practice

Variable	B	SE B	β
SWD able to meet proficiency on HST	-.033	.058	-.040
SWD able to learn and achieve higher level thinking	.056	.063	.063
SWD able to benefit from inclusive instruction	.201	.077	.177**
Fairness and validity of assessing SWD with HST	-.028	.084	-.023
Teacher classification (Special Ed.)	.277	.107	.210**
Amount of Special Education Training	.051	.023	.178*

Note. * $p < .05$ ** $p = .01$ R Square = .176

Note. Teacher Practice Responses were coded 1 'Never' 2 '1-2 times a month' 3 '1-2 times a week' and 4 'daily'

The Relationship between Teacher Attitudes and Practices and Achievement of SWD

Question 6 was designed to examine the relationship between teacher attitudes and practices and the achievement of SWD and to investigate if the results vary by content domain. Group achievement data from the InfoworksRI website (Infoworks.ride.ri.gov, 2012) disaggregated by special education status was collected in the areas of reading, math and science. The percent of SWD meeting proficiency in each subject area was used as the dependent variable. NECAP proficiency scores of SWD were attached to teachers by subject and grade level. If teachers taught multiple tested content areas, they were not included in the analysis. Responses from sixty teachers were used in the analysis (32 reading, 21 math, and 7 science). The predictor variables used in the analysis were the four teacher attitude scales, and the teacher practice scale. A Multiple Regression was used to determine whether teacher attitudes and/or practices predict student achievement. Again, to satisfy the regression model assumptions, visual inspection of the histogram representing the teacher practice scale and the Normal P-Plot of Regression Residual were used to determine normality of the

response variable. Table 12 provides summary of the Multiple Regression Analysis for variables predicting the proficiency of SWD on HST.

One model was produced using the Enter method with results showing that teachers' attitudes toward the ability of SWD to learn and achieve higher level thinking did predict NECAP achievement scores, $F(5, 54) = 1.386, p < .05$. This model shows 11.4% of the variance in the percentage of SWD meeting proficiency is explained by the predictor variable teacher attitude. Table 12 provides a summary of the teacher attitude and teacher practice scales as predictors of the proficiency of SWD on NECAP scores. This test shows that higher percentage of proficient achievement scores of SWD was significantly related to more positive teacher attitude reports. The other three teacher attitude scales and the evidence-based practice scale were not shown to be significant predictors of proficient achievement scores of SWD.

Table 12. Summary of Multiple Regression Analysis for Teacher Attitude and Practice Variables Predicting Proficiency of SWD on the New England Common Assessment Program (NECAP)

Variable	B	SE B	β
Teacher use of evidence-based practice	5.807	4.724	-.166
SWD able to meet proficiency on HST	-1.657	4.308	-.055
SWD able to learn and achieve higher level thinking	7.981	3.934	.278*
SWD able to benefit from inclusive instruction	2.534	5.274	.065
Fairness and validity of assessing SWD with HST	.262	6.365	.005

Note. * $p < .05$ R Square = .114

In order to determine if teacher attitudes and practices differ significantly by content domain, One-Way Analyses of Variance (ANOVA) were conducted using the four teacher attitude scales and teacher use of evidence-based practice scale as the dependent variables and the subject taught was used as the independent variable.

Three levels of the factor, subject taught were used, reading, math, and science, to align with the previous analysis. Seventy-seven teachers were identified as teaching only reading, math, or science, which is more than the sixty that could be attached to NECAP scores. The seventy–seven were used to gain more information about teachers of these subjects. The first ANOVA conducted showed that there were significant differences between groups in the reports of teacher attitude toward the ability of SWD to learn and achieve higher level thinking ($p < .05$), which was found to predict achievement scores in the previous analysis. See table 13 for descriptive and table 14 for the ANOVA results. There were also significant differences between content area teachers in the reported use of evidence-based practices at the $p < .05$ level. Table 15 provides descriptive information and table 16 shows the ANOVA results for teacher use of evidence-based practice by content domain.

Table 13. Descriptives of Teacher Attitude toward the Ability of SWD to Learn and Achieve Higher Level Thinking by Content Domain

Descriptives

Mean Teacher Attitude SWD capable of learning and higher level thinking

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Reading	40	3.1500	.63246	.10000	2.9477	3.3523	1.00	4.00
Math	21	2.7857	.48917	.10675	2.5630	3.0084	1.50	3.50
Science	16	2.8438	.43661	.10915	2.6111	3.0764	2.50	4.00
Total	77	2.9870	.57910	.06599	2.8556	3.1185	1.00	4.00

Note. Teacher Attitude Responses were coded 1 ‘Strongly Disagree’ 2 ‘Disagree’ 3 ‘Agree’ 4 ‘Strongly Agree’

Table 14. ANOVA for Teacher Attitude toward the Ability of SWD to Learn and Achieve Higher Level Thinking by Content Domain

ANOVA

Mean Teacher Attitude SWD capable of learning and higher level thinking

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.242	2	1.121	3.569	.033
Within Groups	23.245	74	.314		
Total	25.487	76			

Multiple comparisons using the Least Significant Difference (LSD) were employed to see which content area groups means differed significantly. These tests indicate that the means of reading and math teachers differ significantly in the area of teachers' attitudes toward the ability of SWD to learn and achieve higher level thinking ($p < .05$). The Tukey (HSD-Honestly Significant Difference) method of multiple comparisons did confirm these results. Reading teachers reported a significantly more positive attitude toward the ability of SWD to learn and achieve higher level thinking than math teachers. Multiple comparisons using the LSD method also indicated that there were significant differences between both reading and math and reading and science in teachers' use of evidence-based practice ($p < .05$). Higher means in the content area of reading indicate that reading teachers report that they use evidence-based practice more than either math or science teachers. The Tukey (HSD) method of multiple comparisons confirmed significant differences between reading and math teachers' use of evidence-based practice, but did not show a significant difference between reading and science teachers' use of evidence-based practice.

Table 15. Descriptives of Teacher Use of Evidence-based Practices by Content

Domain

Descriptives

Mean teacher practice scale

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Reading	41	3.4898	.39833	.06221	3.3640	3.6155	2.45	4.00
Math	22	3.1687	.49948	.10649	2.9473	3.3902	2.17	4.00
Science	16	3.1965	.44628	.11157	2.9587	3.4343	2.17	4.00
Total	79	3.3410	.45948	.05170	3.2380	3.4439	2.17	4.00

Note. Teacher Practice Responses were coded 1 'Never' 2 '1-2 times a month' 3 '1-2 times a week' and 4 'daily'

Table 16. ANOVA for Teacher Use of Evidence-based Practices by Content Domain

ANOVA

Mean teacher practice scale

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.895	2	.947	4.940	.010
Within Groups	14.573	76	.192		
Total	16.468	78			

The results of these analyses provide informative descriptive data regarding the attitudes of teachers toward the ability of SWD and the fairness and validity of HST. Also, significant differences between general and special education teachers were found in the expectations of SWD to benefit from inclusive instruction. Teacher attitude toward the ability of SWD, teacher classification, and the amount of teacher training were all found to be predictors of the use of evidence-based practice. Finally, teachers' attitude toward the ability of SWD to learn and achieve higher level thinking was found to predict proficient achievement scores for SWD on the NECAP achievement test and reading teachers were found to have significantly more positive

attitudes than and math teachers toward the ability of SWD to learn and achieve higher level thinking. Reading teachers also reported using evidence-based practices more than either science or math teachers. The result of these analyses will be discussed and policy implications will be recommended in the following chapter.

CHAPTER 5

CONCLUSION

The purpose of this study was to examine teacher attitudes toward the ability of SWD to meet proficiency on high-stakes tests and toward the fairness and validity of using HST to assess the achievement of SWD using the instrument, High-Stakes Testing and Students with Disabilities: A Teacher Attitude Survey (HST-SWD). Data from the survey was also used to investigate if there are any differences in expectations between general education teachers and special education teachers regarding the ability of SWD to meet proficiency on HST, to investigate the relationship between teacher attitudes and teacher practices, and to examine the relationship between teacher attitudes and practices and the achievement of SWD.

These findings fill a void in the literature by providing current information on middle school teacher attitudes and expectations toward SWD and demonstrate the importance of measuring self-reported teacher attitudes to determine if there is an effect on teacher practices and the delivery of instruction to SWD. With so few schools meeting proficiency targets for SWD (Infoworks.ride.ri.gov, 2012; Thomas B. Fordham Institute, 2009) and the wide gap between achievement scores of SWD and SWOD (Chudowsky, Chudowsky, & Keber, 2009; Schute, et al., 2001) the information gained that will help improve the performance of SWD and alter long-term outcomes for SWD is well worth the investigation of current teacher attitudes and practices.

Teacher Attitudes

Results from the analysis of teacher responses indicated that most teachers have high expectations for student learning, but low expectations for SWD meeting proficiency on HST. Approximately 54% of teachers reported that they believe that even with appropriate instruction, SWD will be unable to meet proficiency levels on HST and an even higher percentage of teachers believe that HST are too difficult for SWD. Previous research indicates that teacher attitudes and expectations may be unintentionally passed on to the student causing a self-fulfilling prophecy to occur (Darley and Fazio, 1980). Results have consistently shown that mediation of interpersonal expectancy effects are often conveyed through unintended nonverbal behavior and can have significant impact on the individual to whom the expectation is communicated (Rosenthal, 1997; Hornstra, et al., 2010).

Rosenthal's (1997) affect-effort theory suggests that the teacher's level of expectations of the intellectual performance of a student affects the affect shown by the teacher toward that student, and the level of effort given by the teacher in teaching the student. If more than half of the teachers expect SWD to fail to meet proficiency, surely this is affecting the education of SWD. It has been previously found that the highest correlation between expectation and expector's behavior were found to be related to: 1. climate-the affect shown by the teacher to the student and 2. input -the amount and quality of instruction directed at the student. Similarly, the highest correlation was found between behavior of the teacher and response of the student in

the same areas (Harris & Rosenthal, 1985). It has been suggested that there may be benefits of selecting and training for climate and input in teaching (Rosenthal, 1997; Woodrock & Vialle, 2011). Specific examples of improving the classroom climate are expressing high expectations to SWD, both verbally and non-verbally; interacting with students with disabilities in a warm, positive manner; and using knowledge of interpersonal expectancy effects to boost students' feelings of self-confidence and self-efficacy (Harris & Rosenthal, 1985). Training to improve the input or instructional techniques used with students with disabilities must include using a combination of standards-based instruction and differentiated instruction based on individuals' strengths, needs, and present levels of performance (Lawrence-Brown, 2004; Levy, 2008; Rock, Gregg, Ellis, & Gable, 2008; & McTighe & Brown, 2005). Feedback should focus on providing increased informative feedback to help students improve their achievement rather than giving positive feedback where student performance may show that it is not warranted (Brophy, 1982; Woodrock & Vialle, 2011). Students with disabilities should also be taught to a level of mastery, using various methods of re-teaching when students fail to master the skills or content necessary for achievement (Bulgren, Marquis, Deshler, Schumaker, & Lenz, 2006; Brophy, 1982; Mclesky & Waldron, 2002). The results of this study suggest that these may be important factors in improving the education and achievement of SWD.

Additionally, two-thirds of teachers report that they do not have the resources to plan their lessons to address the needs of SWD. Future research should investigate which resources are most needed, time, materials, or professional development, to help meet the needs of SWD. Findings have also been reported that students with "hidden"

disabilities are often rejected and students with “obvious” disabilities are often ignored (Cook, 2001). Students who are rejected by teachers are rarely provided with instructional feedback in response to incorrect answers, but are criticized by teachers more. Previously, teachers reported that they were indifferent to students with obvious disabilities because they did not know how to meet the educational needs of these students (Cook, 2001). The findings of this study that teachers do not have the resources to meet the needs of SWD in their classrooms indicate that SWD may be in danger of being rejected, ignored, or receiving less than adequate instruction.

To avoid the Pygmalion effect or situations where SWD needs are simply ignored, quality inclusive programs must include high levels of teacher support and provision of resources. Specific supports necessary for successful inclusive classrooms may include: district level inclusive program coordinators, increased planning time and collaboration with specialists to improve instruction for SWD, and additional support from trained professionals within the classroom. Teachers working in inclusive settings must be offered professional development opportunities to build teacher confidence and capacity and opportunities for collaboration and support must also be provided (Mclesky & Waldron, 2002). Professional development should include implementing evidence-based practices and interventions, such as differentiated instruction and implementing modifications and accommodations in class as well as on high-stakes tests. Information that will assist teachers in making participation decisions regarding SWD and high-stakes tests versus alternate assessment must also be included in teacher training.

It cannot be ignored that 90% of the teachers who administer HST reported that they do not believe HST are a valid measure of achievement for SWD. This confirms previously reported findings of teacher beliefs that statewide tests do not accurately reflect student performance (Crawford and Tindal, 2006). Despite the report that the majority of teachers felt that the required accommodations are not fully implemented, most teachers feel that accommodations do not eliminate the effect of the disability. This indicates that the tests may be measuring construct irrelevance or the effect of the disability rather than the intended skill or concept (AERA, 1999). The fact that nearly 97% of teachers feel that more SWD should be given the opportunity to show achievement through multiple measures, clearly shows that this option needs to be provided to more students. Students who are learning grade level curriculum standards who are not able to demonstrate their knowledge on HST should be offered alternate assessments based on grade-level achievement standards (AA-GLAS) (Albrecht & Joles, 2003; Destefano, Shriner, & Lloyd, 2001), or multiple measures of achievement (Deno, Fuchs, Marston, & Shin, 2001; Schute et al., 2001; Fuchs & Fuchs, 1996). The option to take alternate assessments must be investigated for all SWD and not just the current standard of 1% of the intellectually challenged (Harr-Robins et al. 2012). Research findings have indicated that teacher training on appropriate testing participation decisions did result in more recommendations for alternate assessment. Also, participation did show a stronger connection to general education access and decisions regarding accommodations were more linked to student needs (Destefano et al., 2001). With this information provided by teachers, there is no doubt why 87% of teachers feel decisions based on HST, such as

placement, promotion or graduation are not fair to SWD. In order to increase the fairness of decisions based on HST, states should not make decisions based on a single test. Students should be allowed to demonstrate knowledge in diverse ways. Adequate notice should be given before high-stakes consequences are attached to tests and care should be taken that students are not tested on material that they have not been taught (O'Neil, 2001). Following these guidelines should help to improve the outcomes and achievement of SWD.

Difference in Attitudes and Expectations

Special education teachers report significantly more positive attitudes toward the ability of SWD to benefit from inclusive instruction than general education teachers. Specifically, special education teachers report more positive attitudes toward the ability of SWD benefiting from instruction as much as SWOD and more positive attitudes toward including SWD in general education whenever possible. Ward, Montague, and Linton (2003) also found that special education teachers were more likely to be in favor of inclusion of SWD in general education classes and general education teachers were less likely to favor SWD in the general education classes. Further analysis of these items revealed that general education teachers report less positive attitudes toward having the resources to plan lessons to address the needs of SWD. By nature of their position, special educators must hold a Bachelor's Degree or higher and all participants in the study who reported that they were a special educator also reported that they did meet the requirement of having a high level of education in the area of special education. General education teachers reported their level of special education training ranging from no training to a Bachelor's Degree or higher in

the area of special education. The mean response of general education teachers indicates that most general education teachers have had 1-2 courses in special education. It is possible that the increased amount of special education training that special educators have allows them to see the benefit of inclusive instruction for SWD and provides them with more resources to plan lessons that meet the needs of SWD. However, it is possible that differences in the setting or circumstances of instruction account for the differences between general and special educators in attitudes toward SWD being able to benefit from inclusive instruction. Now that the areas of difference have been identified future study can focus on investigating the differences in attitudes and improving inclusive education for SWD.

Differences in the Use of Evidence-based Practice

The Multiple Regression Analysis performed to address question 5 produced findings that indicate that special education teachers report using evidence-based practice more frequently than general education teachers. Also, teachers who report a more positive attitude toward the ability of SWD to benefit from inclusion and teachers who have had more special education training both report using evidence-based practice more often. As mentioned in the previous discussion, special education teachers do report having more training and professional development in the area of special education than general education teachers. This may allow them to implement more strategies and interventions allowing SWD to benefit more from inclusive instruction. Having more special education training does predict the use of evidence-based instruction, whether the teacher is a general or special educator. This indicates that teachers who work in inclusive classrooms should be provided training to promote

the use of evidence-based practices, such as combining standards-based and differentiation instruction (Lawrence-Brown, 2004; Levy, 2008; Rock, Gregg, Ellis, & Gable, 2008; & McTighe & Brown, 2005; Tomlinson, 2000). Increasing teacher knowledge of research-based practice and holding SWD to the same expectations by exposing them to higher level thinking activities, and requiring SWD to acquire skills and concepts to a level of mastery may also increase learning for SWD (Bulgren, et al., 2006). Teachers have indicated that they would like to use research-based practices when instructing SWD, but class size and lack of resources, such as time and opportunities for collaboration with special educators make it difficult (Bulgren, et al., 2006).

Predictors of the Proficiency of SWD on HST

Teacher attitude toward the ability of SWD to learn and achieve higher level thinking was a significant predictor of the proficiency of SWD on the NECAP large-scale achievement test. This may be evidence of the self-fulfilling prophecy in action. Less positive attitudes toward the ability of SWD to learn and achieve higher level thinking predict lower achievement scores and more positive attitudes toward the ability of SWD to learn and achieve higher level thinking predict higher NECAP achievement scores, regardless of the content area. This indicates that the teachers' attitudes toward their ability are somehow affecting the achievement of SWD. It is possible that teacher attitudes are unintentionally conveyed through nonverbal teaching behaviors causing expectancy effects (Darley and Fazio, 1980, Rosenthal, 1997). Also, teachers stress and pressure may be creating negative feelings toward SWD causing teachers to convey a negative affect toward SWD and provide less

quality input or instruction to SWD. This is consistent with Rosenthal's (1997) affect-effort theory.

Findings from this study also indicate that reading teachers report more positive attitudes toward the ability of SWD to learn and achieve higher level thinking than math teachers. Additionally, reading teachers report using evidence-based practices more than both math and science teachers. Now that we have this information, further investigation is needed to determine why these phenomenon are occurring. Mean proficiency rates in this study were much higher in the area of reading (40.26%) than in math (22.02%) and science (16.14%). Do SWD naturally achieve higher levels of performance in the areas of reading than in math and science, or is there something about the delivery of instruction or methods of assessment that allows for SWD to show higher achievement in the area of reading? This phenomenon is worth future study.

Policy Implications

Looking past the superficial need to raise the numbers of SWD who are proficient and moving beyond to a deeper understanding of what will help SWD to achieve their highest potential, the following recommendations are made for future policy regarding the education and assessment of SWD. Pre-service or in-service training for general educators must be expanded and improved to include evidence-based practice and interventions that have proven successful for SWD. Teacher training should also include factors involved in participation decisions for SWD in assessments and other options that may be available. Additionally, expectations must

be raised for SWD to achieve a level of mastery rather than just teaching the standard content, hoping for the best, and moving on regardless of mastery. Finally, all teachers must be supported at all levels, so they have an environment conducive for them to use their expertise to implement evidence-based practices in the classroom.

As the current accountability system increases the work load and responsibilities of teachers, it has been suggested that pressure from school districts on teachers to meet the NCLB continuous improvement targets has resulted in teacher stress and a variety of instructional practices in contrast with what educational research confirms are requirements for promoting student engagement, understanding, and achievement (McTighe & Brown, 2005). Findings from this study indicate that more than 60% of teachers report being stressed daily by the pressure to move all students to proficiency and the teachers of the core tested subjects of math and reading report the highest levels of stress. However, research has shown that when the school districts were supportive and consultants were provided to assist in the implementation of inclusion programs and service delivery for SWD in general education classes, teachers reported that they were in favor of curriculum content and instructional adaptations, raising expectations for SWD, and collaboration with special educators that included co-teaching (Mclesky & Waldron, 2002). These findings highlight the need for teacher training in the area of special education and providing support to teachers so that they can implement successful inclusive programs and improve the education of SWD.

Limitations

The results of this study may be generalized only to schools with similar demographics. The respondents were from schools that approximate the demographics of the state of RI average. Further, the survey was voluntary so the sample included only certified teachers that were willing to invest their time. All participants were offered a thank-you gift worth less than \$2.00, such as stickers, and a chance to win a \$25.00 gift card to an education-based store. These incentives were not seen as being very influential. Most teachers who participated indicated a genuine concern for improving the education for SWD.

A second limitation is potential response bias, as the instrument was a self-report survey. Due to the item content, it is possible that teachers wanted to provide socially desirable responses, rather than the most honest response. In this case, it is possible that the results may have actually been more pronounced. An attempt at avoiding response bias was through the assurance of confidentiality and that only group data would be reported. However, it is important to recognize that response bias could be a factor when interpreting the results of the study.

A third limitation that must be acknowledged is the difficulty in separating the content areas taught by teachers at the middle school level. This was not much of a problem for teachers of 7th and 8th grade, but teachers of 5th and 6th grade often teach multiple tested content areas. This resulted in the elimination of many teacher responses from the analysis of question 6. Only 60 of the 218 teachers were able to be linked to one subject area to determine if their responses contributed to a relationship between teacher attitudes and practices and proficient assessment scores of SWD by grade level. Therefore, results in this area should be interpreted with caution.

Lastly, although the results provide an overall description of teacher attitudes toward the ability of SWD to meet proficiency on HST and the frequency of teacher use of evidence-based practices, the quantitative method does not provide for much detail in the area of why teachers hold the dominant attitudes reported or use research-based practices to the extent that they do. Now that a framework of teacher attitudes and practices has been established, qualitative methods should be employed to gather more specific information in the areas of what teachers need to feel more supported and able to provide instruction that meets the needs of SWD.

Implications for Future Research

Future research should focus on the types of training and professional development that would be most beneficial for teachers of inclusive programs. Additionally, qualitative research should be conducted to determine the resources that teachers need to provide quality instruction that meets the needs of SWD. There is a pressing need for research in the area of providing alternate assessment to more SWD and to students who have diagnosed disabilities other than intellectual disabilities. This is needed to determine if these students are better able to demonstrate their knowledge on these types of assessments. It is important to find out if alternate assessments based on grade level standards are more valid measures than the current system of assessment for SWD, as the vast majority of teachers feel that current large-scale assessment are not a valid way to assess the achievement of SWD.

Conclusion

In investigating teacher attitudes toward SWD and HST, it is important to focus on the factors that we can control. It has been shown that there is a need to promote awareness of expectation effects and improve the climate and input in educating SWD. There is also a need to improve the validity in assessing SWD. Allowing students to demonstrate their knowledge in different ways by using alternate assessment based on grade level standards for more SWD and using multiple methods to assess students only on materials that they have had the time and opportunity to learn may make assessment a more valid measure of student knowledge. Doing this would also assist educators in collecting accurate information on the performance of SWD to be used diagnostically to pinpoint areas where SWD are doing well and areas where individuals need more intensive instruction or interventions.

Findings of this study highlight the need for teachers who work in inclusive programs to receive training in the area of special education to increase the use of evidence-based practices. School districts must provide support and assistance to teachers implementing inclusive programs to allow for successful implementation to take place. Further, teachers must be aware of expectancy effects in order to guard against their negative effects on SWD and possibly use interpersonal expectancy effects to increase the achievement of SWD by providing a warm climate and increasing the use of evidence-based practices.

APPENDICES

APPENDIX A

Survey Design: Teacher Attitudes toward High-Stakes Testing and Students with Disabilities

Survey Design: Teacher Attitudes Toward High-Stakes Testing and Students with Disabilities			Klehm 2012
Research Question	Question #	Survey Question	Research Citation
Do teachers believe that students with disabilities have the ability to meet proficiency on high-stakes assessments?	1	Given adequate exposure to standards (skills and concepts) being assessed, students with disabilities can meet proficiency levels on high-stakes assessments.	Thomas B. Fordham Institute (2009)
	2	High-stakes assessments such as the NECAP are too difficult for students with disabilities.	DeBard and Kubow (2002) Crawford, Almond, Tindal, & Hollenbeck (2001)
	3	Students with disabilities are capable of constructing big ideas in areas of subject content through problem solving.	Reid, D. K. & Valle, J. W. (1996)
	4	Students with disabilities are able to achieve higher level thinking.	Reid, D. K. & Valle, J. W. (1996)
	5	In your opinion, what is the main reason some students with disabilities are not meeting proficiency levels on high-stakes assessments.	

Do teachers believe that high-stakes assessments are a fair opportunity for students with disabilities to show achievement?	6	Students with learning disabilities are allowed to show achievement through alternate assessment (EX. Portfolio).	Disability Rights Advocates (2001)
	7	More students should be given the opportunity to show achievement through multiple measures (RI Assessments, Districtwide Assessments, and Major Course Assessments).	AERA (2000) Disability Rights Advocates (2001), Fuchs & Fuchs (1993)
	8	Students with disabilities have a meaningful opportunity (sufficient exposure to content tested) to learn the tested content and cognitive processes.	AERA (2000)
	9	Students with disabilities who fail a high-stakes test are provided sufficient time for remediation that focus on the knowledge and skills the test is intended to address.	AERA (2000)
	10	Decisions based on high-stakes testing, such as high school graduation and promotion are fair to students with disabilities.	AERA (2000)
	11	If you believe decisions based on high-stakes testing are not fair to students with disabilities, please describe why below.	

Do teachers believe that high-stakes assessments yield valid achievement ratings of students with disabilities?	12	Scores generated through high-stakes testing are a valid assessment of the achievement of students with disabilities. AERA	AERA (2000)
	13	Students with disabilities are able to demonstrate their knowledge on high-stakes assessments.	AERA (2000)
	14	Accommodations or accommodation packages chosen for students with disabilities to use when taking high-stakes testing are individualized (Ex. Reading test questions to a students with decoding difficulties).	IDEA (1997), Kettler, Niebling, Mroch, Feldman, Newell, Elliot, Kratochwill, & Bolt (2005)
	15	Accommodations are designed to eliminate the effect of the disability on the skills and concepts being tested the assessments.	AERA (2000)
	16	All accommodations listed in students IEPs are fully defined and implemented with careful precision.	Fuchs et al. (2000) The Disability Rights Advocates (2001)
	17	When accommodations are used, effects on testing caused by the characteristics of the disability are eliminated.	AERA (2000) The Disability Rights Advocates (2001)
	18	Using accommodations allows for a more accurate assessment by removing the extraneous variables, the manifestations of the disability, while allowing the construct being assessed to remain unaltered.	The Disability Rights Advocates (2001) Fuchs et al. (2000)
	19	Using accommodations (see definition) gives students with disabilities an unfair advantage.	Kettler, Niebling, Mroch, Feldman, Newell, Elliot, Kratochwill, & Bolt (2005) Fletcher, Francis, Boudousquie, Copeland, Young, Kalinowski, & Vaughn (2006)
	20	If you believe high-stakes testing is not a valid measure of the achievement of students with disabilities, please describe why below.	

Do teachers believe that students with disabilities have the ability to meet proficiency on high-stakes assessments?	21	Students with disabilities should be educated in the general education setting to the greatest degree possible.	Tomlinson (2004) Lawrence-Brown (2004) Levy (2008)
	22	Students with disabilities are able to understand core concepts.	Rock, Gregg, Ellis, & Gable (2008)
	23	Superficial coverage of many topics in the subject is necessary to cover all the material on the assessments.	McTighe & Brown (2005)
	24	There is sufficient time for students with disabilities to develop a deep understanding of the concepts covered in the tests.	McTighe & Brown (2005)
	25	In my school, students with disabilities are engaged by the learning environment, not threatened or ignored by it.	McTighe & Brown (2005)
	26	I have the resources (Ex: time, materials, and professional development) to plan my lessons to address the needs of students with disabilities.	Rosenthal: 4 Factor Theory Expectancy Cues: Affect-Effect Theory(1997)
	27	Students with disabilities are able to benefit from my instruction as much as students without disabilities.	Rosenthal: 4 Factor Theory Expectancy Cues, Affect-Effect Theory(1997)

How do high-stakes tests affect teaching practices?	28	I plan lessons based on IEP goals.	Katsiyannis, Zhang, Ryan, & Jones, (2007)
	29	I give students with disabilities worksheets for drill and practice to learn facts.	Reid, D. K. & Valle, J. W. (1996)
	30	I involve students with disabilities in hands on learning activities, such as using manipulatives in math.	McTighe & Brown (2005)
	31	I look for resources on evidenced based practices for students with disabilities.	McTighe & Brown (2005)
	32	I use resources to devise lesson accommodations appropriate for students with disabilities.	McTighe & Brown (2005)
	33	I give students with disabilities meaningful feedback regarding their performance.	McTighe & Brown (2005)
	34	I give students with disabilities meaningful feedback regarding their behavior.	McTighe & Brown (2005)
	35	Each individual student is provided with different modes of instruction based on his or her needs.	Rosenthal: 4 Factor Theory Expectancy Cues; Affect-Effect Theory(1997)
	36	I call on students without disabilities more than students with disabilities to participate in class discussions.	Rosenthal: 4 Factor Theory Expectancy Cues; Affect-Effect Theory(1997)
	37	I communicate positively (smiling, nodding, warmth) with all students with disabilities.	Rosenthal: 4 Factor Theory Expectancy Cues; Affect-Effect Theory(1997)
	38	I am stressed by the pressure to move all students to proficiency.	Rosenthal: 4 Factor Theory Expectancy Cues; Affect-Effect Theory(1997)
	39	I adjust the content of lessons to accommodate individual differences.	Tomlinson (2000)
	40	I adjust the pace of instruction to accommodate individual differences.	Tomlinson (2000)
	41	I challenge students with disabilities to perform slightly above what they can demonstrate independently.	Tomlinson (2000)
	42	I connect the content students with disabilities are learning to their real-life experiences.	Tomlinson (2000)
	43	I teach lessons that make students with disabilities feel respected and valued as learners.	Tomlinson (2000)
	44	I provide extra support to students with disabilities so they can move toward proficiency.	Tomlinson (2000)

APPENDIX B

High-Stakes Testing and Students with Disabilities: A Teacher Attitude Survey

(HST-SWD)

Demographic Information: In this section of the survey, the questions relate to your experience and background in education. These questions help us place a context to your responses.

1. Are there students with disabilities in your classroom? Yes_____ No_____

If yes please answer 1a, 1b, and 1c.

1a. Which diagnosis of disability do students in your class have? (Please check all that apply.)

- | | |
|------------------------------------|-------------------------------------|
| _____ Specific Learning Disability | _____ Serious Emotional Disturbance |
| _____ Intellectual Disability | _____ Orthopedic Impairment |
| _____ Hearing Impairment | _____ Autism |
| _____ Visual Impairment | _____ Other Health Impairment |
| _____ Speech/Language Impairment | _____ I am not sure |

- 1b. Do you provide the accommodations for instruction? Yes_____No_____

If yes please list the most frequently used accommodation.

- 1c. Do you provide accommodations for state assessments? Yes____No_____

If yes please list the most frequently used accommodation.

2. Are you a General Education or Special Education Teacher?

_____ General Education Teacher

_____ Special Education Teacher

3. Please check the grade level(s) you teach.

5th Grade 7th Grade
 6th Grade 8th Grade

4. What subject(s) do you teach? (Please check all that apply.)

Reading Science
 Language Arts Social Studies
 Math Physical Education
 Unified Arts

5. What is the highest level of education you have attained? (Please check only the most accurate descriptor.)

Bachelor's Degree
 Master's Degree
 Ed.D. or Ph. D.

6. How many years have you taught, regardless of level and subject?

1-3 7-9
 4-6 10 or more

7. Have you received special education training? Yes No

If yes please answer 7a.

7a. What is the most accurate descriptor of your special education training?

Graduated with a Bachelor's Degree or higher in special education
 More than 4 courses in special education
 3-4 courses in special education
 1-2 courses in special education
 No special education training received

8. Gender: Male Female

Definition of Terms- Please use the following definitions to answer the survey questions:

Child with a disability: “The term ‘child with a disability’ means a child--
 `` (i) with mental retardation, hearing impairments (including deafness), speech or language impairments, visual impairments (including blindness), serious emotional disturbance (referred to in this title as ‘emotional disturbance’), orthopedic impairments, autism, traumatic brain injury, other health impairments, or specific learning disabilities and
 `` (ii) who, by reason thereof, needs special education and related services.”
 (Individuals with Disabilities Education Improvement Act of 2004, sec. 602)

Testing accommodation: The American Educational Research Association (1999) defined testing accommodations in The Standards for Educational and Psychological Testing as changes in the standard assessment process, including modifications to the test itself, made because an individual’s disability requires changes for the test to be a valid measure.

Please indicate the degree to which you agree or disagree with the following statements regarding students with disabilities and high-stakes assessments, such as NECAP:

Question	Strongly Disagree	Disagree	Agree	Strongly Agree
1. Given adequate exposure to standards (skills and concepts) being assessed, students with disabilities can meet proficiency levels on high-stakes assessments.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. High-stakes assessments such as the New England Common Assessment Program (NECAP) are too difficult for students with disabilities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Students with disabilities are capable of constructing big ideas of subject content through problem solving.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Students with disabilities are able to achieve higher level thinking.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. Many students with disabilities do not meet a level of proficiency on high-stakes assessments. In your opinion, what are the main reasons? (Please check all that apply.)

- Tests don’t allow students with disabilities to demonstrate their knowledge.
- Students with disabilities are not able to meet proficiency due to limitations in ability.
- Modifications used in the classroom are not allowed on the state assessments.
- Other (please specify) _____

DEFINITION

Fair: The testing or assessment process should be carried out so that test takers receive comparable and equitable treatment during all phases of the testing or assessment process (AERA, 1999).

Please indicate the degree to which you agree or disagree with the following regarding high-stakes testing as a fair opportunity for students with disabilities to show achievement.

Question	Strongly Disagree	Disagree	Agree	Strongly Agree
6. Students with learning disabilities are allowed to show achievement through alternate assessment (Ex: Portfolio).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. More students should be given the opportunity to show achievement through multiple measures (Ex: RtI Assessments, Districtwide Assessments, and Major Course Assessments).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Students with disabilities have a meaningful opportunity (sufficient exposure to content tested) to learn the tested content.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Students with disabilities who fail a high-stakes test are provided sufficient time for remediation that focuses on the knowledge and skills the test is intended to address.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Decisions based on high-stakes testing, such as high school graduation and promotion, are fair for students with disabilities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. If you believe decisions based on high-stakes testing are not fair to students with disabilities, please indicate why below. (Please check all that apply.)

- Lack of exposure to tested concepts.
- Instruction is not differentiated to meet the needs of students with disabilities in class.
- Students with disabilities need to show achievement through multiple measures.
- Alternate assessment is not offered to all students who need it.
- Other (Please specify) _____

DEFINITION

Valid: In testing students with disabilities, test developers, test administrators, and test users should take steps to ensure that the test score inferences accurately reflect the intended construct rather than any disabilities and their associated characteristics extraneous to the intent of the measurement (AERA, 1999).

Please indicate the degree to which you agree or disagree with the following statements regarding the ability of high-stakes assessment to yield valid achievement ratings for students with disabilities.

Question	Strongly Disagree	Disagree	Agree	Strongly Agree
12. Scores generated through high-stakes testing are a valid assessment of the achievement of students with disabilities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. Students with disabilities are able to demonstrate their knowledge on high-stakes assessments.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. Accommodations or accommodation packages chosen for students with disabilities to use when taking high-stakes testing are individualized (Ex: Reading test questions to a students with decoding difficulties).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. Accommodations are designed to eliminate the effect of the disability on the skills and concepts being tested on the assessments.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. All accommodations listed in students IEPs are fully defined and implemented with careful precision.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. When accommodations are used, effects on testing caused by the characteristics of the disability are eliminated.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. Using accommodations allows for a more accurate assessment by removing any characteristics of the disability from interfering with testing, while allowing the construct being assessed to remain unaltered.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. Using accommodations (see definition) gives students with disabilities an unfair advantage.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

20. If you believe high-stakes testing is not a valid measure of the achievement of students with disabilities, please indicate why below. (Please check all that apply.)

_____ Assessments should be individualized.

_____ Accommodations are not effective in allowing students to demonstrate their knowledge.

_____ Assessments are too heavily based on reading.

_____ Adequate accommodations are not provided.

_____ Other (Please specify) _____

Please indicate the degree to which you agree or disagree with the following statements regarding high-stakes assessments and students with disabilities.

Questions	Strongly Disagree	Disagree	Agree	Strongly Agree
21. Students with disabilities should be in the general education setting to the greatest degree possible.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. Students with disabilities are able to understand core concepts.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. Superficial coverage of many topics in the subject is necessary to cover all the material on the assessments.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. There is sufficient time for students with disabilities to develop a deep understanding of the concepts covered on the assessments.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25. In my school, students with disabilities are engaged by the learning environment, not threatened or ignored by it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26. I have the resources (Ex: time, materials, and professional development) to plan my lessons to address the needs of students with disabilities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27. Students with disabilities are able to benefit from my instruction as much as students without disabilities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please indicate how often the following practices occur in your classroom to prepare students for proficiency on high-stakes assessments.

Questions	Daily	1-2 times a week	1-2 times a month	Never
28. I plan lessons based on IEP goals.	0	0	0	0
29. I give students with disabilities worksheets for drill and practice to learn facts.	0	0	0	0
30. I involve students with disabilities in hands on learning activities, such as using manipulatives in math.	0	0	0	0
31. I look for resources on evidence based practices for students with disabilities.	0	0	0	0
32. I use resources to devise lesson accommodations appropriate for students with disabilities.	0	0	0	0
33. I give students with disabilities meaningful feedback regarding their performance.	0	0	0	0
34. I give students with disabilities meaningful feedback regarding their behavior.	0	0	0	0
35. Each individual student is provided with different modes of instruction based on his or her needs.	0	0	0	0
36. I call on students without disabilities more than students with disabilities to participate in class discussions.	0	0	0	0

Questions	Daily	1-2 times a week	1-2 times a month	Never
37. I communicate positively (smiling, nodding, warmth) with all students with disabilities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
38. I am stressed by the pressure to move all students to proficiency.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
39. I adjust the content of lessons to accommodate individual differences.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
40. I adjust the pace of instruction to accommodate individual differences.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
41. I challenge students with disabilities to perform slightly above what they can demonstrate independently.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
42. I connect the content students with disabilities are learning to their real-life experiences.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
43. I teach lessons that make students with disabilities feel respected and valued as learners.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
44. I provide extra support to students with disabilities so they can move toward proficiency.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Thank-you!

(Klehm, 2013)

APPENDIX C

Informed Consent for Anonymous Research Form

The University of Rhode Island

Department of: School of Education

Address: Room 707, Chafee Building, Kingston, RI 02881

Title of Project: Teacher Attitudes: The effect of teacher Beliefs on Teaching Practices and Achievement of Students with Disabilities

TEAR OFF AND KEEP THIS FORM FOR YOURSELF

Dear Participant

You have been invited to take part in the research project described below. If you have any questions, please feel free to call (*Mary Klehm, M.Ed., 401-885-1014*) or (*Dr. Minsuk Shim, Ph.D., 401-874-4162*), the people mainly responsible for this study.

The purpose of this study is to examine teacher attitudes and practices when teaching and preparing students with disabilities for high-stakes assessments. Responses to these items will be anonymous meaning no one on the research team will ever have access to any identifiers. No names or identifying information will be asked for or used to link responses to any individual. Your job here at this school will in no way be affected by your responses on the survey.

YOU MUST BE AT LEAST 18 YEARS OLD to be in this research project.

If you decide to take part in this study, your participation will involve filling out a *survey* pertaining to Teacher attitudes and practices regarding students with disabilities and high-stakes testing. ***The survey should take approximately 10 to 15 minutes to complete.***

Although there are no direct benefits of the study to you, your answers will help increase the knowledge regarding teacher attitudes and practices and to inform decisions regarding the education and assessment of students with disabilities, so educational programming will better reflect the needs of the individuals with disabilities.

Your part in this study is anonymous. That means that your answers to all questions are private. No one else can know if you participated in this study and no one else can find out what your answers were. Scientific reports will be based on group data and will not identify you or any individual as being in this project.

The decision to participate in this research project is up to you. You do not have to participate and you can refuse to answer any question without any negative consequences.

Participation in this study is not expected to be harmful or injurious to you. However, if this study causes you any injury, you should write or call Mary Klehm M.Ed. and Dr. Minsuk Shim Ph.D. at the University of Rhode Island at (401)(874-1000).

If you have other concerns about this study or if you have questions about your rights as a research participant, you may contact the University of Rhode Island's Vice President for Research, 70 Lower College Road, Suite 2, URI, Kingston, RI, (401) 874-4328.

You are at least 18 years old. You have read the consent form and your questions have been answered to your satisfaction. Your filling out the survey implies your consent to participate in this study.

Thank you, Mary Klehm M. Ed.

Ph. D. Candidate URI/RIC and

Rhode Island Teacher

APPENDIX D

Letter of Authorization

The University of Rhode Island

Department of: School of Education

Address: Room 707, Chafee Building, Kingston, RI 02881

Title of Project: Teacher Attitudes: The Effect of Teacher Beliefs on Teaching Practices and Achievement of Students with Disabilities

Dear {Name of School Principal},

The teachers in your school have been invited to take part in a research project described below. The researcher will explain the project to you in detail. You should feel free to ask questions. If you have more questions later, Mary Klehm, the person mainly responsible for this study, (401) 885-1014, will discuss them with you.

The purpose of this study is to examine teacher attitudes and practices when teaching and preparing students with disabilities for high-stakes assessments. Responses to these items will be anonymous meaning no one on the research team will ever have access to any identifiers. No names or identifying information will be asked for or used to link responses to any individual. Your job here at this school will in no way be affected by your responses on the survey.

If you decide to allow participation in this study, teachers in your school will be asked to take a brief survey regarding their attitudes toward students with disabilities and the fairness and validity of high-stakes testing in assessing students with disabilities. Teachers will also be asked to respond to questions regarding their practices when preparing students with disabilities for high-stakes testing.

There are no likely risks or discomforts associated with participation in the survey

Although there are no direct benefits of the study to your school, responses will help increase the knowledge regarding teacher attitudes and practices and to inform decisions regarding the education and assessment of students with disabilities, so educational programming will better reflect the needs of the individuals with disabilities.

Participation in this study is anonymous. Responses to these items will be anonymous meaning no one on the research team will ever have access to any identifiers. No names or identifying information will be asked for or used to link responses to any individual. Employment here at this school will in no way be affected by responses on

the survey. Scientific reports will be based on group data and will not identify you or any individual as being in this project.

Participation in this study is not expected to be harmful or injurious to you or your staff. However, if this study causes you any injury, you should write or call Mary Klehm M.Ed. and Dr. Minsuk Shim Ph.D. at the University of Rhode Island at (401)(874-1000).

You may also call the office of the Vice President for Research, 70 Lower College Road, University of Rhode Island, Kingston, Rhode Island, telephone: (401) 874-4328.

If you are not satisfied with the way this study is performed, you may discuss your complaints with Mary Klehm or with Dr. Minsuk Shim Ph.D., anonymously, if you choose. In addition, if you have questions about your rights as a research participant, you may contact the office of the Vice President for Research, 70 Lower College Road, Suite 2, University of Rhode Island, Kingston, Rhode Island, telephone: (401) 874-4328.

You have read the Consent Form. Your questions have been answered. Your signature on this form means that you understand the information and you agree to allow teachers employed at your school to participate in this study.

Signature of Principal

Signature of Researcher

Typed/printed Name

__Mary Klehm M.Ed._____
Typed/printed name

Date

Date

Please sign both consent forms, keeping one for yourself.

APPENDIX E

Frequency Histograms of Scales Used for Analyses

Figure 1. Frequency Histogram of Teacher Use of Evidence-Based Practices Scale.

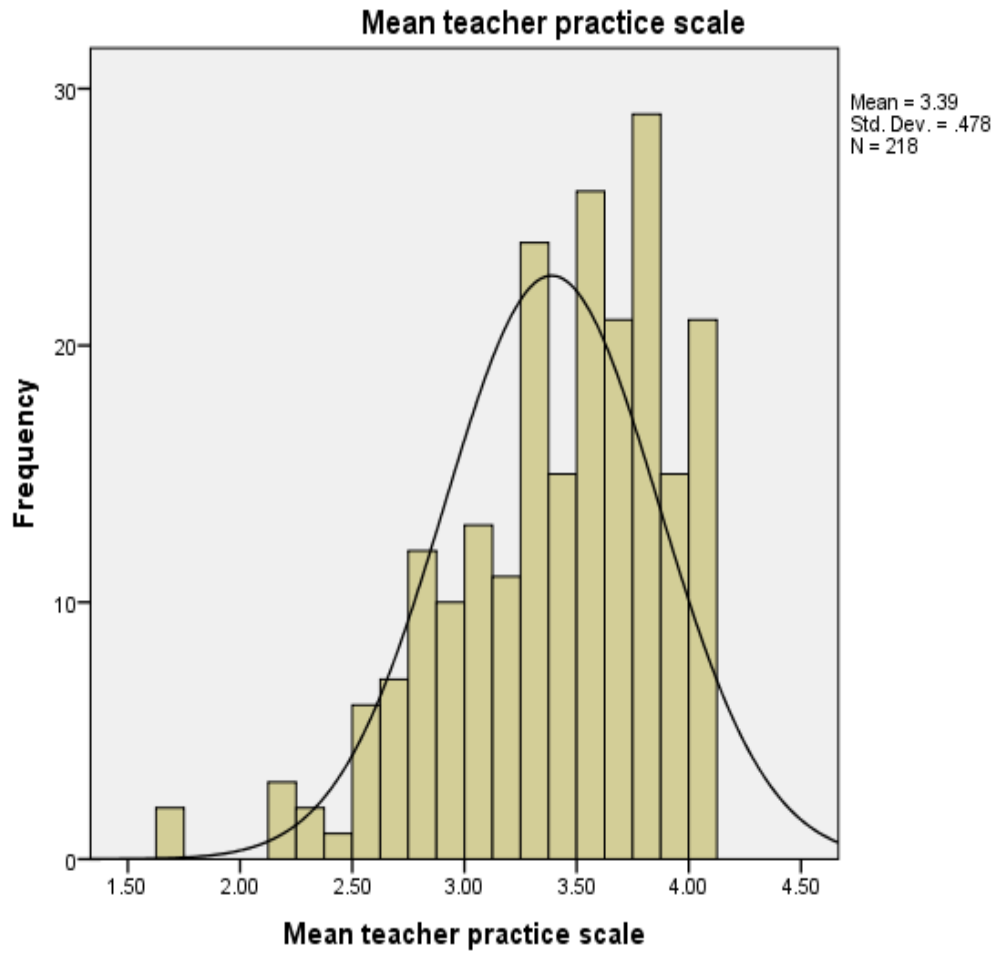


Figure 2. Frequency Histogram of Teacher Attitude toward the Fairness and Validity of Assessing SWD using HST.

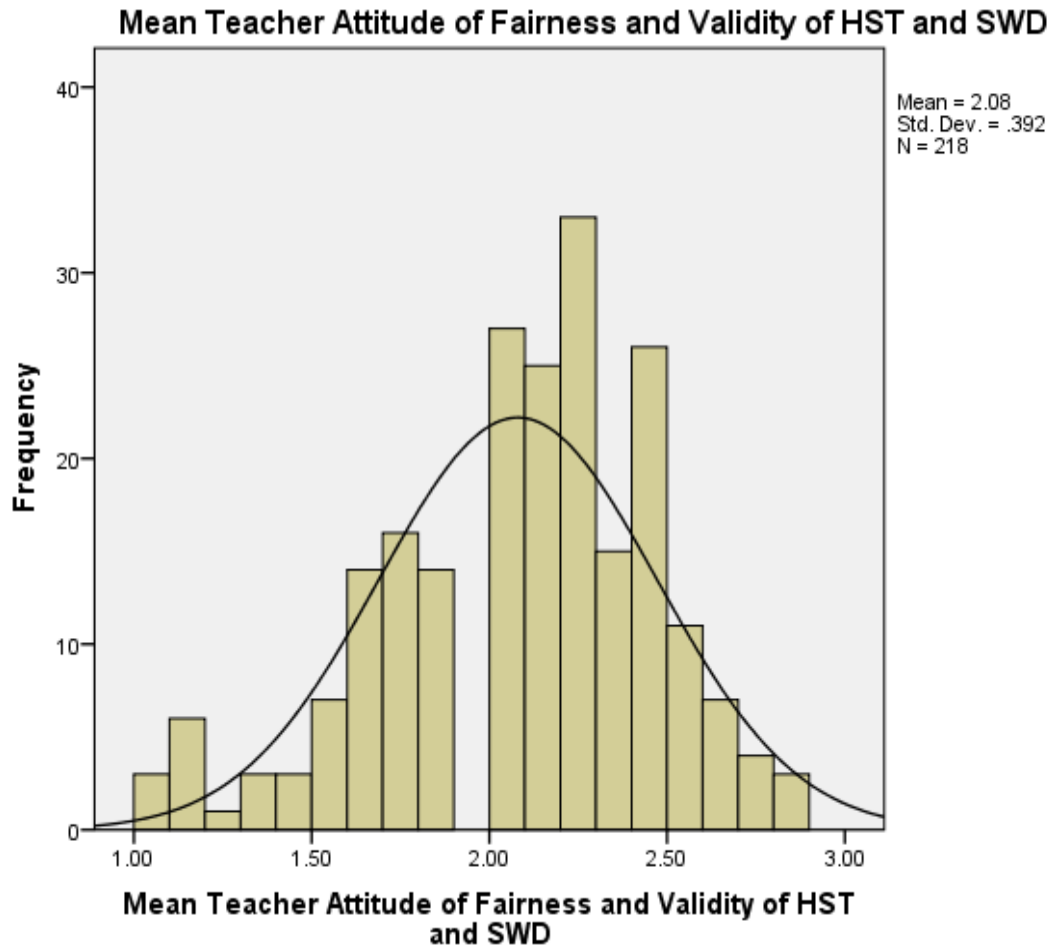


Figure 3. Frequency Histogram of Teachers' Attitudes toward the Ability of SWD to Meet Proficiency in HST.

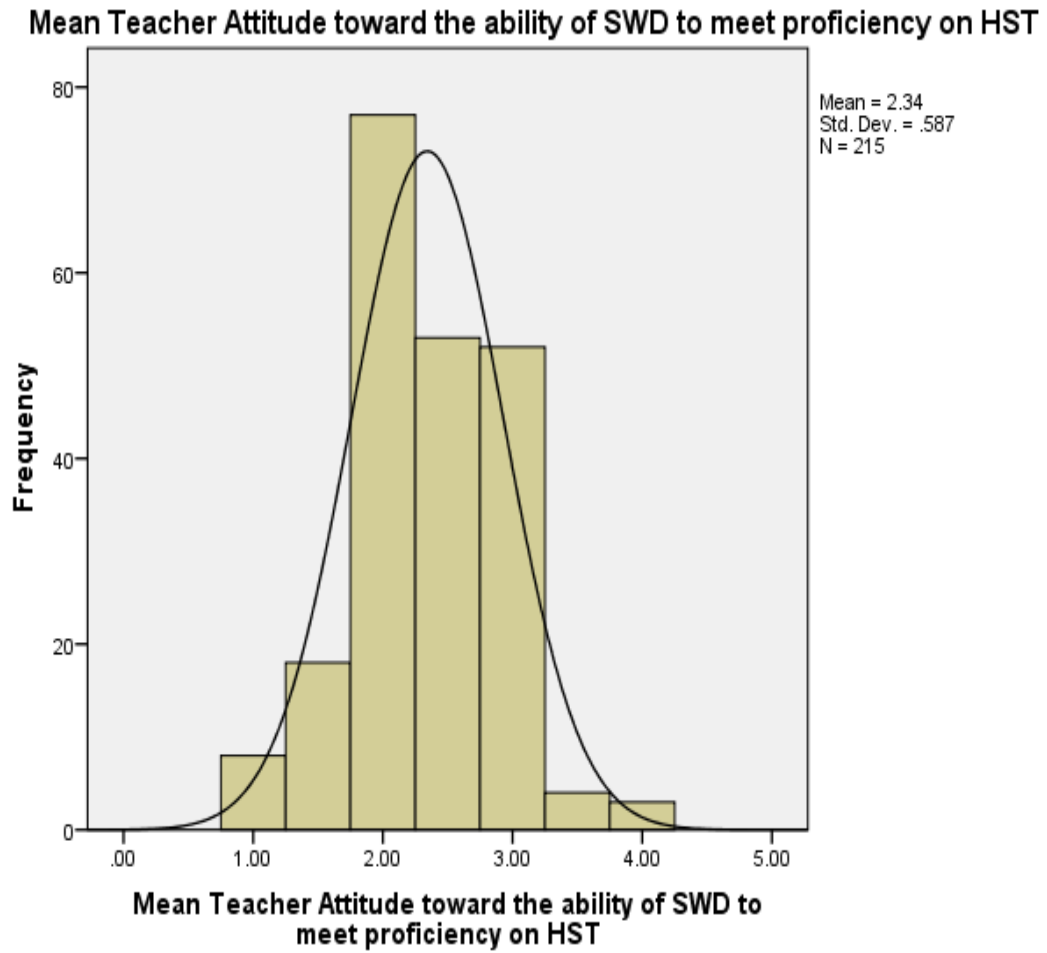


Figure 4. Frequency Histogram of Teachers' Attitudes toward the Ability of SWD to Learn and Achieve Higher Level Thinking.

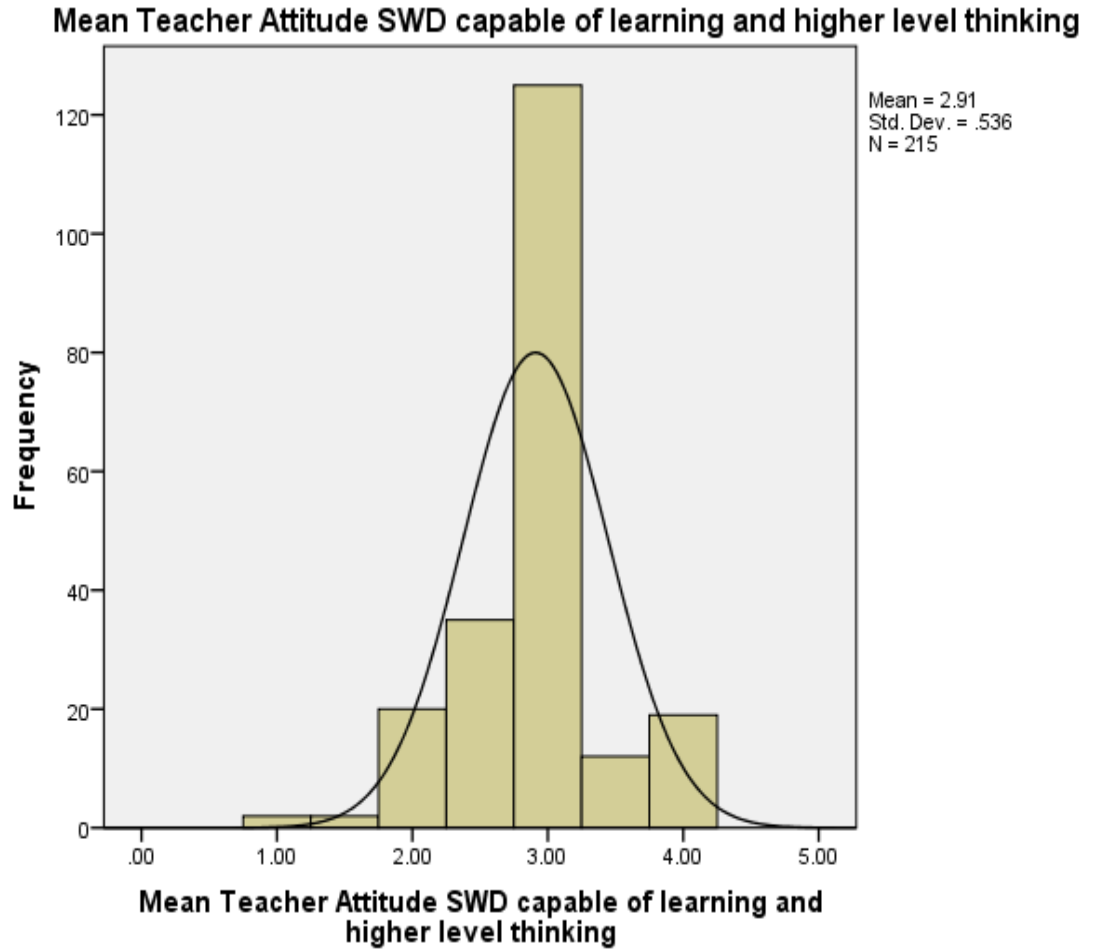
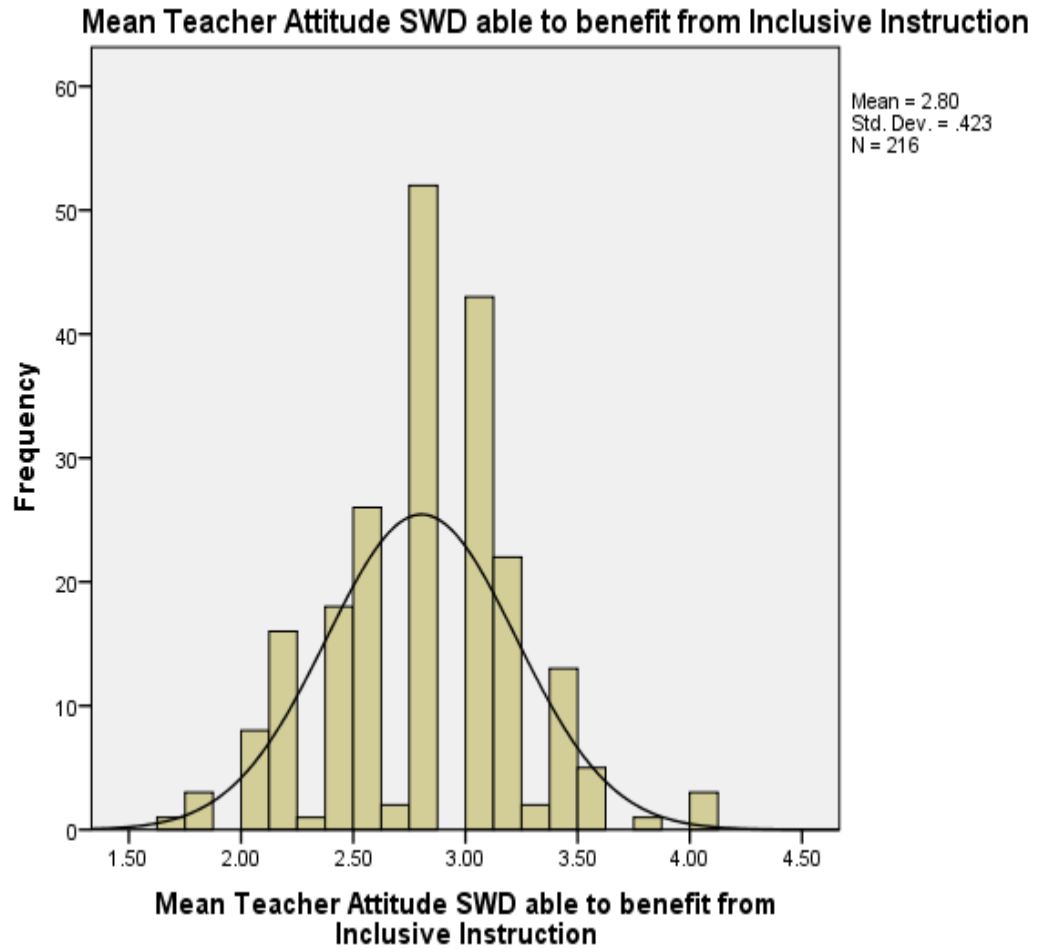


Figure 5. Teachers' Attitudes toward the Ability of SWD to Benefit from Inclusive Instruction.



BIBLIOGRAPHY

- Ahearn, E. (2009). *Growth Models and Students with Disabilities: Report of State Interviews*. Alexandria, VA: Project Forum, National Association of State Directors of Special Education. Retrieved September 15, 2012, from <http://www.projectforum.org/docs/GrowthModelsandStudentswithDisabilities-ReportofStateInterviews.pdf>.
- Albrecht, S. & Joles, C. (2003), Accountability and Access to Opportunity: Mutually exclusive tenets under high-stakes testing mandate. *Preventing School Failure*, 47(2), 86-91.
- Altman, J. R., Lazarus, S. S., Quenemoen, R. F., Kearns, J., Quenemoen, M., & Thurlow, M. L. (2010). *2009 survey of states: Accomplishments and new issues at the end of a decade of change*. Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes.
- American Educational Research Association, American Psychological Association, & National Counsel on Measurement in Education. (1999). *Standards for educational and psychological testing*. American Educational Research Association: Washington, DC.
- American Educational Research Association. (2000, July). *AERA position statement on high-stakes testing in pre-K–12 education*. Washington, DC: Author. Retrieved January 30, 2011, from <https://www.aera.net/policyandprograms/?id378>.

Baumgartner, T., Lipowski, M., & Rush, C. (2003). *Increasing reading achievement of primary and middle school students through differentiated instruction.*

Unpublished doctoral dissertation, Saint Xavier University, Chicago.

Biddle, S. (2006). Attitudes in education: Assessing how teachers' attitudes about inclusion of learning disabled students affects their use of accommodations.

The Science Teacher, March, 52-56.

Brehm, S. S., & Kassir, S. M. (1996). *Social psychology.* Boston: Houghton Mifflin.

Brookhart v. Board of Education, 699 F.2d 179 (5th Cir. 1983).

Brophy, J. (1982). Research on the self-fulfilling prophecy and teacher expectations.

Institute for Research on Teaching. Michigan State University.

Brophy, J., & Good, T. L. (1970). Teachers' communication of differential

expectations for children's classroom performance: Some behavioral data.

Journal of Educational Psychology, 61, 365-374.

Brophy, J., & Good, T. (1974). *Teacher-student relationships: Causes and*

consequences. New York: Holt, Rinehart, & Winston.

Bulgren, J., Marquis, J., Deshler, D., Schumaker, J., & Lenz, B. (2006). The

instructional context of inclusive Secondary general education classes:

Teachers' instructional roles and practices, curricular demands, and research-

based practices and standards. *Learning Disabilities: A Contemporary Journal*. 4(1), 39-65.

Chudowsky, N., Chudowsky, V., and Keber, N. (2009). *State Test Score Trends*

Through 2007–08, Part 4: Has Progress Been Made in Raising Achievement for Students with Disabilities? Washington, DC: Center on Education Policy.

Retrieved September 15, 2012, from

<http://www.edweek.org/media/studentswdisabilities.pdf>

Cook, B. G. (2001). A comparison of teachers' attitudes toward their included

students with mild and severe disabilities. *The Journal of Special Education*, 34 (2), 203-213.

Crano, W., & Mellon, P. (1978). Causal influence of teachers' expectations on

children's academic performance: A cross lagged panel analysis. *Journal of Educational Psychology*, 71, 169-182.

Crawford, L., Almond, P., Tindal, G., & Hollenbeck, K. (2001). Teacher perspectives

on inclusion of students with disabilities in high-stakes assessments. *Special Services in the Schools*, 18(1/2), 95–118.

Crawford, L., & Tindal, G. (2006). Policy and practice: Knowledge and beliefs of

education professionals related to the inclusion of students with disabilities in a state assessment. *Remedial and Special Education*. v27 (4), 208-217.

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches*. Los Angeles: SAGE Publications, Inc.

Darley, J. and Fazio, R. (1980). Expectancy confirmation processes arising in the social interaction sequence. *American Psychologist*, 35, 867-881.

DeBard, R., & Kubow, P. K. (2002). From compliance to commitment: The need for constituent discourse in implementing testing policy. *Educational Policy*, 16, 387-405.

Debra P. v. Turlington, 644 F.2d 397 (5th Cir. 1981).

Deno, S. L. (1985). Curriculum-based measurement: The emerging alternative. *Exceptional Children*, 52, 219-232.

Deno, S., Fuchs, L., Marston, D., & Shinn, J. (2001). Using curriculum-based measurement to establish growth standards for students with learning disabilities. *School Psychology Review*, 30, 507-524.

Destefano, L., Shriner, J., & Lloyd, C. (2001). Teacher decision making in participation of students with disabilities in large scale assessments. *Exceptional Children*, 68, 7-22.

Disability Rights Advocates (2001). *Do No Harm-High Stakes Testing and students with learning disabilities*. Oakland, CA: Author. Retrieved January 30, 2011, from www.dralegal.org.

- Dillon, W. R. & Goldstein, M. (1984). *Multivariate Analysis: Methods and Applications*. New York, NY: John Wiley and Sons Inc.
- Ellins, J. & Porter, J. (2005). Departmental differences in attitude to special educational needs in the secondary school. *British Journal of Special Education*, 32(4), 188-195.
- Education of All Handicapped Children Act (EHCA) of 1975, Pub. L. No. 94-142, §2, 89 Stat. 77. (1975).
- Fletcher, J., Francis, D., Boudousquie, A., Copeland, K., Young, V., Kalinowski, S., & Vaughn, S. (2006). Effects of accommodations on high stakes testing for students with reading disabilities. *Exceptional Children*, 72, 136-150.
- Fosnot, C. T. (1996). *Constructivism: Theory, perspectives, and practice*. New York: Teacher's College Press.
- Fuchs, L. S., & Fuchs, D. (1993). Formative evaluation of academic progress: How much growth can we expect? *School Psychology Review*, 22 (1), 1-30.
- Fuchs, L., & Fuchs, D. (1996). Combining performance assessment and curriculum-based measurement to strengthen instructional planning. *Learning Disabilities Research and Practice*, 11, 183-192.
- Fuchs, L. S., Fuchs, D., Eaton, S. B., Hamlett, C., Karns, K. (2000). Supplementing

teacher judgments of test accommodations with objective data sources. *School Psychology Review*, 29, 65-85.

Gersten, R., Walker, H. & Darch, C. (1988). Relationship between teacher effectiveness and their tolerance for handicapped students. *Exceptional Children*, 54, 433-438.

Harris, M., & Rosenthal, R. (1985). Mediation of interpersonal expectancy effects: 31 meta-analyses. *Psychological Bulletin*, 97 363-385. (Beginning of 4 Factor Theory)

Harr-Robins, J., Song, M., Hurlburt, S., Pruce, C., Danielson, L., Garet, M., and Taylor, J. (2012). *The Inclusion of Students With Disabilities in School Accountability Systems* (NCEE 2012-4056). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.

Hornstra, L. Dennessen, E. Bakker, J. van den Bergh, L. & Voeten, M. (2010). Teacher attitudes toward dyslexia: Effects on teacher expectations and the academic achievement of students with dyslexia. *Journal of Learning Disabilities*, 43(6), 515-529.

Humphreys, L., & Stubbs, J. (1977). A longitudinal analysis of teacher expectation, student expectation, and student achievement. *Journal of Educational Measurement*, 14, 261-270.

Hurwitz, J., Elliot, S., & Braden, J. (2007). The influence of test familiarity and student disability status upon teachers' judgments of students' test performance. *School Psychology Quarterly*, 22(2), 115-144.

Individuals with disabilities Education Act Amendments of (IDEA) 1997, P.L. 105-17, U.S.C. (1997).

Individuals with Disabilities Education Act (IDEA) of 2004, P. L. 108-446, 20 U.S.C. (2004).

Infoworks LIVE! A Rhode Island Education Data Initiative (2012). Retrieved online March 31, 2012, from <http://infoworks.ride.ri.gov>.

Jussim, L., & Eccles, J. (1992). Teacher expectations: II. Construction and reflection of student achievement. *Journal of Personality & Social Psychology*, 63(3), 947-961.

Katsiyannis, A., Zhang, D., Ryan, J. B., & Jones, J. (2007). High-stakes testing and students with disabilities: Challenges and promises. *Journal of Disability Policy Studies*, 18, 160-167.

Kettler, R., Niebling, B., Mroch, A., Feldman, E., Newell, M., Elliot, S., Kratochwill, T., & Bolt, D. (2005). Effects of testing accommodations on math and reading scores: An experimental analysis of the performance of students with and without disabilities. *Assessment for Effective Intervention*, 31, 38-48.

Klehm, M. (2013). High-stakes testing and students with disabilities: A teacher

attitude survey (HST-SWD). *Teacher attitudes: The effects of teacher beliefs on teaching practices and achievement of students with disabilities.*

Unpublished doctoral dissertation, University of Rhode Island and Rhode Island College.

Koretz, D. (1997). Using student assessment for educational accountability. In E. A. Hanushek & D. W. Jorgenson (Eds.), *Improving America's schools: The role of incentives* (pp. 171-195). Washington DC: National Academy Press.

LaVoie, J., & Adams, G. (1973). Pygmalion in the classroom: An Experimental investigation of the characteristics on teacher expectancy. *Midwest Psychological Association*. Chicago, Illinois, May, 1973.

Lawrence-Brown, D. (2004). Differentiated instruction: Inclusive strategies for standards-based learning that benefit the whole class. *American Secondary Education*, 32, 34–62.

Levy, H. M. (2008). Meeting the needs of all students through differentiated instruction: Helping every child reach and exceed standards. *Clearing House: A Journal of Educational Strategies, Issues, and Ideas*, v81, n4, 161-164.

Lombardi, A., & Murray, C. (2010). Measuring university faculty attitudes toward disability: Willingness to accommodate and adopt universal design principles. *Journal of Vocational Rehabilitation*, 34, 43-56.

McLeskey, J., & Waldron, N. L. (2002). Inclusion and school change: Teacher

perceptions regarding curricular and instructional adaptations. *Teacher Education and Special Education*, 25,(1), 41-54.

McTighe, J., & Brown, J. (2005). Differentiated instruction and educational standards: Is détente possible? *Theory Into Practice*, 44, 234–244.

Mehrens, W. (1998). Consequences of assessment: What is the evidence? *Education Policy Analysis Archives* 6(13). Retrieved online August 30, 2012, from <http://epaa.asu.edu/v6n13.html>.

Merton, R. K. (1948). The self fulfilling prophecy. *Antioch Review*, 8, 193-210.

McDonnell, L. M., McLaughlin, M., & Morison, P. (Eds.). (1997) *Educating one and all: Students with disabilities and standards based reform*. Washington, DC: National Academy Press.

No Child Left Behind Act of 2001, P.L. 107-110, 115 Stat. 1425.

Olson, L. (2004). Enveloping expectations. *Education Week*, 23, 8–20.

O’Neil, P. (2001). Special education and high stakes testing for high school graduation: An analysis of current law and policy. *Journal of Law and Education*, 30(2), 185-222.

Park, P., Singer, G. H., & Gibson. (2005). The Functional Effect of Teacher Positive and Neutral Affect on Task Performance of Students With Significant Disabilities. *Journal of Positive Behavior Interventions*, v7, (4), 237–246.

Reid, D. K. & Valle, J. W. (1996). A Constructivist perspective from the emerging

field of disability studies. In Fosnot, C. T. (Eds.). *Constructivism: Theory, perspectives, and practice* (pp. 150-171). New York: Teacher's College Press.

Rist, R. (1970). Student social class and teacher expectations: The self-fulfilling prophecy in ghetto education. *Harvard Educational Review*, 40, 411-451.

Rock, M. L., Gregg, M., & Ellis, E. (2008). REACH: A framework for differentiating classroom instruction. *Preventing School Failure*, v52, n2, 31-47.

Rosenthal, R. (1997). Interpersonal Expectancy Effects: A 40 Year Perspective. American Psychological Association Convention. (Chicago, Illinois, August 16, 1997).

Rosenthal, R., & Jacobson, L. (1968). *Pygmalion in the classroom: Teachers' expectation and pupils' intellectual development*. New York: Holt, Rinehart and Winston.

Rosnow, R., & Rosenthal, R. (1997). *People studying people: Artifacts and ethics in behavioral research*. New York: W.H. Freeman.

Shim, M. K., Felner, R. D., Shim, E., & Brand, S. (2000). Measures of instructional practices in middle grades. Annual Meeting of the American Statistical Association: Section on survey research methods (pp. 1-5). Kingston: University of Rhode Island.

Schute, A, Villwock, D., Whichard, S., & Stallings, C. (2001). High stakes testing and

expected progress standards for students with learning disabilities: A five year study of one district. *School Psychology Review*, 30(4), 487-506.

Taylor, G., Shepard, L, Kinner, F., & Rosenthal, J. (2003). A survey of teachers' perspectives on high-stakes testing in Colorado: What get taught, what gets lost (CSE Report 588). Santa Cruz: University of California, Center for Research on Evaluation, Diversity, and Excellence.

The Alternate Assessment Consortia: National Center and State Collaborative. (2012, January 6). Retrieved November 11, 2012 from http://www.ride.rigov/assessment/DOCS/NCSC_Summary_February_2012_ET.S.pdf

Thomas B. Fordham Institute. (2009). *The Accountability Illusion: Rhode Island*. Thomas B. Fordham Institute.

Thompson, S., & Thurlow, M. (2001). State special education outcomes: A report on state activities at the beginning of a new decade. Minneapolis, MN: University of Minneapolis, National Center on Educational Outcomes. Retrieved September 9, 2012, from <http://www.cehd.umn.edu/NCEO/OnlinePubs/statereports.html>.

Thurlow, M., & Johnson, D. (2000). High stakes testing of students with disabilities. *Journal of Teacher Education*, 51 (4), 305-315.

- Thurlow, M., Seyfarth, A., Scott, D., & Ysseldyke, J. (1997). *State assessment policies on participation and accommodations for students with disabilities: 1997 update* (Synthesis Report 29). Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes, (ERIC Document Reproduction Service No. 425 595).
- Tindal, G., & Fuchs, L. (1999). *A Summary of research on testing accommodations: What we know so far*. Lexington: University of Kentucky Mid-south Regional Resource Center.
- Tomlinson, C. A. (2000). Reconcilable differences: Standards-based teaching and differentiation. *Educational Leadership*, 58, 6–11.
- Tomlinson, C. A. (2004). Sharing responsibility for differentiating instruction. *Roper Review*, 26, 188.
- U.S. Department of Education, Office of Civil Rights. (2000). The use of tests as part of high-stakes decision-making for students: A research guide for educators and policy makers. Washington DC: Author.
- Vogler, K. (2002). The impact of high-stakes, state-mandated student performance assessment on teachers' instructional practices. *Education*, 123(1), 39-51.
- Ward, M. J., Montague, N. & Linton, T. H. (2003). Including students with disabilities and achieving accountability: Educators' emerging challenge. Texas A&M University: Corpus Christi. (ERIC Document Reproduction Service No. ED481111).

Williams, T. (1976). Teacher prophecies and the inheritance of inequality. *Sociology of Education*, 49, 223-236.

Wittrock, M. C. (1986) Students Thought Process. Handbook of Research on Teaching. New York. MacMillian.

Woodrock, S., &Vialle, W. (2011). Are we exacerbating students' learning disabilities? An investigation of preservice teachers' attributions of the educational outcomes of students with learning disabilities. *Annals of Dyslexia*, 61(2). 223-241.

Ysseldyke, J., Nelson, J. R., Christenson, S., Johnson, D., Dennison, A., Triezenberg, H., Sharpe, M., & Hawes, M. (2004). What we know and what we need to know about the consequences of high-stakes testing for students with disabilities. *Exceptional Children*, 71(1), 75-94.