

**VIRGINIA TEACHERS' PERCEPTIONS AND KNOWLEDGE OF TEST  
ACCOMMODATIONS FOR STUDENTS WITH DISABILITES**

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Presented to

The Faculty of the School of Education

The College of William and Mary in Virginia

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In Partial Fulfillment  
Of the Requirements for the Degree  
Doctor of Education

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by  
William Michael Brown  
March 2007

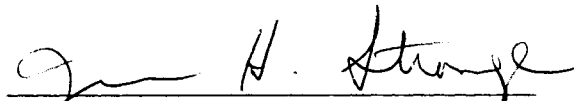
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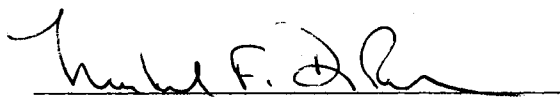
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## DEDICATION

This dissertation is dedicated to my wife, Catherine. Your encouragement and belief in me started me on this journey and your guidance, love, and support saw me through every step of the way. You are truly my best friend.

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ABSTRACT

The purpose of this study was to examine teachers' perceptions and knowledge of test accommodations for students with disabilities. This survey, which was sent to 600 general education and special education teachers in Virginia, collected information on teachers' perceptions of their own preparedness, the fairness and helpfulness of test accommodations, and their basic knowledge of test accommodations for students with disabilities. Teachers reported that they were generally confident in their knowledge, but that they perceived their college teacher preparation programs and, to a lesser extent, their staff development programs, were lacking. In regards to the fairness of test accommodations both special and general education teachers also felt that it is fair that only students with disabilities and English as a Second Language students receive test accommodations. Both groups also perceived that all 10 of the specific test accommodations presented in the survey were either *very helpful* or *helpful* to students and that reading the test aloud was the most helpful test accommodation.

Both special education teachers and general education teachers demonstrated a very good knowledge of test accommodations for students with disabilities. There was little difference between the two groups in their knowledge of test accommodations for students with disabilities.

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## Chapter 1: The Problem

### *Introduction*

The standards-based reform movement that began with publication of *A Nation At Risk* over two decades ago (National Commission on Excellence in Education, 1983) has spread to all 50 states since that time and has affected all aspects of elementary, secondary, and post-secondary education. This reform movement, driven by several federal mandates and public dissatisfaction with the nation's education system, led to the states' establishing higher academic standards and developing statewide accountability systems that measure students' progress.

One result of this reform movement is that the federal government enacted several laws designed to improve student achievement and to increase state and local accountability. The most significant and far-reaching of these laws during the past 10 years have been the Goals: 2000: Educate America Act (Goals 2000), the 1997 Amendments to the Individuals with Disabilities Education Act (IDEA 97), the No Child Left Behind Act of 2001 (NCLB), and the Individuals with Disabilities Education Improvement Act (IDEA 04). Spurred by these federal mandates, all states now have some type of assessment program to measure the academic achievement of all students, including students with disabilities, limited English proficiency students, economically disadvantaged students, and students from major racial and ethnic groups (Goals 2000, 1994; IDEA '97, 1997; NCLB, 2001; Thurlow, Elliott, & Yssle, 2003).

### *Participation of Students with Disabilities in State Assessments*

While every state now has some type of statewide assessment program in which all students are required to participate (Thompson & Thurlow, 2001), this was not always

the case. Until the enactment of the IDEA 97, a reauthorization of the Education for All Handicapped Children Act of 1975 (EAHCA), the states' emphasis on student achievement and the accompanying accountability programs did not extend to students with disabilities. These students were often excluded from district and statewide assessment programs for a variety of reasons. Primary among these reasons is the fact that students with disabilities generally score lower on assessments than students without disabilities (McKinney, 1983; Safer, 1980). Consequently, some policy makers and school leaders, faced with public pressure to show increased student achievement, excluded students with disabilities in district and statewide assessment programs so as not to have these students' scores lower the overall test performance (Shepard, Taylor, & Betebenner, 1998).

Pitoniak and Royer (2001) found that students with disabilities were often excluded from assessment programs because "parents may not have wanted their children to experience failure by not doing well on the assessments, or school personnel may not have felt the assessment would be appropriate or worthwhile for those students" (p. 56). No matter what the reason, a significant number of students with disabilities were excluded from state assessments for many years. The number of children affected is impossible to determine. In 1996 the National Center on Educational Outcomes (NCEO) found that participation rates of students with disabilities in statewide assessments ranged from a low of 0% to a high of 100% (Erickson, Thurlow, & Ysseldyke, 1996). Three years later the NCEO, after examining the information from 23 states, reported that participation rates for students with disabilities still varied considerably, from 15% to 100% (Thompson & Thurlow, 2001).

The NCEO reviewed the 2000-2001 participation rates for five states and found that they ranged from 30% in West Virginia to 97.4% in Kansas (Thurlow, Wiley, Bielinski, 2003). In Virginia, the Virginia Department of Education (VDOE) reported that approximately 77% of students with disabilities participated in the 1997-1998 administrations of third, fifth, and eighth grade statewide assessment program, the Standards of Learning (SOL) assessments, and about 74% of students with disabilities in the same three grades participated in the 1998-1999 administration (Virginia Department of Education [VDOE], 2000). These rates are considerably less than the 95% participation rate for students with disabilities that the NCLB Act requires beginning in the 2005 – 2006 school year. The Virginia SOL assessments are currently given to students in the third, fifth, and eighth grades in mathematics, science, English, and history/social science and after the completion of some courses in the ninth through twelfth grades.

The exclusion of students with disabilities in state assessment programs has had significant implications for these students because “It is generally believed that students who are not measured in educational accountability systems tend to be ignored when educational reforms are enacted” (Elliott, Erickson, Thurlow, & Shriner, 2000, p. 39). The participation of students with disabilities in state assessment programs is needed so that these students can reap the same benefits from educational reforms of the past two decades as do non-disabled students.

The participation rates of students with disabilities in statewide assessment programs are steadily increasing in most states. The NCEO found in a 2001 survey of State Directors of Special Education that the participation of students with disabilities in

statewide assessment programs increased over previous years in half of the states and remained about the same in 25% of the states. Only one state reported a lower participation rate than in previous years (Thompson & Thurlow, 2001).

While the IDEA 97 required that students with disabilities be included in state and district assessments, the NCLB Act goes much further by actually instructing the states to develop high academic standards for all students and to develop annual assessment programs in specific subjects to measure student achievement in those academic areas. The law also specifically states that students with disabilities must participate in these assessments and must be afforded the accommodations provided under IDEA 97, and their test scores must be disaggregated from the total and reported separately.

Beginning in the 2005 – 2006 school year, all students must be assessed in reading/language arts, mathematics, and social studies every year in grades 3 through 8 and at least once in grades 9 through 12. Additionally, beginning in the 2007 – 2008 school year, all students must be assessed in science at least once in grades 3 through 5, once in grades 6 through 9, and once in grades 10 through 12. The law requires that 95% of all students with disabilities in every school in the country be tested (NCLB, 2001). While the participation rates of students with disabilities in state assessment programs have increased in recent years, the numerous federal and state laws and policies that have been enacted have had little effect on improving the relatively poor academic achievement of students with disabilities (Moody, Vaughn, Hughes, & Fisher, 2000). The reasons for this are not clear. The IDEA 97 stated that low academic performance of students with disabilities had been limited by low expectations “that in turn narrowed student access to the general curriculum” (deFur, 2002, p. 204). The IDEA 97 was

passed, in part, as a way to improve the achievement of students with disabilities by expanding their participation in the general educational curriculum. Mandating the participation of students with disabilities in statewide assessments is seen as the key to giving these students access to the general education curriculum.

#### *Test Accommodations for Students with Disabilities*

The IDEA 97 also recognized that some students have disabilities that interfere with the accurate measurement of their skills and abilities (Pitoniak & Royer, 2001) by requiring states to allow “appropriate accommodations and modifications, as necessary” (IDEA, 1997) when they take state and district assessments. The NCLB Act also requires that students with disabilities participate in annual state assessments, using the accommodation guidelines set out in IDEA 97. Unfortunately, neither of the statutes includes definitions of the terms *accommodations* and *modifications*.

While researchers have proffered several definitions of *accommodations* over the years (Burns, 1998; Fuchs & Fuchs, 1999; Pitoniak & Royer, 2001), Fuchs and Fuchs (1999) provide a very succinct definition that encompasses the purpose of test accommodations: “Test accommodations are changes in standardized test conditions designed to level the playing field between students with and without disabilities” (p. 24).

There are numerous accommodations, ranging from extending the time limit on a test, to having test directions and test questions read aloud to a student, to allowing the student to use a calculator. Test accommodations are used to change the (a) presentation format of the test, (b) presentation equipment and materials that are used, (c) response format, (d) test setting, and (e) timing (Thurlow, Lazarus, Thompson, & Robey, 2002).

### *Teacher Knowledge of Accommodations*

Determination of what, if any, accommodations are afforded students with disabilities is determined by an Individualized Education Program (IEP) team. All IEP teams are charged with writing a formal document, the IEP, that contains the academic program for the student. It contains details concerning what individualized special education services are provided to the student, the student's participation in state and district assessment programs, and what accommodations, if any, are to be made available to the student during classroom instruction and when taking state and district assessments.

The IDEA 97 mandates the composition of the IEP team. It must include (a) a general education teacher, if the student with a disability is, or may be, participating in the regular education environment, (b) a special education teacher, (c) parents of the student, (d) a representative of the public agency with a knowledge of available resources and the general curriculum, and who is qualified to supervise the provision of specially designed instruction to meet the unique needs of children with disabilities, (e) an individual who can interpret the instructional implications of evaluation results, (f) individuals having knowledge or special expertise regarding the child, including special services personnel, and (g) the child, if appropriate (IDEA, 1997). The most recent reauthorization of IDEA in 2004 made no changes to the composition of the IEP team requirements.

The IEP team is charged with determining what accommodations, if any, are afforded to students with disabilities (Thurlow, Elliott, & Ysseldyke, 2003). The IEP team includes special education teachers and, if the student is participating in, or may

participate in the general education environment, a general education teacher. It is important that the team's accommodation decisions are a collaborative effect and "reflect input from several team members, not just signing off on the recommendation made by an individual member of the team" (p. 42). Given that both special education and general education teachers provide routine instructional and accommodations to the student, their knowledge of accommodations is critical to the team when making accommodation decisions for district and statewide assessments.

Thurlow, Elliott, and Ysseldyke (2003) wrote that "both the general and special education teachers are in the best position collaboratively to coordinate decisions about inclusive assessments and accommodations" (p. 159). Other members of the IEP team can make valuable contributions, but only the general education and the special education teachers have specific knowledge about what accommodations are needed by the student.

Prior to the enactment of the IDEA 97, the participation of the general education teacher on IEP teams was optional. Under this revision to the IDEA, however, an "IEP cannot be written without the assistance and cooperation of the regular classroom teacher" (Kubiszyn & Borich, 2000, p. 434). The value of the general education teacher on the IEP team cannot be overstated. They need to be "integrally involved in determining the accommodations to which students have access during all state and district assessments" (Thurlow & Johnson, 2000, p. 311). As members of the IEP team, both special education and general education teachers need to have knowledge of state accommodation policies and procedures to ensure that students with disabilities are afforded the same educational opportunities as their non-disabled peers.

There are three professional organizations, the National Board of Professional Teaching Standards (NBPTS), the Council for Exceptional Children (CEC), and the Interstate New Teacher Assessment and Support Consortium (INTASC) that have developed professional standards for teachers that, among other requirements, include knowledge of accommodations. These standards require that teachers (a) understand that accommodations may be required for some students with disabilities, (b) collaborate with others to incorporate accommodations into assessment, (c) plan and design accommodations, and (d) make decisions regarding accommodations are aligned with state guidelines and are the same as those used routinely in the classroom.

As members of the IEP team, general education teachers can and should make significant contributions when the team makes accommodation decisions for students with disabilities. The general education teacher should be knowledgeable of the student's disability, strengths, and weaknesses, and may actually spend more time with the student than the special education teacher does. (Thurlow, Elliott, & Ysseldyke, 2003). General education teachers bring invaluable knowledge to the IEP decision making process on test accommodations given that the accommodations used in district and statewide assessments are the same ones that these teachers use in daily instruction (Thurlow, 2001). The importance of general education teachers on the IEP team was emphasized by Kubiszyn and Borich (2000): "The classroom teacher may be the only professional on the IEP team with general curriculum expertise. They evaluate the academic performance and progress of special learners in the general curriculum; the IEP team will rely largely on data gathered in the regular classroom-the domain of the classroom teacher" (p. 449-450). In Virginia, the IEP team is specifically charged with deciding on the "need for an

selection of accommodations, or the non-participation in a Standards of Learning assessment” (VDOE, 2002b, p. 2).

The INTASC *Model Standards* also contains two standards that require general education teachers who teach students with disabilities have knowledge of test accommodations. Standard 8.03 requires that “all teachers collaborate with others to incorporate accommodations and alternate assessments into the ongoing assessment process of students with disabilities when appropriate.” Standard 8.05 states that “all teachers understand that students with disabilities are expected to participate in district and statewide assessments and that accommodations or alternate assessments may be required when necessary.”

#### *Research on Teachers’ Knowledge of Test Accommodations*

An examination of the literature determined that there have been very few studies that specifically addressed teachers’ knowledge of test accommodations for students with disabilities. In a small study of 43 special education teachers and 17 general education teachers, Siskind (1993) found that “neither special or regular educators are well-informed” (p. 154) about what test modifications were allowed for students with disabilities on state-mandated tests in South Carolina. While citing several limitations in the study including the small sample size, a non-representative sampling, and the unequal numbers of special education and general education teachers, Siskind reported that the percentage of special education teachers and general education teachers who answered the 51-item survey correctly were “remarkably consistent” (p.155).

Hollenbeck, Tindal, and Almond (1998), using an instrument developed by the Oregon State Department of Special Education, surveyed 166 Oregon teachers to

determine their knowledge of allowable accommodations for statewide assessments. The sample of surveyed teachers, 90 special education teachers and 76 general education teachers, was asked to identify which of 16 accommodations were allowed on statewide assessments. Overall, 54.8% of teachers correctly identified all 16 accommodations. There was very little difference between the performance of the special education teachers and the general education teachers. Special education teachers averaged 47.4% correct and general education teachers averaged 51.6% correct.

In 1996 Jayanthi, Epstein, Polloway, and Bursuck (1996) conducted a national survey of 401 general education teachers' perceptions of testing accommodations. This study examined, among other aspects of accommodations, teachers' perceptions of the fairness of only allowing accommodations for students with disabilities and not other students, the helpfulness of accommodations, and the ease in which accommodations could be made in the classroom.

#### *Purpose of the Study*

The purpose of this study is to examine Virginia general education and special education teachers' perceptions and knowledge of test accommodations for students with disabilities when they take the Virginia SOL assessments. The SOL assessments are part of the statewide accountability program and must be taken by all students in Virginia at the end of the third, fifth, and eighth grades and after completion of specified courses in high school. The IDEA 97 requires that students with disabilities be included in this assessment program and mandates that they be given appropriate accommodations if they are required (IDEA 97, 1997).

### *Research Questions*

The study will address the following specific questions using data collected from a survey of general and special education teachers in Virginia.

1. What are special education teachers' perceptions of their preparedness, the fairness of test accommodations, and the helpfulness of test accommodations for students with disabilities?
2. What is special education teachers' knowledge of test accommodations for students with disabilities?
3. What are general education teachers' perceptions of their preparedness, the fairness of test accommodations, and the helpfulness of test accommodations for students with disabilities?
4. What is general education teachers' knowledge of test accommodations for students with disabilities?
5. Do the perceptions of special education teachers differ from the perceptions of general education teachers with respect to their preparedness, the fairness of test accommodations, and the helpfulness of test accommodations for students with disabilities?
6. Does the knowledge of test accommodations for student with disabilities differ between general education teachers and special education teachers?

### *Significance of the Study*

As a society we are no longer content to teach only some of the nation's children, those who are the "easiest" to teach. Schools must now provide the same educational opportunities to virtually all students, including students with disabilities. These

educational opportunities include holding all students to a single set of academic standards and ensuring that all students are periodically assessed to measure their academic achievement. In the past, officials often had lower academic expectations for students with disabilities and consequently excluded them from state assessments that are intended to measure academic achievement. This exclusion policy prevented students with disabilities from reaping the same benefits as non-disabled students in many reform efforts. After all, if students with disabilities were not assessed, how could school, district, and state officials know what changes to make to improve the education of these students? The exclusion of students with disabilities in state assessment programs was a denial of educational opportunities and resulted in an incomplete and inaccurate perception of the success of our nation's schools. In the 2000–2001 school year students with disabilities made up 11.5% of the estimated school enrollment of students in pre-kindergarten through twelfth grades. Over 5.7 million children and youths with disabilities were not assessed regularly and were not given the same educational opportunities as non-disabled children (U.S. Department of Education, 2002).

The IDEA 97 and the NCLB Act have done a great deal to change this situation. Students with disabilities are now held to the same standards and they will also be included in the same state assessment programs as are non-disabled students. Students with disabilities who require accommodations will be afforded them when they participate in state assessment programs to eliminate or at least minimize the effect that a disability has on the knowledge or skill being measured. It is the responsibility of IEP team members to make the critical determination of what, if any, accommodations a child is afforded when taking state assessments. Both general education and special education

teachers, as members of the IEP team, have the responsibility of making this important decision. Teachers must have knowledge of the student's disability, the accommodations that are used during the student's instruction, and the Virginia accommodation policy before they can make fair accommodation decisions that ensure students with disabilities are given the same educational opportunities as non-disabled students.

An understanding of teachers' knowledge and perceptions of test accommodations for students with disabilities gained from this study will provide educational leaders with information to assist them in developing professional development opportunities at the school and district levels for all teachers of students with disabilities. Results from this study may also have implications for college teacher preparatory programs.

### *Definitions of Terms*

#### *General education teacher*

Refers to a licensed teacher employed in Virginia, who may or may not have a special education endorsement, and whose primary responsibility is teaching general education classes. These general education classes may or may not include students with disabilities.

#### *Individualized Education Program (IEP)*

A written statement for a child with a disability that specifies the educational needs of the child and outlines the special education and related services that will be provided to meet those needs, including instructional and assessment accommodations (IDEA 04, 2004; VDOE, 2002a).

### *Special education teacher*

Refers to a licensed teacher employed in Virginia who has obtained full or conditional state certification as a special education teacher and who is currently teaching students with disabilities in a school in Virginia. The special education teacher's responsibilities may or may not include teaching students with disabilities along with non-disabled students in a general education classroom.

### *Students with disabilities*

A student with a disability is “a child 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 who, by reason thereof, needs special education and related services” (IDEA 04, 2004).

### *Test accommodation*

Any change in the setting of a test, the way in which the test is presented or scheduled, or any change in the way that the person being tested responds to the test that does not change the construct that the test measures (Tindal, Hollenbeck, Heath, & Almond, 1997).

### *Limitations of the Study*

1. Participants may not respond honestly to all questions contained in the survey.
2. Participants may consult reference materials or obtain assistance from other individuals to better answer the survey questions.

3. The data collection period will include the last two weeks of August, 2006, a time when many teachers are on vacation. This may reduce the number of respondents.

*Delimitations of the Study*

The following are researcher-imposed delimitations of this study and should be considered when interpreting the results of this study.

1. The study participants will be limited to special education and general education teachers currently teaching in Commonwealth of Virginia school districts.
2. The sampling procedure will limit the generalizability of the study to teachers in the Commonwealth of Virginia.

## Chapter 2: Review of the Related Literature

This chapter reviews the related literature on Virginia teachers' knowledge and perceptions of test accommodations for students with disabilities. A discussion of the federal legislation requiring accommodations for students with disabilities, the various definitions and types of accommodations, as well as the participation and performance of these students on state assessments, precedes the discussion of teachers' knowledge and perceptions of test accommodations for students with disabilities.

### *Federal Legislation and Accommodations for Students with Disabilities*

The federal government has passed several pieces of legislation that specifically address accommodations for students with disabilities. The Education for All Handicapped Children Act of 1975 and its subsequent reauthorizations, the Individuals with Disabilities Education Act of 1990 (IDEA 90), the 1997 Amendments to IDEA (IDEA 97), the Individuals with Disabilities Education Improvement Act (IDEA 04), as well as the No Child Left Behind Act of 2001 (NCLB) all require that students with disabilities participate in state and district assessments and that these students be afforded accommodations, if needed, when taking the assessments.

### *The Education for All Handicapped Children Act and Test Accommodations*

In 1975, Congress passed the first federal legislation, the Education for All Handicapped Children Act, written with the express purpose of meeting the educational needs of students with disabilities. This act provides federal funds to help states defray the costs of educating students with disabilities in public schools. The intent of this legislation was to require that states provide students with disabilities with the same educational opportunities as non-disabled children by ensuring that students with

disabilities were afforded equal access to the nation's public schools. The act requires states to have a plan on file with the U.S. Department of Education that shows that students with disabilities are being provided with a free and appropriate education. In return, the federal government provides financial assistance to the states to help pay for some of the cost of special education services. The EAHCA was amended in 1990, and the law was renamed the Individuals with Disabilities Education Act (IDEA, 1990). Neither the EAHCA nor the IDEA addressed the participation of students with disabilities in state and district-wide assessment programs, nor did the bills specifically address accommodations for students with disabilities.

*The Individuals with Disabilities Education Act of 1997 and Test Accommodations*

Congress, having helped students with disabilities gain more access to public education with the passage of the IDEA in 1990, then turned its attention to improving the “performance and educational achievement of students with disabilities in both the special education and general education curricula” (Yell, 1998, p. 87) with the enactment of the IDEA 97. Two significant changes to the original IDEA illustrate this concern for improving the academic achievement of students with disabilities. Unlike the IDEA 90, which did not mention accommodations, the 1997 Amendments to IDEA required the states to ensure that students with disabilities are “included in general State and district-wide assessment programs, with appropriate accommodations.” (IDEA 04, 2004). The law also changed the composition of the Individualized Education Program (IEP) team by adding the requirement to include a general education teacher if the student with a disability is, or may be, participating in the regular education environment (IDEA 97, 1997). The original IDEA only required that the child's teacher be a member of the IEP

team, without specifying whether the teacher be a regular or a special education teacher. IDEA 97 now requires that both a special education teacher and a general education teacher, if the student is receiving instruction in general education classes, be included on the IEP team. This change was significant because it is one of the responsibilities of the IEP team to determine what, if any, accommodations are afforded a student with a disability.

The primary function of the IEP team is to develop an IEP that addresses the educational needs of the student with a disability. The IEP documents exactly how the school district and the individual school will meet those needs. The IEP includes, among other information, statements addressing a) the child's present level of performance, b) how the disability affects the child's involvement in the general curriculum, c) measurable annual goals, and d) any individual modifications in the administration of State or district-wide assessments of student achievement that are needed in order for the child to participate in the assessment (IDEA, 1997).

In 2000 the Office of Special Education Programs issued a memorandum stating that the phrase "modifications in the administration" should be viewed as a general term that would include both accommodations and modifications, as they are commonly used in assessment practice" (U.S. Department of Education, 2000, p. 7). In 2001 the U.S. Department of Education reiterated the IEP team's authority to determine what modifications and accommodations are to be used when a student with a disability participates in a state or district-wide assessments (U.S. Department of Education, 2001). As members of the IEP team, general education teachers are now required to participate in the process of determining what, if any, accommodations are provided to the student

with a disability during classroom instruction and when participating in district and statewide assessments.

*The No Child Left Behind (NCLB) Act of 2001 and Test Accommodations*

On January 8, 2002, President Bush signed into law the No Child Left Behind Act of 2001 (NCLB), the most recent reauthorization of the Elementary and Secondary Education Act (ESEA, 1965). The NCLB Act sets the goal of ensuring that every child in America is able to meet the high learning standards of the state where he or she lives. It requires that states regularly test all students to measure their academic achievement and to disaggregate these test scores by (a) economically disadvantaged students, (b) students from major racial and ethnic groups, (c) students with disabilities, and (d) students with limited English proficiency. States must also ensure that at least 95% of each of these groups who are enrolled in school participate in state assessment programs. Additionally, the law requires states to make “the reasonable adaptations and accommodations for students with disabilities, as defined in the IDEA 97, necessary to measure the academic achievement of such students relative to State academic content and State student academic achievement standards” (NCLB, 2001).

*The Individuals with Disabilities Education Improvement Act and Test Accommodations*

The most recent reauthorization of IDEA, the Individuals with Disabilities Education Improvement Act of 2004 (IDEA 04), while making substantive changes in several areas, did not alter the requirements for participation of students with disabilities in state and local assessment programs, nor did it alter the requirements to provide these students with appropriate accommodations. The new law, which went into effect on July 1, 2005, adds the requirement that IEPs must include a statement of any individual

accommodations that are necessary to measure the academic achievement and functional performance of the students with disabilities on state and district-wide assessments.

Table 1 presents information on the federal legislation requiring accommodations for students with disabilities.

Table 1

*Federal Legislation Requiring Accommodations for Students with Disabilities*

Legislation	Requirements for Accommodations
IDEA 97	Children with disabilities are “included in general and state and district-wide assessment programs, with appropriate accommodations, where necessary” (Section 612(a) (17)(A)).
NCLB	states must make “the reasonable adaptations and accommodations for students with disabilities, as defined under section 602(3) of the Individuals with Disabilities Education Act) necessary to measure the academic achievement of such students relative to State academic content and State academic achievement standards” (NCLB, Section 1111(3)(C)(ii)).
IDEA 04	“All children with disabilities are included in all general State and districtwide assessment programs, including assessments described under section 1111 of the Elementary and Secondary Education Act of 1965, with appropriate accommodations and alternate assessments where necessary and as indicated in their respective individualized education programs” (Section 612a (16)(A)).

### *Test Accommodations for Students with Disabilities*

Federal government interest in the need for providing test accommodations to individuals with disabilities has a history that spans more than fifty years. In 1946 the U. S. Civil Service Commission (CSC) started researching “ways to permit individuals with disabilities to enter federal service” (Fischer, 1994, p.18). Ten years later the CSC actually began modifying tests for individuals with visual impairments and expanded their research into the question of the validity of the modified tests. While the initial interest was in providing accommodations for individuals with physical disabilities, vision impairments, and hearing impairments, in the past several decades there has been more attention to providing accommodations to individuals with cognitive disorders such as learning disabilities (Pitoniak & Royer, 2001). Test accommodations for individuals with cognitive disorders do not guarantee a high or a higher test score and might have no impact on test performance whatsoever, but are intended to provide students with the opportunity to compete on a relatively even basis with nondisabled peers (Burns, 1998).

#### *Definitions of Test Accommodations*

Since 1997 the federal government has enacted two statutes that direct states to provide accommodations to students with disabilities: the IDEA 97 and the NCLB Act of 2001. The IDEA 97 requires that states include students with disabilities in state and district assessments and that they provide these students with appropriate accommodations, where necessary (IDEA, 1997). The NCLB Act also requires states to make reasonable adaptations and accommodations for students with disabilities (NCLB, 2001). While both of these statutes require the states to provide students with disabilities with accommodations, neither law provides a definition of *accommodation*. This lack of

federal guidance on the definition of accommodations has resulted in the individual states defining accommodations as they see fit. Thurlow, Erickson, Spicuzza, Vieburg, & Ruhland (1996) found that some states have policies with strict definitions of accommodations while others allow for much more flexibility.

There is also a lack of a consensus among educators on the definition of an accommodation. Indeed, Burns (1998), recognizing the many definitions, wrote that a test accommodation “is defined by legislative mandate (e.g., state regulations), philosophy, and use” (p.16). He also offered his own definition of an accommodation as “an adaptation, modification, alternative test or a test exemption which eliminates, mitigates or minimizes the effect(s) of a disability on the factor being assessed, except where the skill is the factor that the test purports to measure” (p. 16).

The failure to develop a generally accepted definition has been complicated by the fact that the terms *accommodation*, *modification* and *adaptation* have often been used interchangeably over the years (Thurlow, Ysseldyke, & Silverstein, 1993). Although the majority of states use the term *accommodation* to describe test changes that do not change the construct of a test, Thurlow & Weiner (1999) found that five states, Florida, Maine, New Mexico, New York, and Ohio, used the term *modification* in lieu of *accommodation* when describing valid test changes.

While the terms *accommodation* and *modification* are used interchangeably, Hollenbeck, Tindal, and Almond (1998) argue that not only are there clear differences between the terms but that *accommodations* and *modifications* are “diametrically opposed constructs.” Hollenbeck et al. continued by stating that “accommodations provide access to, but do not change the test, whereas modifications do change the test” (p. 176).

The Standards for Educational and Psychological Testing (American Educational Research Association, American Psychological Association, and National Council on Measurement in Education (AERA/APA/NCME, 1999) defines an accommodation as “any action taken in response to a determination that an individual’s disability requires a departure from establish testing protocol” (p. 101).

In their 2001 review of state policies on assessment and accommodations the NCEO offered this definition of accommodations:

Accommodations are those changes intended to enable a student with a disability to participate in state or district assessments, or for the students to better show knowledge and skills. Accommodations can be categorized in a variety of ways. For this report, we organize accommodations into five categories: presentation, presentation equipment and materials, response, scheduling/timing, and setting (Thurlow, Lazarus, Thompson, & Robey, 2002, p. 8).

Finally, Thurlow, Elliott, and Ysseldyke (2003) provide a very simple and concise definition of *accommodation* as “any change in material or procedures used for testing” (p. 30). A summary of the various definitions of *accommodations* is contained in Table 2.

Table 2

*Various Definitions of Accommodations*


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AERA/APA/NCME, 1999	“Any action taken in response to a determination that an individual’s disability requires a departure from established testing protocol” (p. 101).
Burns, 1998	“an adaptation, modification, alternative test or a test exemption which eliminates, mitigates or minimizes the effect(s) of a disability on the factor being assessed, except where the skill is the factor that the test purports to measure” (p. 16).
Hollenbeck, Tindal, and Almond, 1998	Accommodations “ provide access to, but do not change the test” (p. 176).
Thurlow, Elliott, and Ysseldyke, 2003	“any change in material or procedures used for testing” (p. 30).
Thurlow, Lazarus, Thompson & Robey, 2002	“Accommodations are those changes intended to enable a student with a disability to participate in state or district assessments” (p. 8).

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### *Types of Test Accommodations*

Just as there are several different definitions of accommodations, there are also different views on organizing the types of accommodations that are used. The Standards for Educational and Psychological Testing (AERA/APA/NCME, 1999) identifies six types of test accommodations: (a) modification of presentation format, (b) modification of response format, (c) modification of timing, (d) modification of test setting, (e) use of alternate assessments, and (f) using only part of a test. Only the first four of these accommodations apply to the standard administration of state assessment programs.

Since its inception in 1990, the National Center on Educational Outcomes (NCEO) has conducted extensive research on the states' participation and accommodation policies for students with disabilities. After examining the accommodations used by the states in 1999 the NCEO organized accommodations into five categories: (a) presentation format, (b) presentation equipment and materials, (c) response format, (d) test setting, and (e) timing (Thurlow, Lazarus, Thompson, & Robey, 2002).

#### *Presentation Accommodations*

Presentation accommodations are those that "alter the way in which the test is presented to a student" (Thurlow, et al., 2002, p. 14). Examples of presentation accommodations include (a) the use of Braille, (b) large print, (c) having either the entire test or a portion of it read aloud, (d) the use of a sign interpreter, and (e) having directions clarified or re-read. The two most frequently allowed presentation accommodations are large print and Braille, which are permitted in 49 states.

### *Equipment and Materials Accommodations*

Equipment and materials accommodations are either presentation-related or response related. They include the use of (a) magnification equipment that enlarges the print size of a test, and (b) amplification equipment such as FM systems and hearing aids, (c) adaptive or special furniture, (d) calculators, and (e) graph paper or templates.

### *Response Accommodations*

Response accommodations are changes in the way in which a student records the response to a test item. These accommodations include (a) using a proctor or scribe to record answers, (b) allowing the students to write responses in the test booklet rather on an answer sheet, (c) using a computer or other machine and the use of a tape recorder.

### *Scheduling/timing Accommodations*

Scheduling/timing accommodations are changes in the timing or scheduling of a test. These accommodations include allowing (a) extended time, (b) a break during the test, (c) the test to be administered over multiple sessions, (d) the test to be administered over several days, and (f) the test to be administered at a time that is most beneficial to the student.

### *Setting Accommodations*

Setting accommodations, which are changes in the test location or environment, include (a) individual administration of the test, (b) small group administration; (c) allowing a student to be tested while seated in a carrel, and (d) allowing the student to be tested in a separate room. The most controversial of setting accommodations is allowing a student to be tested at home. A total of 18 states allow this accommodation.

*Alternate Approaches to Categorizing Test Accommodations*

Taking yet a different approach to categorization of accommodations, CTB/McGraw-Hill (2001) has developed a framework for classifying accommodations based on the impact that the accommodation is expected to have on student performance and the “appropriate interpretation of student test scores” (p.5). There are three categories in this framework. Category 1 accommodations are those that are not expected to alter the interpretation of test scores. These accommodations can be treated “in the same manner as those for students who do not use accommodations” (p.5). Category 1 accommodations include large print tests, use of visual magnifying equipment, and allowing the student to mark responses in the test booklet. Category 2 accommodations are accommodations that may have an effect on student performance that should be “considered when interpreting individual criterion- and norm-referenced test scores” (p. 5). These accommodations include having the test read aloud. Category 3 accommodations are likely to change what the test measures. The use of Braille testing materials, the use of a dictionary on a writing test, and the paraphrasing of directions, stimulus material, questions, and/or answer choices are all category 3 accommodations..

Thurlow and Wiener (2001) organized accommodations based on the effect that they have on “the construct being tested or the comparability of scores obtained from accommodated and non-accommodated testing” (p. 1). Accommodations that do not change the construct or the comparability of scores are referred to as standard accommodations. Those accommodations that change what the test is designed to measure are referred to as modifications while in other states they are referred to as “non-allowed, nonstandard administrations, or non approved accommodations” (p. 2).

### *Use of Accommodations on State Assessments*

Just as there is no consensus on the definition and the types of accommodation, there is also no agreement on what accommodations are acceptable for students with disabilities among the states when participating in state assessments. Salvia and Ysseldyke (1995) found that the “practice of test accommodation runs the gamut from permitting no modifications and requiring that any students who are included in local, state, and national assessments take standard versions of tests being used to allowing extensive alternative testing procedures. The NCEO found that the participation rate of students with disabilities using accommodations during statewide assessments among the 12 states that responded to a survey varied from 8% to 82% (Thurlow, 2001).

The survey also found that accommodation usage not only varies among the states, it also varies among grade levels within the states. Although only 12 states responded to the survey and the data were incomplete in some instances, the NCEO reported that there is a general “downward trend of students using accommodations across grades” (Thurlow, 2001). Johnson, Kimball, Brown, and Anderson (2001) examined the performance of students with disabilities on the Washington Assessment for Student Learning and found that fourth grade students received more accommodations than did seventh grade students.

All 50 states now have policies addressing the procedures for affording particular groups of students with accommodations on district and statewide assessments (Thurlow, House, Boys, Scott, & Ysseldyke, 2000). Most states afford accommodations to three groups of students: students with disabilities, students with a Section 504 Plan, and limited English proficient students. There are, however, five states, Colorado, Kansas,

Oregon, Rhode Island, and Wyoming, that allow virtually all students to use accommodations without any restrictions. Minnesota allows setting and scheduling accommodations to all students, and Washington permits all students certain accommodations such as extended time, frequent breaks, carrels, preferential seating, and calming music (Thurlow, Lazarus, Thompson, & Robey, 2002).

Not all accommodations are allowed in all states. The NCEO reviewed state accommodation policies in 2002 (Thurlow, Lazarus, Thompson, & Robey, 2002) and identified the most frequently allowed accommodations, according to state policy documents. There is no single accommodation that is allowed, without limitations, in all 50 states. Large print and Braille, which are allowed in 49 states, are the two most frequently allowed accommodations. The most frequently allowed accommodations are summarized in Table 3.

Table 3  
*Most Frequently Allowed Accommodations in State Policies*

Accommodation	Number of states allowing accommodation
Large print	49
Braille	49
Dictate response to a proctor or scribe	49
Sign interpretation of directions	49
Small group administration	47
Read aloud questions	47
Individual administration	46
Read aloud directions	46
Testing with breaks	46
Extended time	45
Computer/machine response	45
Use of calculator	44
Amplification equipment	42
Magnification equipment	41
Write in test booklet	39
Read/reread/simplify/clarify directions	38
Separate room	38

*Note.* From “2003 State Policies on Assessment Participation and Accommodations,” by A. Clapper, A. Morse, S. Lazarus, S. Thompson, & M. Thurlow, 2005. (Synthesis Report 56) Minneapolis, MN: University of Minnesota, National Center of Educational Outcomes.

*Participation of Students with Disabilities in State Assessment Programs*

Prior to the passage of the Individuals with Disabilities Education Act Amendments of 1997 (IDEA 97), students with disabilities were routinely excluded from state and district assessments for several reasons. According to Thurlow (1997) and Ysseldyke, Thurlow, Langenfeld, Nelson, Teelucksingh, & Seyfarth (1998), one reason for this exclusion is that students with disabilities have been found to generally score lower on assessments than students without disabilities. Faced with public pressure to improve the performance of students with disabilities on assessments, some policy makers and educational leaders excluded them from assessment programs so as not to lower the overall performance results of the school, district, or state, a practice that Pitoniak and Royer (2001) described as “sinister” (p. 56).

Shepard, Taylor, & Betebenner (1998) found that some parents did not want their children to fail on high-stakes assessments and, consequently, were content to have their children exempt from state and district assessment programs. This parental concern, coupled with the belief held by some teachers and administrators that such assessments were not appropriate for students with disabilities, led to the exclusion of many of these students from assessment programs that were designed to measure the achievement of students.

In another study Elliott, Ysseldyke, Thurlow and Erickson (1998) identified four beliefs held by some teachers, administrators, and other decision makers that led to the exclusion of students with disabilities from assessments: (a) the tests were too difficult, (b) students with disabilities learn a different curriculum than their non-disabled peers, (c) students with disabilities need accommodations that are often not allowed on the

assessments, and (d) students with disabilities may become frustrated when taking the assessments. The enactment of the Individuals with Disabilities Education Act of 1997 (IDEA 97) required the inclusion of students with disabilities in district and statewide assessments mandatory, making all these arguments against including students with disabilities in state and district assessments moot.

#### *The Performance of Students with Disabilities on State Assessments*

The NCEO has found that “In general, the few studies that have been conducted on students with disabilities show that they do poorly when compared to peers without disabilities” (Langenfeld, Thurlow, & Scott, 1997, p. 11). In one of the earliest studies on the performance of students with disabilities on state assessments, Safer (1980) found that a large percentage of these students who took the 1977 administration of the *Florida Minimal Competency Exam* in their junior year of high school did not pass it. Only 1% of educable mentally retarded students, 17% of emotionally disturbed students, and 17% of students with learning disabilities passed the mathematics subtest. Of the students who took the communications subtest only 6% of the educably mentally retarded students, 56% of emotionally disturbed students, and 49% of students with learning disabilities passed.

McKinney (1983) reviewed the performance of students with disabilities on the 1978 administration of the *North Carolina Minimum Competency Test* and reported similar findings. Only 12% of educable mentally retarded students and 56% of students with a learning disability passed the reading subtest. The pass rates for the math subtest were 7% for the educable mentally retarded students and 47% for the students with learning disabilities.

In a review of the performance of students with disabilities on the 1997 administration of the Kentucky Instructional Results Information System (KIRIS), researchers Koretz and Hamilton (1999) reported that “On average, students with disabilities scored well below students without disabilities in every case, but there were important variations across grade, subject, and format” (p. 14). Students with disabilities taking the 11<sup>th</sup> grade reading test scored 1.4 standard deviations below non-disabled students on both the multiple choice and the open response questions. The smallest variation in test scores was on the open response questions on the fourth grade science test; the performance of students with disabilities was .4 standard deviation lower than non-disabled students.

*The Effects of Accommodations on the Performance of Students with Disabilities*

While the use of test accommodations is generally accepted and is allowed in all 50 states, the research on the effects of accommodations is not conclusive that accommodations always have a positive effect on the test scores of students with disabilities. The NCEO examined empirical research studies that were conducted between 1999 and 2001 on the effects of test accommodations on the performance of students with disabilities. (Thompson, Blount, & Thurlow, 2002). Ten of the studies examined the effects of read aloud accommodations on the test performance of students with disabilities. This accommodation was found to have a positive effect on test scores in six studies and had no significant effect in one study. Two of the studies found that the read aloud accommodation “altered item comparability, affecting the construct the assessment was intended to measure, while one other study did not result in alterations in test comparability” (p. 12).

The accommodations of allowing extended time and allowing a test to be administered over a several day period was examined in seven studies. Four of the studies found test score gains for students with disabilities when allowed extended time or multiple-day administration, while three studies found that there was no significant effect on the scores of these students.

Nine studies examined the effect of the accommodation of computer administration of an assessment. As was the case with extended time, the results were varied. Four of the studies found computer administration had a positive effect on test scores and three of the studies resulted in no significant effect on the scores of students with disabilities. Two of the studies altered item comparability, which changed the construct that the assessment was designed to measure. The one study that addressed the use of simplified language found that this accommodation had no significant effect on test scores. The results of this research are summarized in Table 4.

Table 4  
*Research Results on the Effects of Test Accommodations on the Scores of Students with Disabilities*

Type of Accommodation	Results	Number of Studies
Read Aloud	Positive effect on test scores	6
	No significant effect on test scores	1
	Altered item comparability	2
	Did not alter item comparability	1
Extended Time	Positive effect on test scores	4
	No significant effect on test scores	3
Computer Administration	Positive effect on test scores	4
	No significant effect on test scores	3
	Altered item comparability	2
Simplified Language	No significant effect on test scores	1

*Note.* From “A Summary of Research on the Effects of Test Accommodations: 1999 through 2001,” by S. Thompson, A. Blount, & M. Thurlow, 2002 (Technical Report 34) Minneapolis, MN: University of Minnesota, National Center of Educational Outcomes.

*The Virginia Standards of Learning Assessments and Students with Disabilities*

In the summer of 1995, after more than a decade of study, the Virginia Board of Education adopted its statewide accountability system with the establishment of new Virginia Standards of Learning (SOL). The state established the standards in the four core subjects of English, mathematics, science, and history and social science. By the spring of 1998, the SOL accountability system also included criterion-referenced assessments, the SOL assessments, designed to measure student knowledge of the standards. All students, including those with disabilities, were required to take SOL assessments in the

third, fifth, and eighth grades, in technology in the fifth and eighth grades, and after completing some high school courses. The program has expanded in recent years; there are now 28 SOL assessments in use. The SOL assessments are high-stakes assessments as a student must obtain a passing score on at least six high school SOL assessments before graduating from high school with a standard diploma.

The Virginia SOL program is a highly rated state accountability program. *The Princeton Review*, in its 2003 examination of statewide assessments programs, ranked the program the fifth highest in nation. Virginia was the only state to receive an *A* rating in two of the four criteria (The Princeton Review, 2003).

Under the provisions of the IDEA 97, the NCLB Act, and the Virginians with Disabilities Act, all students with disabilities must be given the same educational opportunities as other students and they are to be provided with appropriate accommodations on state assessments. Virginia allows students with disabilities to take SOL assessments using either standard or nonstandard accommodations. The state defines standard accommodations as those in which a student is allowed to “take the test without changing what the test is measuring” while nonstandard accommodations are those that “significantly change what a test is measuring” (VDOE, 2002b, p. 6).

All students are required to participate in SOL assessments if they receive instruction in the SOL subject areas. In the case of students with disabilities, each student's IEP team determines whether the student has received instruction in an SOL content area and what, if any, accommodations the student has been afforded in the classroom. When determining accommodations for the SOL assessments, state guidelines recommend that the student be allowed the same accommodations that he receives in

classroom instruction and assessment. Finally, the IEP team must include a statement of any individual accommodations or modifications in the administration of state assessments of student achievement that are needed in order for the child to participate in the assessment” (VDOE, 2002b).

Students with disabilities may take SOL assessments with no accommodations or with one or more standard and/or nonstandard accommodations. SOL assessment scores from both standard and nonstandard accommodations are included in state reporting of SOL assessment results. Virginia allows students with disabilities a total of 38 standard and eight nonstandard testing accommodations in four different categories: timing/scheduling, setting, presentation, and response when taking the SOL assessments. The participation rates of students with disabilities in the 1999 administration of the Virginia SOL assessments were 74.2% for students taking third, fifth, and eighth assessments and 91.2% for those students taking high school end-of-course assessments (VDOE, 2000).

The performance of students with disabilities on the SOL assessments has consistently been lower than their non-disabled peers. In 1999, 34% of students with disabilities passed the SOL assessments given in the third, fifth, and eighth grades, compared to 66% of non-disabled students. The pass rates for students taking high school end-of-course assessments were similar: 33% of students with disabilities passed the assessments while 63% of non-disabled students passed (VDOE, 2000).

#### *Teacher Knowledge of Test Accommodations for Students with Disabilities*

In all 50 states, the IEP team is charged with making determining what

accommodations, if any, are afforded to students with disabilities (Thurlow, Elliott, & Ysseldyke, 2003). The IEP team includes special education teachers and, if the student with a disability is participating in or may participate in the general education environment, a general education teacher. It is important that the team's accommodation decisions are a collaborative effect and "reflect input from several team members, not just signing off on the recommendation made by an individual member of the team" (p. 42). Given that both special education and general education teachers provide routine instructional and accommodations to the student, their knowledge of accommodations is critical to the team when making accommodation decisions for district and statewide assessments. Thurlow, Elliott, and Ysseldyke (2003) wrote that "both the general and special education teachers are in the best position collaboratively to coordinate decisions about inclusive assessments and accommodations" (p. 159).

The Education Policy Reform Research Institute (EPRRI) at the University of Maryland determined that there are 10 skills that are needed by all teachers to support the academic content standards by students with disabilities. One of those skills needed by teachers is to "Assist students with disabilities in selecting and using assessment accommodations, including assistive technology" (EPRRI, 2003, pg. 27).

*Special Education Teachers' Knowledge of Test Accommodations for Students with Disabilities*

Three national professional organizations, the National Board of Professional Teaching Standards (NBPTS), the Council for Exceptional Children (CEC), and the Interstate New Teacher Assessment and Support Consortium (INTASC), have all developed professional standards for teachers that, among other requirements, include a

knowledge of accommodations. The NBPTS Exceptional Needs Standards consists of 14 professional standards. The standard addressing assessment includes the requirement that “Accomplished teachers of students with exceptional needs design and select a variety of assessment strategies to obtain useful and timely information about student learning and development and to help students reflect on their own progress” (NBPTS, 2001, p.55). The discussion on assessment continues by stating that teachers of students with exceptional needs “are adept at selecting, designing, and documenting test accommodations for students with disabilities” (p. 55).

The Council for Exceptional Children (CEC) is the largest international professional organization dedicated to improving educational outcomes for students with disabilities. As part of their mission, the CEC has developed professional standards for the preparation and licensure of special education teachers. These performance-based standards have been approved by the National Council for the Accreditation of Teacher Education (NCATE) and are divided into three parts: Field Experiences and Clinical Practice Standards, Assessment System Standards, and Special Education Content Standards.

There are 10 narrative Special Education Content Standards. One of the knowledge requirements in the assessment standard is the requirement that special education teachers have knowledge of “National, state or provincial, and local accommodations and modifications” (Council for Exceptional Children, 2002). This knowledge requirement is included in the CEC Standards for Beginning Special Education Teachers of Students with Learning Disabilities, for Beginning Teachers of

Students with Mental Retardation/ Developmental Disabilities, and for Beginning Special Education Teachers of Students with Emotional and Behavioral Disorders.

The Interstate New Teacher Assessment and Support Consortium (INTASC), founded in 1987, is a consortium of state education agencies and national educational organizations that are involved with the preparation, licensing, and professional development of both special education and general education teachers. The consortium has developed several sets of standards for teacher education programs, state education offices, and professional organizations. One of these sets of standards, the Model Standards for Licensing General and Special Education Teachers of Students with Disabilities: A Resource for State Dialogue, specifically addresses the unique knowledge and skills that all teachers of students with disabilities should possess. The INTASC standards are not binding on any state or organization; rather they are designed to serve as “model” standards that can be used by all states to develop their own standards for beginning teachers. Table 5 summarizes the four INTASC model standards that specifically address the requirements for special education teachers to have knowledge of test accommodations for students with disabilities.

Table 5  
*INTASC Standards Addressing Special Education Teachers' Knowledge of Test Accommodations for Students With Disabilities*

Standard	Description
8.03	All teachers collaborate with others to incorporate accommodations and alternate assessments into the ongoing assessment process of students with disabilities when appropriate.
8.05	All teachers understand that students with disabilities are expected to participate in district and statewide assessments and that accommodations or alternate assessments may be required when necessary.
8.06	All special education teachers understand how to administer, score, interpret, and report on formal and informal assessments (including standardized tests) related to their areas of specialization. They analyze the accessibility of assessment situations and instruments for students with disabilities, and work with general education teachers and others to plan and design accommodations, modifications, adaptations or alternate assessments.
8.11	Special education teachers ensure that students with disabilities participate in district and statewide assessments and document on the IEP the use of accommodations or an alternate assessment when appropriate. They ensure that decisions regarding accommodations or alternate assessments are aligned with state guidelines and are consistent with accommodations or modifications provided routinely in the classroom. They facilitate the participation of students with disabilities by providing accommodations and alternate assessments when specified.

*Note.* Adapted from “Model Standards for Licensing General and Special Education Teachers of Students with Disabilities: A Resource for State Dialogue,” by the Interstate New Teacher Assessment and Support Consortium, 2001. Washington, DC: Council of Chief State School Officers.

*General Education Teachers' Knowledge of Test Accommodations for Students with Disabilities*

One of the most significant changes in the original EAHC legislation is the requirement in IDEA 97 that general education teachers participate as members of the IEP team. This change, along with the requirement that students with disabilities participate in state and district assessments, has helped eliminate the two-track education system in which non-disabled students pursue one set of educational objectives while students with disabilities pursue another set. General education teachers now have a significant role in the education and the IEP decisions of these students. The IEP, which outlines the educational plan for students with disabilities, also includes decisions on accommodations for the classroom and for state and district assessments.

As members of the IEP team, general education teachers can and should make significant contributions when the team makes accommodation decisions for students with disabilities. The general education teacher should be knowledgeable of the student's disability, strengths, and weaknesses, and may actually spend more time with the student who has a disability than the special education teacher does. (Thurlow, Elliott, & Ysseldyke, 2003). General education teachers bring invaluable knowledge to the IEP decision making process on test accommodations given that the accommodations used in district and statewide assessments are the same ones that these teachers use in daily instruction (Thurlow, 2001). The importance of having general education teachers on the IEP team was emphasized by Kubiszyn and Borich (2000) who wrote "the classroom teacher may be the only professional on the IEP team with general curriculum expertise. They evaluate the academic performance and progress of special learners in the general

curriculum; the IEP team will rely largely on data gathered in the regular classroom—the domain of the classroom teacher” (p. 449-450). In Virginia, the IEP team is specifically charged with deciding on the “need for a selection of accommodations, or the non-participation in a Standards of Learning assessment” (VDOE, 2002b, p. 2).

The INTASC Model Standards also include two standards that require general education teachers who teach students with disabilities have knowledge of test accommodations. Standard 8.03 requires that “all teachers collaborate with others to incorporate accommodations and alternate assessments into the ongoing assessment process of students with disabilities when appropriate.” Standard 8.05 states that “all teachers understand that students with disabilities are expected to participate in district and statewide assessments and that accommodations or alternate assessments may be required when necessary.”

*Research on Teachers’ Knowledge and Perceptions of Test Accommodations*

An extensive review of the related literature identified few studies that addressed teachers’ knowledge and/or perceptions of test accommodations for students with disabilities. In a small study of 43 special education teachers and 17 general education teachers in South Carolina, Siskind (1993) found that “neither special or regular educators are well-informed” (p. 154) about test accommodations for students with disabilities on state-mandated criterion-referenced tests. Survey participants were asked to determine if each of 51 different accommodations was allowed on South Carolina criterion-referenced tests. There was no significant difference between the number of special education educators who responded correctly and the number of general education teachers who responded correctly on 48 of the 51 questions. None of the

participants responded correctly to all 51 questions; indeed the highest number of correct answers was only 40. While citing several limitations in the study including the small sample size, a non-representative sampling, and the unequal numbers of special education and general education teachers, Siskind reported that the percentage of special education teachers and general education teachers who answered the survey correctly were “remarkably consistent” (p.155).

Hollenbeck, Tindal, and Almond (1998), using an instrument developed by the Oregon State Department of Special Education, surveyed 166 Oregon teachers to determine their knowledge of allowable accommodations for statewide assessments. The sample of surveyed teachers, 90 special education teachers and 76 general education teachers, were asked to identify which of 16 accommodations were allowed on statewide assessments. Overall, 54.8% of teachers correctly identified all 16 accommodations. There was very little difference between the performance of the special education teachers and the general education teachers. Special education teachers averaged 47.4% correct and general education teachers averaged 51.6% correct.

Schulte, Elliott, and Kratochwill (2000) conducted a survey of 118 educational professionals, including teachers, state and district directors of special education, psychologists, school counselors, researchers, and consultants, to measure their perceptions of the helpfulness and fairness of accommodations for students with disabilities. Most ( $n = 92$ ) of the participants were from Wisconsin; the remaining 26 participants were from the District of Columbia and 15 other states.

Four major findings emerged from this study. The first major finding was that respondents did not recommend significantly more assessment accommodations for a

hypothetical student with a severe disability compared to a hypothetical student with a mild disability. Secondly, participants indicated that they considered categories of accommodations equally fair for students with mild disabilities and those with more severe disabilities. Thirdly, educators recommended “significantly more assessment accommodations for use with the performance assessment than with the multiple choice assessment (p. 52). The final major finding was that respondents perceived that some accommodations were significantly more helpful for students with disabilities on performance assessments than on multiple choice assessments.

Jayanthi, Epstein, Polloway, and Bursuck (1996) conducted a nationwide survey of 401 general education teachers, examining their perceptions of several aspects of using test accommodations for students with disabilities in tests administered in inclusion classrooms. The survey used a four-point Likert scale to measure the teachers’ views on the helpfulness of 24 specific test accommodations as well as the respondents’ opinions of the fairness of accommodations only being available for students with disabilities and not for other students.

Teachers’ perceptions varied by the grade level that they taught. The test modifications of (a) giving individual help with directions during tests, (b) reading test questions, (c) allowing oral instead of written answers, and (d) giving tests in small groups were rated “as being more helpful for students with disabilities (i.e., received higher ratings) by elementary schools teachers than by middle and secondary school teachers” (Jayanthi, Epstein, Polloway, & Bursuck, 1996, p. 108).

Survey respondents also indicated that giving individual help with directions during tests and reading test questions and simplifying the wording of test questions were

the two most helpful of the 24 test accommodations delineated in the survey. Only 33.4% of general education teachers thought it fair that test accommodations were available only to students with disabilities while 66.6% believed that it was not fair to limit test accommodations to these students. Seventy-eight percent of the teachers indicated that the accommodations were unfair “because there were other students who were not receiving any special education services who needed the same testing adaptations to be made for them” (p. 110).

### *Summary*

While there is no single definition of *test accommodation* that is accepted by all states or by all educators, there are both legal and professional reasons for all teachers to have some knowledge of test accommodations for students with disabilities. The IDEA 97 and the NCLB Act of 2001 both require general and special education teachers, as members of the IEP team, to develop accommodations for students with disabilities to be used in the classroom and when taking state and district assessments. Standards have been developed by the CEC, the NBPTS, and the INTASC that discuss the need for general education and special education teachers to have some knowledge of accommodations. Along with this knowledge of test accommodations, teachers’ perceptions of the usefulness and effectiveness are both essential to providing educational equity to the millions of students with disabilities in our nation’s schools.

### Chapter 3: Methodology

The purpose of this study was to examine general education and special education teachers' knowledge and their perceptions of test accommodations for students with disabilities with respect to (a) their preparedness to participate in decisions concerning test accommodations for students with disabilities, (b) their perceptions of the fairness of test accommodations for students with disabilities, and (c) their perceptions of the usefulness of test accommodations for students with disabilities. This chapter discusses the selection of participants, the design of the study, the collection of data, and the analysis of data.

#### *Research Questions*

The study addressed the following specific questions using data collected from a survey of general and special education teachers in Virginia.

1. What are special education teachers' perceptions of their preparedness, the fairness of test accommodations, and the helpfulness of test accommodations for students with disabilities?
2. What is special education teachers' knowledge of test accommodations for students with disabilities?
3. What are general education teachers' perceptions of their preparedness, the fairness of test accommodations, and the helpfulness of test accommodations for students with disabilities?
4. What is general education teachers' knowledge of test accommodations for students with disabilities?
5. Do the perceptions of special education teachers differ from the perceptions of general

education teachers with respect to their preparedness, the fairness of test accommodations, and the helpfulness of test accommodations for students with disabilities?

6. Does the knowledge of test accommodations for students with disabilities differ between general education teachers and special education teachers?

### *Sample*

The study's sample consisted of a randomly selected sample of general and special education teachers in Virginia. The mailing addresses for the 300 general education teachers and the 300 special education teachers were obtained from Quality Education Data (QED), a subsidiary of Scholastic Incorporated. QED has been recommended by the Association for Supervision of Curriculum Development, which stated that "the listings maintained by QED were high quality" (cited in Hindman, 2004, p. 57).

### *Data Collection*

The first step in collecting data consisted of mailing a precontact postcard (Appendix A) to the 300 randomly selected general education teachers and the 300 special education teachers informing them of the study's purpose and requesting their participation in the study. Contacting respondents in advance of sending a questionnaire has been found to increase the response rate (Gall, Borg, & Gall 1996). One week later a packet containing a cover letter (Appendix B), the survey instrument (Appendix C), a stamped, self-addressed envelope, and a Sacagawea dollar coin were mailed. The cover letter contained a statement assuring participants of the confidentiality of their responses. The teachers were asked to complete the 15-minute survey and return it within two weeks.

One week after this initial deadline, nonrespondents were mailed another cover letter (Appendix D), another copy of the survey, and a stamped, self-addressed envelope. The nonrespondents were asked to return the survey within one week. A final cover letter (Appendix E), containing a request to complete the survey within one week, a copy of the survey, and a stamped, self-addressed envelope were mailed to nonrespondents 10 days later. Any surveys returned eight weeks after the initial precontact postcard were not used in the study.

### *Instrument Development*

A review of the literature failed to reveal an instrument that measured Virginia teachers' perceptions and knowledge of test accommodations for students with disabilities. Consequently, the researcher developed a survey instrument that collected the participants' demographic information and their responses to questions about their perceptions and knowledge of accommodations for students with disabilities. The survey was reviewed by a school administrator, a special education coordinator, four general education teachers, and four special education teachers who were familiar with test accommodations for students with disabilities. The survey instrument, entitled Survey of Virginia Teachers' Perceptions and Knowledge of Test Accommodations for Students With Disabilities (Appendix C), is comprised of a demographic cover page and 16 Likert-scale questions and 10 true/false questions.

Section One of the survey, consists of four questions designed to collect demographic information about the respondent. These questions were designed to determine 1) current teaching position, 2) type of school, 3) sources of information on test accommodations obtained during the past 12 months, and 4) whether the participant

had participated in one IEP meeting during the 2005-2006 school year.

Section Two (items 5 – 10) of the survey is comprised of five Likert-scale questions intended to elicit teachers' perceptions of their personal training and staff development concerning test accommodations for students with disabilities. Respondents were asked to respond to the Likert-scale questions by selecting one of following five choices: 1 (Strongly Agree), 2 (Agree), 3 (Unsure), 4 (Disagree), and 5 (Strongly Disagree).

Section Three (items 11 – 20) consists of questions designed to elicit teachers' perceptions of the helpfulness to students with disabilities of 10 specific test accommodations. Respondents were asked to indicate how they perceive each accommodation by selecting one of the following choices: 1 (Very Helpful), 2 (Helpful), 3 (Somewhat Helpful), and 4 (Not Helpful).

Section Four (items 21 – 30) consists of 10 true/false questions designed to determine teachers' knowledge of test accommodations for students with disabilities. These questions were developed after a review of test accommodation literature, the IDEA 04, the Regulations Governing Special Education Programs for Children with Disabilities in Virginia, and the Procedures for Participation of Students with Disabilities in the Assessment Component of Virginia's Accountability System (VDOE, 2002b). Table 6 summarizes the survey's 10 knowledge questions and their basis in the professional literature and the state and federal laws and policies.

Table 6

*Table of Specifications: Section Four, Virginia Teachers' Perceptions of Test Accommodations for Students with Disabilities*

Questions	Basis in Professional Literature and Federal and State Regulations and Policies
21. Accommodations for standardized tests such as the Virginia SOL should be the same accommodations that a student needs and uses when taking a classroom assessment.	VDOE (2002a)
22. IEP teams should consider school resources, such as the availability of classrooms, equipment, and teachers, when determining what accommodations should be made available to students with disabilities.	Elliott, Thurlow, Ysseldyke, & Erickson (1997)
23. All students with disabilities must have at least one accommodation listed on their IEP.	VDOE (2002a)
24. As part of the IEP team, general education teachers should participate in the determination of any accommodations that will be provided to the student.	IDEA 04 (2004); VDOE (2002a)
25. There is no need for general education teachers to have knowledge of accommodations for students with disabilities.	IDEA 04 (2004); VDOE (2002a)
26. The purpose of a test accommodation is to provide students with disabilities an equal opportunity on assessments.	Fuchs, L. & Fuchs. D. (1999)
27. Test accommodations should be used only when students participate in the Virginia SOL assessments.	VDOE (2002a)
28. All students with a learning disability should receive the same test accommodations.	IDEA 04 (2004); VDOE (2002a)
29. The school principal cannot alter an IEP team's accommodation decisions.	IDEA 04 (2004)
30. An IEP team must allow any test accommodation that a student's parent requests.	IDEA 04 (2004); VDOE (2002a)

### *Questionnaire Content Validity and Reliability*

A group of 10 educators, consisting of one special education coordinator, one middle school principal, four general education teachers, and four special education teachers, with experience in determining and writing test accommodations reviewed the instrument to determine content validity. Based on the suggestions from these reviewers, minor adjustments were made to the wording of four of the questions. The instrument was also piloted by a group of 20 practicing teachers currently employed in a large school district in southeastern Virginia. Internal consistency reliability was calculated at 0.76 using Cronbach's coefficient alpha analysis of the pilot study data.

### *Data Analysis*

Descriptive statistics, including means, frequencies, standard deviations, and percentages were analyzed by Statistical Package for the Social Studies (SPSS) version 11.0 statistical analysis software. A *t*-test for independent samples was conducted to determine the difference between the means of the independent variables of teacher affiliation (general education and special education teachers) for each of the dependent variables of teacher preparedness and fairness of test accommodations.

### *Ethical Safeguards*

Prior to contacting any potential participants, this study was submitted to the Human Subjects Review Committee of The College of William and Mary for approval. Once that approval was obtained, the study was conducted as described in this chapter and in a manner that protects the anonymity of study participants. Each survey contained a numeric code that allowed the researcher to track respondents and to conduct follow-up mailings. The code sheet always remained locked in the possession of the researcher. The

code sheet was destroyed after the study was completed. Any publication or presentation of this study's findings will also protect the anonymity of study participants.

## Chapter 4: Analysis of Results

The purpose of this study was to determine general education and special education teachers' perceptions and knowledge of test accommodations for students with disabilities. The study sought to elicit teachers' perceptions of their own preparedness and training, their perceptions of the fairness of tests accommodations for students with disabilities, their perceptions of usefulness of specific accommodations, and their general knowledge of accommodations for students with disabilities.

This chapter presents the findings for each of the following six research questions.

1. What are special education teachers' perceptions of their preparedness, the fairness of test accommodations, and the helpfulness of test accommodations for students with disabilities?
2. What is special education teachers' knowledge of test accommodations for students with disabilities?
3. What are general education teachers' perceptions of their preparedness, the fairness of test accommodations, and the helpfulness of test accommodations for students with disabilities?
4. What is general education teachers' knowledge of test accommodations for students with disabilities?
5. Do the perceptions of special education teachers differ from the perceptions of general education teachers with respect to their preparedness, the fairness of test accommodations, and the helpfulness of test accommodations for students with disabilities?

6. Does the knowledge of test accommodations for student with disabilities differ between general education teachers and special education teachers?

### *The Study*

#### *Return Rate*

On August 14, 2006, postcards announcing the study were mailed to the 600 randomly selected participants. One week later, on August 21, 2006, the initial survey along with a cover letter, a return envelope, and a Sacagawea dollar coin were sent to the same group. This first mailing yielded 197 survey responses (32.8 % response rate). A second mailing was sent on September 4, 2006, to non-respondents to the first request. This mailing resulted in 52 additional surveys being returned, which raised the overall response rate to 41.5%. The final mailing was sent on September 25, 2006, which resulted in another 13 surveys being returned, for a total of 262 surveys. Of the 600 surveys mailed, a total of 257 were usable, for a final usable response rate of 42.8%. Sixty-two (10.3%) of the surveys were returned unopened due to address changes, and five surveys were deemed unusable because not all of the questions were answered. Surveys received after October 8, 2006, were not used in the study.

#### *Demographic Information*

The random survey sample (N=600) was drawn from a population of 90,573 Virginia teachers (Standard & Poor's, 2006). Attempts by this researcher to obtain the number of general education teachers and special education teachers from the Virginia Department of Education in early 2007 were unsuccessful (personal communications, January 24, 2007 and January 29, 2007). Of the 257 usable responses, 155 (60.3%) were from general education teachers and 102 (39.7%) were completed by special education

teachers. Table 7 presents the school settings in which the 257 respondents currently teach.

Table 7

*Respondents' Current School Employment*

Teacher	Type of School							
	Elementary	Middle	Junior High	High	Alternative	Vocational/ Technical	Other	Total
General Education	96	29	1	25	1	1	2	155
Special Education	55	24	1	15	4	9	3	102
Total	151	53	2	40	5	1	5	257

Most respondents, 91.8% (n=234), reported that they had participated in at least one IEP meeting during the 2005 – 2006 school year. A total of 99% (n=101) of special education teachers and 85.8% (n=133) of the general education teachers reported participating in at least one IEP meeting during the 2005 - 2006 school year.

Respondents were also asked from what sources they had obtained information on test accommodations for students with disabilities during the past school year.

Participants were presented with a selection of six different sources of information and were asked to select as many of the sources from which they had received information, as well as the opportunity to indicate that they had received no information, or that they had obtained information from other sources than the six listed in the survey. A majority of both general education and special education teachers indicated that school or district staff development training was an information source from which they obtained information. A total of 76.5% (n=78) of special education teacher respondents and 71.6% (n=111) of the general education teacher respondents reported that they had obtained

information about test accommodations from school or district staff development training.

The second most frequently cited source of information for special education teachers was the Virginia Department of Education (VDOE) web site, with 38.2% (n=39) of them reporting using that source, while professional journals were reported as a source of information by 16.8% (n=26) of general education teachers. A total of 7.8% (n=8) of the special education teacher respondents and 16.8% (n=26) of general education teacher respondents reported that they had not received any information about test accommodations for students with disabilities from any source during the past school year. Table 8 presents information on the percentage and number of teachers who obtained information on test accommodations for students with disabilities from various sources during the 2005 – 2006 school year.

Table 8  
*Percentage of Teachers Obtaining Information on Test Accommodations for Students with Disabilities from Various Sources*

Teacher	Undergraduate course	Graduate course	National/regional conference	Professional journal	School/district staff development	VDOE web site	No information	Other sources
Special Education	2.9% (3)	20.6% (21)	11.8% (12)	15.7% (16)	76.5% (78)	38.2% (39)	7.8% (8)	14.7% (15)
General Education	5.8% (9)	11.0% (17)	7.1% (11)	11.6% (18)	71.6% (111)	7.7% (12)	16.8% (26)	11.0% (17)

*Note.* The number of teachers who responded to each item is presented in parentheses. Totals exceed 100% because teachers were able to select more than one category.

### *Findings for the Research Questions*

*Question 1. What are special education teachers' perceptions of their preparedness, the fairness of test accommodations, and the helpfulness of test accommodations for students with disabilities?*

A total of 16 Likert-scale questions were used to elicit special education teachers' perceptions of test accommodations for students with disabilities. Three of the questions addressed teachers' perceptions of their preparedness regarding test accommodations for students with disabilities. Overall, 64.8% (n=66) of the special education teachers either *strongly agreed* or *agreed* with the statements that they had sufficient knowledge of test accommodations to fully participate in IEP team decisions, adequate college preparation, and adequate staff development concerning test accommodations for students with disabilities. Only 25.8% (n=26) of the special education teachers respondents *disagreed* or *strongly disagreed* with those statements. Table 9 presents the means, standard deviations, and special education teachers' responses to the three questions about their perceptions of their preparedness on a scale of 1 to 5. The closer the mean is to 1, the more strongly the respondent agrees with the statement.

Table 9

*Special Education Teachers' Perceptions of Their Preparedness Regarding Test Accommodations for Students with Disabilities*

Question	M	SD	Responses				
			Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
5. I have sufficient knowledge of test accommodations for students with disabilities to participate fully in IEP team decisions.	1.61	0.91	58.8% (60)	29.4% (30)	5.9% (6)	3.9% (4)	1.9% (2)
6. During my college teacher preparation program, I received adequate training on testing and test accommodations for students with disabilities.	3.13	1.27	12.7% (13)	25.5% (26)	8.8% (9)	42.1% (43)	10.8% (11)
7. During my employment as a teacher I have received adequate staff development training on test accommodations for students with disabilities.	2.22	1.12	31.4% (32)	36.3% (57)	13.7% (14)	16.7% (17)	1.9% (2)
Overall	2.32	1.10	34.3%	30.4%	9.5%	20.9%	4.9%

*Note:* The number of teachers who responded to each item is presented in parentheses.

The scale is: 1=strongly agree 2=agree 3=unsure 4=disagree 5=strongly disagree

Three questions addressed special education teachers' perceptions of the fairness of test accommodations for students with disabilities. Table 10 provides the means, standard deviations, and special education teachers' responses to the questions about their perceptions of the fairness of test accommodations on a scale of 1 to 5. The closer the mean is to 1, the more strongly the respondent agrees with the statement.

Table 10

*Special Education Teachers' Perceptions of the Fairness of Test Accommodations for Students with Disabilities*

Question	<i>M</i>	<i>SD</i>	Responses				
			Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
8. It is fair that test accommodations are made available only to students with disabilities and ESL students when they take Virginia SOL assessments.	2.59	1.27	23.6% (24)	29.4% (30)	16.7% (17)	22.5% (23)	7.8% (8)
9. Test accommodations give an unfair advantage to students when they take the Virginia SOL assessments.	4.25	0.95	3.9% (4)	1.7% (2)	5.9% (6)	42.2% (43)	46.1% (47)
10. Test accommodations give an unfair advantage to students when they take tests as part of their daily classroom instruction.	4.27	0.86	2.9% (3)	1.0% (1)	5.9% (6)	46.1% (47)	44.1% (45)

*Note.* The number of teachers who responded to each item is presented in parentheses.

The scale is: 1=strongly agree 2=agree 3=unsure 4=disagree 5=strongly disagree

Ten questions elicited special education teachers' perceptions of the helpfulness of specific test accommodations. A total of 92.2% ( $M=1.42$ ,  $SD=0.77$ ) of special education teacher respondents found the reading of test items aloud to be the most helpful accommodation of the 10 presented. Table 11 provides the means, standard deviations, and special education teachers' responses to the questions on their perceptions of the helpfulness of specific test accommodations on a scale of 1 to 4. The closer the mean is to 1, the more helpful the accommodation is perceived to be by special education teachers.

Table 11

*Special Education Teachers' Perceptions of the Helpfulness of Specific Test Accommodations for Students with Disabilities*

Accommodation	M	SD	Response			
			Very Helpful	Helpful	Somewhat Helpful	Not Helpful
Reading of test items aloud	1.42	0.77	71.6% (73)	18.6% (19)	5.9% (6)	3.9% (4)
Reading directions	1.52	0.81	63.7% (65)	24.5% (25)	7.8% (8)	3.9% (4)
Small group	1.55	0.82	61.8% (63)	25.5% (26)	8.8% (9)	3.9% (4)
Simplifying directions	1.57	0.79	59.8% (61)	25.5% (26)	12.7% (13)	1.9% (2)
Ability to mark in test booklets	1.66	0.86	56.9% (58)	23.6% (24)	16.7% (17)	2.9% (3)
Breaks during test	1.96	0.97	41.2% (42)	29.4% (30)	21.6% (22)	7.8% (8)
Large print	1.98	0.95	40.2% (41)	27.5% (28)	26.5% (27)	5.9% (6)
Preferential seating	2.07	1.0	37.2% (38)	28.4% (29)	24.5% (25)	9.8% (10)
Word processor	2.20	0.86	21.6% (22)	44.1% (45)	27.4% (28)	6.9% (7)
Spelling dictionary	2.29	0.98	25.5% (26)	31.4% (32)	31.4% (32)	11.8% (12)

*Note.* The number of teachers who responded to each item is presented in parentheses.  
The scale is: 1=very helpful 2=helpful 3=somewhat helpful 4=not helpful

*Question 2: What is special education teachers' knowledge of test accommodations for students with disabilities?*

Ten true/false questions addressed special education teachers' knowledge of test

accommodations for students with disabilities. Overall, 85.1% of special education teachers' responses on the knowledge questions were correct. On specific questions, their correct responses ranged from a high of 97.1% (n=99) who knew that test accommodations were not limited to students when they participate in the Virginia SOL assessments to a low of 57.8% (n=59) who answered correctly that IEP teams should not consider school resources, such as the availability of classrooms, equipment, and teachers, when determining what accommodations should be made available to students with disabilities. Six of the questions were correctly answered by over 90% of the special education teacher respondents.

Table 12 presents the percentages and numbers of special education teachers who correctly answered the 10 questions addressing their general knowledge of test accommodations for students with disabilities.

Table 12

*Special Education Teachers' Knowledge of Test Accommodations for Students with Disabilities*

Question	Correct Responses
Test accommodations should be used only when students participate in the Virginia SOL assessments.	97.1% (99)
There is no need for general education teachers to have knowledge of accommodations for students with disabilities.	93.1% (95)
The purpose of a test accommodation is to provide students with disabilities an equal opportunity on assessments.	93.1% (95)
All students with a learning disability should receive the same test accommodations.	93.1% (95)
As part of the IEP team, general education teachers should participate in the determination of any accommodations that will be provided the student.	92.2% (94)
Accommodations for standardized tests such as the Virginia SOL assessments should be the same accommodations that a student needs and uses when taking a classroom assessment.	90.2% (92)
An IEP team must allow any test accommodation that a student's parent requests.	85.3% (87)
The school principal cannot alter an IEP team's accommodation decisions.	83.3% (85)
All students with disabilities must have at least one accommodation listed on their IEP.	65.7% (67)
IEP teams should consider school resources, such as the availability of classrooms, equipment, and teachers, when determining what accommodations should be made available to students with disabilities.	57.8% (59)
<b>Overall Correct Responses</b>	<b>85.1%</b>

*Note.* The number of teachers who responded correctly to each item is presented in parentheses.

*Question 3. What are general education teachers' perceptions of their preparedness, the fairness of test accommodations, and the helpfulness of test accommodations for students with disabilities?*

A total of 16 Likert-scale questions were used to elicit general education teachers' perceptions of test accommodations for students with disabilities. Three of the questions addressed teachers' perceptions of their preparedness regarding test accommodations for students with disabilities. Overall, 50.4% of the general education teachers either *strongly agreed* or *agreed* with the statements that they had sufficient knowledge of test accommodations to participate fully in IEP team decisions, adequate college preparation, and adequate staff development concerning test accommodations for students with disabilities. Only 39.8% of the general education teacher respondents *disagreed* or *strongly disagreed* with those statements. Table 13 presents the means, standard deviations, and general education teachers' responses to the three questions about their perceptions of their preparedness on a scale of 1 to 5. The closer the mean is to 1, the more strongly the respondent agrees with the statement.

Table 13

*General Education Teachers' Perceptions of Their Preparedness Regarding Test Accommodations for Students with Disabilities*

Question	M	SD	Responses				
			Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
5. I have sufficient knowledge of test accommodations for students with disabilities to participate fully in IEP team decisions.	2.22	1.10	26.4% (41)	45.2% (70)	12.9% (20)	11.0% (17)	4.5% (7)
6. During my college teacher preparation program, I received adequate training on testing and test accommodations for students with disabilities.	3.73	1.30	8.4% (13)	13.5% (21)	5.8% (9)	41.3% (64)	30.9% (48)
7. During my employment as a teacher, I have received adequate staff development training on test accommodations for students with disabilities.	2.63	1.10	16.1% (25)	41.9% (65)	10.2% (16)	25.8% (40)	5.8% (8)
Overall Responses	2.86	1.17	16.9%	33.5%	9.7%	26.0%	13.8%

Note. The number of teachers who responded to each item is presented in parentheses.

The scale is: 1=strongly agree 2=agree 3=unsure 4=disagree 5=strongly disagree

Three questions addressed teachers' perceptions of the fairness of test accommodations for students with disabilities. Fewer than half, 44.5% (n=69), of the general education teachers respondents either *strongly agreed* or *agreed* that it is fair that accommodations are made available only to students with disabilities and English as a second language students when they take Virginia SOL assessments.

None of the general education teacher respondents *strongly agreed* with the statement that test accommodations gave an unfair advantage to students when they take tests as part of their daily classroom instruction, and only 7.1% (n=11) *agreed* with that statement. Table 14 presents the means, standard deviations, and general education teachers' responses concerning their perceptions of test accommodations for students with disabilities.

Table 14

*General Education Teachers' Perceptions of the Fairness of Test Accommodations for Students with Disabilities*

Question	M	SD	Responses				
			Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
8. It is fair that test accommodations are made available only to student with disabilities and ESL students when they take Virginia SOL assessments.	2.88	1.3	12.9% (20)	31.6% (49)	17.4% (27)	31.0% (48)	7.1% (11)
9. Test accommodations give an unfair advantage to students when they take the Virginia SOL assessments.	4.04	0.95	1.0% (1)	2.6% (4)	14.2% (23)	56.1% (87)	26.4% (40)
10. Test accommodations give an unfair advantage to students when they take tests as part of their daily classroom instruction.	4.01	0.86	0% (0)	7.1% (11)	9.7% (15)	58.1% (90)	25.2% (39)

*Note.* The number of teachers who responded to each item is presented in parentheses.

The scale is: 1=strongly agree 2=agree 3=unsure 4=disagree 5=strongly disagree

Ten questions elicited general education teachers' perceptions of the helpfulness of specific test accommodations. The majority of general education teacher respondents indicated

that all 10 accommodations were either *very helpful* or *helpful*. The most helpful accommodation was perceived to be the reading the test aloud ( $M=1.53, SD=0.71$ ). General education teachers considered the least helpful accommodation to be the use of a word processor ( $M= 2.21, SD=0.96$ ). Table 15 presents the means, standard deviations, and special education teachers' responses to questions on their perceptions of the helpfulness of specific test accommodations on a scale of 1 to 4. The closer the mean is to 1, the more helpful the accommodation is perceived to be by general education teachers.

Table 15

*General Education Teachers' Perceptions of the Helpfulness of Specific Test Accommodations for Students with Disabilities*

Accommodation	M	SD	Response			
			Very Helpful	Helpful	Somewhat Helpful	Not Helpful
Reading of test items aloud	1.53	0.71	58.7% (91)	30.3% (47)	10.3% (16)	<1% (1)
Simplifying directions	1.55	0.70	54.8% (85)	37.4% (58)	5.8% (9)	1.9% (3)
Mark in test booklet	1.59	0.80	56.8% (88)	31.0% (48)	8.4% (13)	3.9% (6)
Small group	1.74	0.86	49.7% (77)	29.7% (46)	17.4% (27)	3.2% (5)
Reading directions aloud	1.80	2.67	56.8% (88)	33.5% (52)	7.7% (12)	1.9% (3)
Breaks during test	1.94	1.21	39.4% (61)	36.1% (56)	20.6% (32)	3.9% (6)
Preferential seating	1.96	0.90	36.1% (56)	37.4% (58)	20.6% (32)	5.8% (9)
Large print	2.02	0.85	31.6% (49)	38.1% (59)	27.1% (42)	3.2% (5)
Spelling dictionary	2.21	0.89	25.2% (39)	34.8% (54)	34.2% (53)	5.8% (9)
Word processor	2.30	0.96	23.9% (37)	32.9% (51)	32.3% (50)	11.0% (17)

*Note.* The number of teachers who responded to each item is presented in parentheses.  
The scale is: 1=very helpful 2=helpful 3=somewhat helpful 4=not helpful

*Question 4. What is general education teachers' knowledge of test accommodations for students with disabilities?*

Ten true/false questions addressed general education teachers' knowledge of test accommodations for students with disabilities. Overall, 80.1% of general education

teachers' responses on the knowledge questions were correct. Their correct responses ranged from a high of 94.8% (n=147) who knew that test accommodations were not limited to students when they participate in the Virginia SOL assessments to a low of 38.1% (n=59) who answered correctly that IEP teams should not consider school resources, such as the availability of classrooms, equipment, and teachers, when determining what accommodations should be made available to students with disabilities. Eight of the ten questions were correctly answered by over 72% of the general education teacher respondents.

Table 16 presents the percentages and numbers of general education teachers who correctly answered the 10 questions addressing their general knowledge of test accommodations for students with disabilities.

Table 16

*General Education Teachers' Knowledge of Test Accommodations for Students with Disabilities*

Question	Correct Response
Test accommodations should be used only when students participate in the Virginia SOL assessments.	94.8% (147)
There is no need for general education teachers to have knowledge of accommodations for students with disabilities.	92.9% (144)
As part of the IEP team, general education teachers should participate in the determination of any accommodations that will be provided the student.	92.3% (143)
The purpose of a test accommodation is to provide students with disabilities an equal opportunity on assessments.	89.0% (138)
Accommodations for standardized tests such as the Virginia SOL should be the same accommodations that a student needs and uses when taking a classroom assessment.	88.4% (137)
An IEP team must allow any test accommodation that a student's parent requests.	87.1% (135)
All students with a learning disability should receive the same test accommodations.	86.5% (134)
The school principal cannot alter an IEP team's accommodation decisions.	72.9% (113)
All students with disabilities must have at least one accommodation listed on their IEP.	58.7% (91)
IEP teams should consider school resources, such as the availability of classrooms, equipment, and teachers, when determining what accommodations should be made available to students with disabilities.	38.1% (59)
<b>Overall Correct Responses</b>	<b>80.1%</b>

*Note.* The number of teachers who responded correctly to each item is presented in parentheses.

*Question 5. Do the perceptions of special education teachers differ from the perceptions of general education teachers with respect to teacher preparedness, fairness of test accommodations, and helpfulness of test accommodations for students with disabilities?*

Three Likert-scale questions addressed teachers' perceptions of their own training and preparedness in the area of test accommodations for students with disabilities. The majority of both special education teachers and general education teachers *strongly agreed* or *agreed* with the statement that they had sufficient knowledge of test accommodations for students with disabilities to participate fully in IEP team decisions. Special education teachers responded overwhelmingly, 88.2% (n=90), and a majority of general education teachers, 71.6% (n=111), responded that they *strongly agreed* or *agreed* with that statement. Results of an independent samples *t*-test indicate that the difference between special education teachers and general education teachers is significant at the .05 level ( $t=4.671, p=.000$ ).

Less than half of both special education teachers, 38.2% (n=39) and general education teachers, 21.9% (n=34), *strongly agreed* or *agreed* with the statement that they had received adequate training on testing and test accommodations for students with disabilities during their college teacher preparation program. There is a statistically significant difference ( $t=3.721, p=.000$ ) between the perceptions of special education teachers and general education teachers on their college teacher preparation programs.

Respondents were also asked whether they had received adequate staff development training during their employment as a teacher on test accommodations for students with disabilities. A total of 67.7% (n=69) of special education teachers and 58.1% (n=90) of general education teachers *strongly agreed* or *agreed* with that

statement. Again, this result is significant ( $t=2.800, p=.006$ ) at the .05 confidence level.

Table 17 presents the results of the independent samples  $t$ -tests on the questions of teacher preparedness.

Table 17

*Results of Independent Samples  $t$ -tests on the Questions of Teacher Preparedness*

Question	$t$	$p$
5. I have sufficient knowledge of test accommodations for students with disabilities to participate fully in IEP team decisions.	4.671	.000
6. During my college teacher preparation program, I received adequate training on testing and test accommodations for students with disabilities.	3.721	.000
7. During my employment as a teacher, I have received adequate staff development training on test accommodations for students with disabilities.	2.800	.006

\*  $p < .05$

Table 18 presents special and general education teachers' responses on questions concerning their own preparedness to fully participate in IEP team decisions.

Table 18

*Special and General Education Teachers' Responses on Their Perceptions of Their Own Preparedness*

Question	Responses				
	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
	General Education Teachers				
5. I have sufficient knowledge of test accommodations for students with disabilities to participate fully in IEP team decisions.	26.4% (41)	45.2% (70)	12.9% (20)	11.0% (17)	4.5% (7)
6. During my college teacher preparation program, I received adequate training on testing and test accommodations for students with disabilities.	8.4% (13)	13.5% (21)	5.8% (9)	41.3% (64)	30.9% (48)
7. During my employment as a teacher, I have received adequate staff development training on test accommodations for students with disabilities.	16.1% (25)	41.9% (65)	10.2% (16)	25.8% (40)	5.8% (9)
	Special Education Teachers				
5. I have sufficient knowledge of test accommodations for students with disabilities to participate fully in IEP team decisions.	58.8% (60)	29.4% (30)	5.9% (6)	3.9% (4)	1.9% (2)
6. During my college teacher preparation program, I received adequate training on testing and test accommodations for students with disabilities.	12.7% (13)	25.5% (26)	8.8% (9)	42.1% (43)	10.8% (11)
7. During my employment as a teacher, I have received adequate staff development training on test accommodations for students with disabilities.	31.4% (32)	36.3% (37)	13.7% (14)	16.7% (17)	1.9% (2)

*Note.* The number of teachers who responded correctly to each item is presented in parentheses.

*Teachers' Perceptions of the Fairness of Test Accommodations*

Participants were asked to respond to three Likert-scale questions concerning their perceptions of the fairness of test accommodations. Slightly more than half, 53.0%

(n=54) of special education teachers and 44.5% (n=69) of general education teachers *strongly agreed* or *agreed* with the statement that it is fair that test accommodations are made available only to students with disabilities and English as a second language students when they take Virginia SOL assessments. There is no significant difference between special education teachers' and general education teachers' perceptions ( $t=1.814, p=.071$ ) at the .05 level.

Very few special education teachers 5.9% (n=6) and general education teachers 3.6% (n=5) *strongly agreed* or *agreed* with the statement that test accommodations give an unfair advantage to students when they take the Virginia SOL assessments. There is no significant difference between the special education teachers' responses and those of the general education teachers' responses ( $t=-1.934, p=.054$ ) at the .05 level.

Only 3.9% (n=4) of special education teachers and 7.1% (n=11) of general education teachers *strongly agreed* or *agreed* with the statement that test accommodations give an unfair advantage to students when they take tests as part of their daily classroom instruction. The difference between the perceptions of the special education teachers and the general education teachers is statistically significant at the .05 level ( $t=-2.496, p=.013$ ).

Table 19 presents the results of the independent samples *t*-test on the three questions on perceptions of the fairness of test accommodations for students with disabilities and Table 20 presents a comparison of general education teachers' and special education teachers' responses to the questions of fairness of test accommodations for students with disabilities.

Table 19

*Results of Independent Samples t-tests on the Questions of the Fairness of Test Accommodations For Students With Disabilities*

Question	<i>t</i>	<i>p</i>
8. It is fair that test accommodations are made available only to students with disabilities and ESL students when they take Virginia SOL assessments.	1.814	.071
9. Test accommodations give an unfair advantage to students when they take the Virginia SOL assessments.	1.934	.054
10. Test accommodations give an unfair advantage to students when they take tests as part of their daily classroom instruction.	2.496	.013

\* $p < .05$

Table 20

*Special Education Teachers and General Education Teachers' Perceptions of the Fairness of Test Accommodations*

Question	Responses				
	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
General Education Teachers					
8. It is fair that test accommodations are made available only to students with disabilities and ESL students when they take Virginia SOL assessments.	12.9% (20)	31.6% (49)	17.4% (27)	31.0% (48)	7.1% (11)
9. Test accommodations give an unfair advantage to students when they take the Virginia SOL assessments.	1.0% (1)	2.6% (4)	14.2% (23)	56.1% (87)	26.4% (40)
10. Test accommodations give an unfair advantage to students when they take tests as part of their daily classroom instruction.	0% (0)	7.1% (11)	9.7% (15)	58.1% (90)	25.2% (39)
Special Education Teachers					
8. It is fair that test accommodations are made available only to student with disabilities and English as a Second Language (ESL) students when they take Virginia SOL assessments.	23.6% (24)	29.4% (30)	16.7% (17)	22.5% (23)	6.8% (8)
9. Test accommodations give any unfair advantage to students when they take the Virginia SOL assessments.	3.9% (4)	1.7% (2)	5.9% (6)	42.2% (43)	46.1% (47)
10. Test accommodations give an unfair advantage to students when they take tests as part of their daily classroom instruction.	2.9% (3)	1.0% (1)	5.9% (6)	46.1% (47)	44.1% (45)

*Note.* The number of teachers who responded correctly to each item is presented in parentheses.

*Teachers' Perceptions of the Helpfulness of Test Accommodations*

Ten Likert-scale questions addressed teachers' perceptions of the helpfulness of specific test accommodations. Over half of both special education teachers and general

education perceive that all 10 of the accommodations are either *very helpful* or *helpful*.

An independent samples *t*-test for each of the 10 accommodations indicates that there is no significant difference between the perceptions of special education teachers and general education teachers at the .05 level for any of the 10 accommodations. Table 21 presents the distribution of teachers' responses and Table 22 presents the results of the *t*-tests for independent samples for each of the 10 accommodations.

Table 21

*General Education Teachers' and Special Education Teachers' Perceptions of the Helpfulness of Test Accommodations*

Accommodation	Very Helpful		Helpful		Somewhat Helpful		Not Helpful	
	General Education Teachers	Special Education Teachers	General Education Teachers	Special Education Teachers	General Education Teachers	Special Education Teachers	General Education Teachers	Special Education Teachers
Reading aloud of test items	58.7% (91)	71.6% (73)	30.3% (47)	18.6% (19)	10.3% (16)	5.9% (6)	<1% (1)	3.9% (4)
Small group	49.7% (77)	61.8% (63)	29.7% (46)	25.5% (26)	17.4% (27)	8.8% (9)	3.2% (5)	3.9% (4)
Preferential seating	36.1% (56)	37.2% (38)	37.4% (58)	28.4% (29)	20.6% (32)	24.5% (25)	5.8% (9)	9.8% (10)
Simplifying directions	54.8% (85)	59.8% (61)	37.4% (58)	25.5% (26)	5.8% (9)	12.7% (13)	1.9% (3)	1.9% (2)
Ability to mark in test booklet	56.8% (88)	56.9% (58)	31.0% (48)	23.6% (24)	8.4% (13)	16.7% (17)	3.9% (6)	2.9% (3)
Reading directions	56.8% (88)	63.7% (65)	33.5% (52)	24.5% (25)	7.7% (12)	7.8% (8)	1.9% (3)	3.9% (4)
Spelling dictionary	25.2% (39)	25.5% (26)	34.8% (54)	31.4% (32)	34.2% (53)	31.4% (32)	5.8% (9)	11.8% (12)
Word processor	23.9% (37)	21.6% (22)	32.9% (51)	44.1% (45)	32.3% (50)	27.4% (28)	11.0% (17)	6.9% (7)
Large print	31.6% (49)	40.2% (41)	38.1% (59)	27.5% (28)	27.1% (42)	26.5% (27)	3.2% (5)	5.9% (6)
Breaks during test	39.4% (61)	41.2% (42)	36.1% (56)	29.4% (30)	20.6% (32)	21.6% (22)	3.9% (6)	7.8% (8)

*Note.* The number of teachers who responded to each item is presented in parentheses.

Table 22  
*Results of Independent Samples t-Tests for Helpfulness of Accommodations for Students with Disabilities*

Accommodation	<i>t</i>	<i>p</i>
Reading aloud of test items	1.148	.252
Small group	1.796	.074
Preferential seating	-.894	.372
Simplifying directions	-.216	.829
Ability to mark in test booklet	-.601	.549
Reading directions	1.028	.305
Spelling dictionary	-.743	.458
Word processor	.916	.361
Large print	.343	.732
Breaks during test	-.186	.852

\*  $p < .05$

*Question 6. Does the knowledge of test accommodations for students with disabilities differ between general education teachers and special education teachers?*

Respondents were asked to answer 10 true/false questions designed to elicit their general knowledge of test accommodations for students with disabilities. A *t*-test of independent samples indicates that there is no significant difference at the .05 level between the knowledge of general education teachers and special education teachers in nine of the ten questions. There was a significant difference ( $t = -3.161$ ,  $p = .002$ ) between the general education teachers' and special education teachers' responses to the question on whether IEP teams should consider school resources, such as the availability of classrooms, equipment, and teachers, when determining what accommodations should be

made available to students with disabilities. A statistically significant higher number of special education teachers responded to that question correctly. Table 23 presents the results of the independent samples t-tests on the 10 general knowledge questions on tests accommodations for students with disabilities.

Table 23

*General Education Teachers' and Special Education Teachers' Knowledge of Test Accommodations for Students With Disabilities*

Question	<i>t</i>	<i>p</i>	Correct Responses	
			General Education Teachers	Special Education Teachers
21. Accommodations for standardized tests such as the Virginia SOL assessments should be the same accommodations that a student needs and uses when taking a classroom assessment.	-0.239	.811	88.4%	90.2%
22. IEP teams should consider school resources, such as the availability of classrooms, equipment, and teachers, when determining what accommodations should be made available to students with disabilities.	3.161	.002	38.1%	57.8%
23. All students with disabilities must have at least one accommodation listed on their IEP.	-1.123	.263	58.7%	65.7%
24. As part of the IEP team, general education teachers should participate in the determination of any accommodations that will be provided the student.	-.030	.976	92.3%	92.2%
25. There is no need for general education teachers to have knowledge of accommodations for students with disabilities.	-.072	.943	92.9%	93.1%
26. The purpose of a test accommodation is to provide students with disabilities an equal opportunity on assessments.	1.105	.270	87.7%	93.1%
27. Test accommodations should be used only when students participate in the Virginia SOL assessments.	-.858	.392	94.8%	97.1%
28. All students with a learning disability should receive the same test accommodations.	-1.686	.093	86.4%	93.1%
29. The school principal cannot alter an IEP team's accommodation decisions.	1.952	.052	72.9%	83.3%
30. An IEP team must allow any test accommodation that a student's parent requests.	.411	.682	87.1%	85.3%

\*  $p < .05$

## Chapter 5: Summary, Discussion, and Recommendations

The purpose of this study was to investigate Virginia teachers' perceptions and knowledge of test accommodations for students with disabilities. A summary of the study's findings are presented in this chapter along with recommendations and possibilities for practice and further areas of research.

### *Summary of the Findings*

Survey information was collected using the Virginia Teachers' Perceptions and Knowledge of Test Accommodations for Students with Disabilities survey. The survey consisted of four sections. The first section collected demographic information. Section Two consisted of six questions that addressed teachers' perceptions of their own training and preparedness and the fairness of test accommodations. Section Three focused on teachers' perceptions of the helpfulness of 10 specific test accommodations. Section Four consisted of 10 questions designed to determine teachers' basic knowledge of test accommodations. A summary of the analysis of the data from the six research questions is presented in this chapter.

*Research Question 1. What are special education teachers' perceptions of their preparedness, the fairness of test accommodations, and the helpfulness of test accommodations for students with disabilities.?*

An overwhelming majority, 88.2%, of special education teachers appear confident that they have sufficient knowledge of test accommodations to participate fully in Individualized Education Plan (IEP) team decisions. The decisions concerning accommodations are made at IEP meetings and special education teachers should certainly possess a breadth and depth of knowledge about accommodations in order to

function as the “expert” when these decisions are made. This research suggests that special education teachers are confident in their knowledge base concerning accommodations for students with disabilities.

While the special education teachers feel confident in their knowledge of test accommodations, only 38% of them feel that they received adequate training on accommodations during their college preparation programs. This perception of special education teachers may suggest a serious shortcoming in college teacher preparation programs. Approximately two thirds of special education teachers did perceive, however, that they received adequate staff development training during their employment as teachers.

Concerning the overall fairness of test accommodations, slightly over half of the special education teachers feel that it is fair that the use of accommodations is limited to students with disabilities and English as a Second Language (ESL) students when they take Standards of Learning (SOL) assessments. Special education teachers also overwhelmingly believe that accommodations do not give an unfair advantage to students with disabilities when these students take SOL assessments nor do accommodations give an unfair advantage to students when they are used in classroom assessments. Finally, the majority of special education teachers also feel that each of the 10 accommodations presented in the survey was either *helpful* or *very helpful* to student with disabilities.

*Research Question 2. What is special education teachers' knowledge of test accommodations for students with disabilities?*

Results indicate that special education teachers have a very good level of knowledge of test accommodations; approximately 85% of them answered the 10 survey

questions correctly. There were only two questions in which fewer than 70% of the special education teachers responded correctly: less than two thirds knew that IEPs were not required to contain at least one accommodation and fewer than half of the special education teachers knew that IEP teams should not consider school resources when determining what accommodations should be made available to students with disabilities. Both of these results are troubling to this researcher. The fact that a third of special education teachers think that all IEPs must contain at least one accommodation suggests that some students with disabilities may be given accommodations that are unnecessary or are actually detrimental to them. The finding that the majority of special education teachers do not know that school resources should not be considered in determining what is best for a student's education suggests that some students with disabilities may not receive all of the services and support that they actually need to be academically successful.

*Research Question 3. What are general education teachers' perceptions of their preparedness, the fairness of test accommodations, and the helpfulness of test accommodations for students with disabilities?*

Like their special education teacher counterparts, general education teachers are confident in their knowledge of test accommodations. Almost three quarters of them believe that they have sufficient knowledge of test accommodations for students with disabilities to participate fully in IEP team decisions. Unfortunately, relatively few of the general education teacher respondents, less than 22%, believe that had received adequate training in testing and test accommodations during their college teacher preparation programs.

The majority of general education teachers, however, do perceive that that they have received adequate staff development training during their employment as teachers.

On the question of the fairness of allowing accommodations only for students with disabilities and English as a second language students when they take SOL assessments, general education teachers are divided in their perceptions. Almost 45% of them feel that such policies are fair, while 38.1% do not agree and over 17% are not sure whether the policies are fair or not. Very few general education teachers perceive that accommodations give an unfair advantage to students when taking SOL or when taking classroom assessments.

*Research Question 4. What is general education teachers' knowledge of test accommodations for students with disabilities?*

Results indicate that general education teachers, like special education teachers, have a very good knowledge of test accommodations for students with disabilities; answering 80.1% of the questions correctly. The general education teachers responded correctly over 72% of the time on eight of the ten questions.

*Research Question 5. Do the perceptions of special education teachers differ from the perceptions of general education teachers with respect to teacher preparedness, fairness of test accommodations, and helpfulness of test accommodations for students with disabilities?*

In the matter of preparedness and training, the majority of both special education teachers and general education teachers perceived that they had sufficient knowledge of test accommodations for students with disabilities to participate fully in IEP team decisions. There was a statistically significant difference between special education

teachers' perceptions and those of their general education counterparts. Special education teachers, not surprisingly, were more confident of their knowledge than were general education teachers.

Concerning teachers' perceptions of their college teacher preparation programs, only 38.2% of special education teachers and 21.9% of general education teachers felt that they had received adequate training on testing and test accommodations. While both groups of teachers felt their college preparation programs were lacking in these areas, there was a statistically significant difference between general education and special education teachers' perceptions. General education teachers were less likely to perceive that their college training programs prepared them adequately in testing and test accommodations than were the special education teachers.

Both special education and general education teachers feel that it is fair that only students with disabilities and ESL students may use accommodations when taking the SOL assessments; there was no significant difference between the responses of the two groups. Very few special and general education teachers perceive that accommodations give an unfair advantage to students when taking SOL assessments or when taking classroom assessments.

Both special education teachers and general education teachers perceive that all 10 of the specific accommodations addressed in the survey were either *very helpful* or *helpful* to students with disabilities. The two groups of teachers were in agreement; there was no statistical significance between the perceptions of special education teachers and those of general education teachers on the matter of the helpfulness of the

accommodations. Both groups of teachers perceive that the accommodation of reading test items aloud as the most helpful of the 10 accommodations presented.

*Research Question 6. Does the knowledge of test accommodations for student with disabilities differ between general education teachers and special education teachers?*

Both special education and general education teachers have a very good knowledge of test accommodations for students with disabilities. Surprisingly, there was no statistically significant difference between the knowledge level of special education teachers and general education teachers in nine of the ten general knowledge questions concerning test accommodations for students with disabilities. However, a significantly higher number of special education teachers correctly answered the question concerning whether IEP teams should consider school resources when determining accommodations for students with disabilities. A significantly larger number of special education teachers knew that the IEP team should not consider school or district resources when making decisions about test accommodations. The IEP team is responsible for providing what the student requires to receive an adequate education, and the school district must provide it, without regard to resources in the school or the district.

#### *Discussion of the Findings*

In this section, the findings from this study will be compared with previous findings on teachers' perceptions and knowledge of test accommodations for students with disabilities. As previously discussed, there is a paucity of research on this subject.

The results of this study have led this researcher to conclude that 1) both special education and general education teachers are confident in their knowledge of test

accommodations for students with disabilities, b) both groups of teachers do not perceive that they received adequate information on test accommodations during their college teacher preparation programs, c) both groups of teachers perceive that they did receive adequate staff development training on test accommodations, d) the majority of special and general education teachers perceive that the 10 accommodations presented were either *very helpful* or *helpful*, and e) both special and general education teachers in Virginia have a good knowledge of test accommodations for students with disabilities.

A decade ago, in a national survey of the perceptions of 401 general education teachers, Jayanthi, Epstein, Polloway, and Bursuck (1996) found that 66.6% of the respondents indicated that it was not fair to make testing adaptations available only to students with disabilities. There has been quite a change since then. This researcher found that fewer than half (48.4%) of general education teachers perceived that it was not fair that test accommodations were limited to students with disabilities and ESL students. Interestingly, 44.5% felt that limiting test accommodations to these two groups of students was a fair policy, but 17.4% of the general education teachers were unsure about the fairness of test accommodations being limited to students with disabilities and ESL students.

These findings suggest that the perceptions of general education teachers on the fairness of test accommodations have changed in the last decade, but there are still a large number of teachers who remain unsure. This change in general education teachers' perceptions may be due, in part, to their increased involvement in inclusion programs and the 1997 Amendments to IDEA requirement that general education teachers attend IEP meetings and participate in accommodations decisions. As more and more students with

disabilities are given access to the general education curriculum, a larger number of general education teachers are involved with these students on a daily basis. More general education teachers are now teaching students with disabilities in their inclusion classrooms, perhaps for the first time in many cases. This increase in general education teachers' involvement with the day-to-day education of these students may have been responsible for the change in their perceptions and attitudes. The inclusion classes have not only exposed more general education teachers to working with students with disabilities, but this has also required them to collaborate more with special education teachers.

Results of this research indicate that 71.6% of general education teachers perceive that they are prepared to participate fully in IEP meetings with respect to their knowledge of test accommodations for students with disabilities. This finding is interesting given the results of a survey conducted by Martin, Huber Marshall, and Sale (2004) that examined the perceptions of 1,638 IEP meeting participants from 393 IEP meetings held over a three-year period in a southwestern state. The participants included special education teachers, general education teachers, administrators, related service providers, parents, and students who participated in IEP meetings at middle, junior high, and high schools in a southwestern state. Results of this survey indicate that general education teachers perceived helping make decisions significantly less than all IEP meeting participants, and the general education teachers reported that they talked less than anyone else at the meetings with the exception of students (Martin, Huber Marshall, & Sale). Is it possible that the relative silence of general education teachers at IEP meetings, exhibited in this study, is a reflection of their lack of confidence and their lack of knowledge?

Although results of this research indicate that Virginia general education teachers and special education teachers have a considerable knowledge of test accommodations for students with disabilities, this researcher was surprised at the findings. In fact, the respondents scored higher than anticipated. At the onset of this study, this researcher had surmised that given their training and experience, special education teachers would have known dramatically more than their general education counterparts. One explanation for the difference in what was expected and what was learned is that general education teachers have increased their knowledge because of their mandated participation in IEP meetings. More and more they are involved with the education of all students, not just those without disabilities. Due to the increased number of students in inclusion classes, general education and special education teachers must collaborate more closely. More interactions between the two groups may also be a factor in general education teachers' good showing. However general education teachers have garnered their knowledge, this research suggests that they do know something about accommodations.

It is interesting to note that there are marginal differences between the responses of the two groups except for one knowledge question. A pattern emerged in which the special education teachers scored slightly higher than the regular education teachers on all of the questions. There was only one statistically significant difference on the item that questioned whether school resources should be considered when determining accommodations for students with disabilities. This question was the one on which both groups scored the lowest and there was a wider range between their responses. Perhaps the difficulty of the question might have separated the two groups. Perhaps teachers do consider the school's resources during IEP meetings when they, indeed, should not limit

what services a child receives based on available resources. An IEP team should only consider the child's needs.

The findings of this research are also interesting given the results of a study of special education teachers and general education teachers in Oregon. Hollenbeck, Tindal, and Almond (1998), surveyed teachers to determine their knowledge of allowable accommodations for statewide assessments. This survey did not investigate the teachers' knowledge of accommodations for students with disabilities, but examined teachers' knowledge of which of 16 accommodations were allowed on statewide assessments. In that study, only 54.8% of teachers correctly identified all 16 accommodations, and general education teachers responded correctly more often than the special education teachers. General education teachers responded correctly 51.6% of the time while special education teachers only answered 47.4% of the questions correctly. The results of this earlier study, conducted almost a decade ago, are similar to the current findings in that the difference between special education teachers' and general education teachers' knowledge of accommodations for students with disabilities was very small.

Using a true/false test to measure the respondents' knowledge of test accommodations for students with disabilities has a limitation in that the nature of a true/false test might have inflated the scores of both groups of teachers. There were only ten items and by the very nature of a true/false test, the respondents had a 50 percent chance of guessing the right answer. This format might lead some to conclude that perhaps the respondents know less than they responded on this finite test. Another limitation is that the respondents could have asked others for assistance or have looked up the answers prior to completing their survey.

### *Recommendations*

This research involved Virginia teachers' perceptions and knowledge of test accommodations for students with disabilities. Based on the results of the findings of this research, this researcher offers the following recommendations for practice and for further research.

#### *Recommendations for Practice*

1. Both special education and general education teachers perceive that they did not receive adequate training during their college teacher preparation programs.

University and colleges should review the curriculum in their teacher preparation programs to determine if the amount of time devoted to assessments and test accommodations for both special and general education teachers needs to be increased. This increase may not need to be in the form of additional courses but perhaps an increase in the amount of time spent on these topics in existing courses.

2. Although the majority of special education and general education teachers perceive that they had received adequate professional development training, school districts as well as individual schools should review their professional development programs to determine if they can offer even better training for teachers. Given teachers' perceptions that their college preparation programs were not adequate, the in-service preparation programs have even more significance. Staff development in the areas of federal and state law, local and state policies and regulations, and current accommodations research is the final responsibility of school districts and individual schools. They have the duty to ensure that only well-trained and confident teachers are teaching our students.

Destefano, Shriner, and Lloyd (2001), in a study involving more than 80 Illinois teachers, found that after 10 to 15 hours of in-service preparation along with several additional hours of informal feedback, teachers reported that they had higher confidence levels in their ability to make accommodations decisions. In-service preparation programs could raise the high confidence levels of Virginia teachers to even higher levels. Additionally, school districts and individual schools could also encourage teachers to take specific college courses in measurement and assessment by providing financial incentives to teachers.

#### *Recommendations for Further Research*

The results of this study should be considered preliminary and this researcher suggests that further study is warranted in several areas.

1. This study was limited to special education and general education teachers currently employed in Virginia. Further research needs to be conducted in other states to determine if these findings are representative of teachers' perceptions in other parts of the country.

2. This study found that while the majority of both special education teachers and general education teachers were confident in their knowledge of test accommodations to participate fully in IEP meetings, both groups perceived that they did not receive adequate training in testing and test accommodations for students with disabilities during their college teacher preparation programs. Research should be conducted to determine if this perception represents an actual current weakness in college teacher preparation programs, or are teachers' perceptions of this inadequacy based on the dates that they attended college? For example, the measurement and assessment courses taken by

teachers prior to the 1997 Amendments to Individuals with Disabilities Education Act may not have addressed students with disabilities or test accommodations at all.

Measurement and assessment courses taught since the enactment of that legislation may include more information concerning accommodations for students with disabilities.

3. This study only investigated general education teachers' and special education teachers' knowledge of test accommodations for students with disabilities.

Accommodations decisions are made by IEP teams that, in addition to special education and general education teachers, are composed of parents, administrators, and, when they are old enough to participate, students. Additional research into the perceptions and knowledge of other members of IEP teams should be conducted.

4. This researcher did not investigate what variables may affect teachers' perceptions and knowledge. Research should be conducted to identify whether the variables of (a) years of experience as a teacher, (b) the teacher's education level, (c) the grade taught (d) the type and location of school, (e) whether general education teachers had previous experience as a special education teacher, and (f) number of IEP meetings attended have an impact on teachers' perceptions and knowledge of test accommodations.

### *Conclusions*

Results of this preliminary study indicate that both general education and special education teachers in Virginia are confident in their knowledge of test accommodations for students with disabilities to participate fully in IEP meetings. That confidence is well-founded, based on the teachers' very good knowledge of test accommodations demonstrated on the survey. While both groups of teachers are confident in their knowledge; neither special education nor general education teachers perceive that they

received adequate training in their college teacher preparation programs. For this researcher, this is the most interesting and disturbing finding of this study. Universities and colleges must provide the coursework to ensure that both general and special education teachers receive adequate coursework in students with disabilities and test accommodations.

Fortunately, both groups of teachers are more satisfied with the staff development training that they have received during their employment as teachers. This may help to mitigate their perceptions that they were not given adequate training on test accommodations in their college teacher preparation programs. School districts and individual schools must continue to include information on students with disabilities and test accommodations in their in-service training programs. Finally, both groups of teachers are also generally in agreement as to their perceptions of the fairness and helpfulness of specific test accommodations.

This researcher believes that the findings that there are few significant differences in the perceptions and knowledge of test accommodations for students with disabilities indicates that Virginia educators, both special education teachers and general education teachers, are well-prepared to make the important decisions about test accommodations for these students. More can be done in pre-service and in-service training programs to improve the accommodations knowledge of teachers, which will certainly improve teachers' confidence and very possible change their perceptions of students with disabilities and test accommodations. Teachers who are more knowledgeable and confident in their knowledge of test accommodations will help ensure that students with disabilities are afforded the same educational opportunities as their non-disabled peers.

## References

- American Educational Research Association, American Psychological Association, & National CME (1999). *Standards for educational and psychological testing*. Washington, DC: American Psychological Association.
- Burns, E. (1998). *Test accommodations for students with disabilities*. Springfield, IL: Charles C. Thomas Publisher, LTD.
- Clapper, A., Morse, A., Lazarus, S., Thompson, S., & Thurlow, M. (2005). 2003 state policies on assessment participation and accommodations for students with disabilities (Synthesis Report 56). Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes. Retrieved January 28, 2006, from: <http://www.education.umn.edu/NCEO/OnlinePubs/Synthesis41.html>.
- Council for Exceptional Children. (2001). CEC Knowledge and Skill Base for All Beginning Special Education Teachers Professional standards. Retrieved September 12, 2003, from: [http://www.cec.sped.org/ps/perf\\_based\\_stdts/standards.html#standards](http://www.cec.sped.org/ps/perf_based_stdts/standards.html#standards)
- CTB/McGraw-Hill. (2001). *Guidelines for inclusive test administration*. Monterey, CA: Author.
- deFur, S. (2002). Education reform, high-stakes assessment, and students with disabilities. *Remedial and Special Education*, 23(4), 203-211.
- Destefano, L., Shriner, G., & Lloyd, C. (2001). Teacher decision making in participation of students with disabilities in large-scale assessment. *Exceptional Children*, 68(1), 7-22.
- Education for All Handicapped Children Act. (1975). 20 U.S.C. 140.

Educational Policy Research Reform Institute. (2003). Preparing educators to teacher students with disabilities in an era of standards-based reform and accountability (Topical Report 5). College Park, MD: University of Maryland, College Park Educational Policy Research Reform Institute.

Elementary and Secondary Education Act of 1965, 20 U.S.C. 2701 (1965).

Elliott, J., Thurlow, M., Ysseldyke, J., & Erickson, R. (1997). Providing assessment accommodations for students with disabilities in state and district assessments (Policy Direction No. 7). Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes. Retrieved November 2, 2005, from the World Wide Web: <http://education.umn.edu/NCEO/Policy7.html>

Elliott, J., Ysseldyke, J., Thurlow, M. & Erickson, R. (1998). What about assessment and accountability? *Teaching Exceptional Children*, 31(1), 20-27.

Elliott, S., Erickson, R., Thurlow, M., & Shriner, J. (2000). State-level accountability for the performance of students with disabilities: Five years of change? *The Journal of Special Education*, 34(1), 39-47.

Elliott, S. Kratochwill, T., & Schulte, A. (1998). The assessment accommodation checklist: Who, what, where, when, why, and how? *Teaching Exceptional Children*, 31(2), 10-14.

Erickson, R.N., Thurlow, M.L., & Ysseldyke, J.E. (1996). Neglected numerators, drifting denominators, and fractured fractions: Determining participation rates for students with disabilities in statewide assessment programs (Synthesis Report No. 23). Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes. Retrieved September 17, 2003, from the World Wide Web:

<http://education.umn.edu/NCEO/OnlinePubs/Synthesis23.html>

Erickson, R., Ysseldyke, J., Thurlow, M., & Elliott, J. (1998). Inclusive assessments and accountability systems: Tools of the trade in educational reform. *Teaching Exceptional Children, 31*(2), 4-9.

Fischer, R. (1994). The American with disabilities act: Implications for measurement. *Educational Measurement: Issues and Practice, 13*(2), 17-26, 37.

Fuchs, L., & Fuchs, D. (1999). Fair and unfair accommodations. *The School Administrator, 56*(1), 24-28.

Gall, M., Borg, W., & Borg, J. (1996). Educational research: An introduction.

Goals 2000: Educate America Act of 1994, 1994.

Hindman, J. (2204). The connection between qualities of effective teachers and selection interviews: The development of a teacher selection interview protocol (Doctoral dissertation, The College of William and Mary , (2004).

Hollenbeck, K., Tindal, G., & Almond, P. (1998). Teachers' knowledge of accommodations as a validity issue in high-stakes testing. *The Journal of Special Education, 32*(3), 175-183.

Individuals with Disabilities Act Amendments of 1997, 20 U.S.C. §1400 *et seq.*

Individuals with Disabilities Education Improvement Act of 2004, P.L. 108-446.

Interstate New Teacher Assessment and Support Consortium (2001, May). Model Standards for Licensing General and Special Education Teachers of Students with Disabilities: A Resource for State Dialogue. Washington, DC: Council of Chief State School Officers.

Jayanthi, M., Epstein, M., Polloway, E., & Bursuck, W. (1996). A national survey of

- general education teachers' perceptions of testing adaptations. *The Journal of Special Education*, 30(1), 99-115.
- Johnson, E., Kimball, K., Brown, S., & Anderson, D. (2001). A statewide review of the use of accommodations in large-scale, high-stakes assessments. *Exceptional Children*, 67(2), 251-264.
- Koretz, D. & Hamilton, L. (1999). Assessing students with disabilities in kentucky: The effects of accommodations, format, and subject (CSE Technical Report 498). Los Angeles, CA: University of California, National Center for Research on Evaluation, Standards, and Student Testing.
- Kubiszyn, T. & Borich, G. (2000). Educational testing and measurement: Classroom application and practice (6<sup>th</sup> ed.) New York: John Wiley & Sons, Inc.
- Langenfeld, K., Thurlow, M., & Scott, D. (1997). High stakes testing for students: Unanswered and implications for student with disabilities (Syntheses Report No. 26). Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes. Retrieved September 28, 2002, from <http://education.umn.edu/NCEO/OnlinePubs/Synthesis26.htm>
- Martin, J., Huber Marshall, L., & Sale, P. (2004). A 3-year study of middle, junior high, and high school IEP meetings. *Exceptional Children*, 70, 285-297.
- McKinney, J. (1983). Performance of handicapped students on the north Carolina minimum competency test. *Exceptional Children*, 547-549.
- Moody, S., Vaughn, S., Hughes, M., & Fisher, M. (2000). Reading instruction in the resource room: Set up for failure. *Exceptional Children*, 66(3), 305-316.
- National Center on Educational Outcomes. (2003). Accountability for assessment results

- in the No Child Left Behind act: What it means for children with disabilities. Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes. Retrieved October 18, 2003, from <http://education.umn.edu/NCEO/OnlinePubs/NCLBaccountability.html>
- National Commission on Excellence in Education. (1983). *A nation at risk: The imperative for educational reform*. Washington, DC: Author.
- National Board for Professional Teaching Standards. (2001). *NBPTS Exceptional Needs Standards*. Author.
- No Child Left Behind Act of 2001, P.L. 107-110, 115 Stat. 1425.
- Pitoniak, M. & Royer, J. (2001). Testing accommodations for examinees with disabilities: A review of psychometric, legal, and social policy issues. *Review of Educational Research, 21*(1), 53-104.
- Safer, N. (1980). Implications of minimum competency standards and testing for handicapped students. *Exceptional Children, 46*(2) 288-290.
- Salvia, J., & Ysseldyke, J. (2001). *Assessment* (8<sup>th</sup> ed.). Boston, MA: Houghton, Mifflin
- Schulte, A., Elliott, S., Kratochwill, T. (2000). Educators' perceptions and documentation of testing accommodations for students with disabilities. *Special Services in the Schools, 15*(1/2), 35-55.
- Shepard, L., Taylor, & Betebenner D. (1998). Inclusion of limited-English proficient students in Rhode Island's Grade 4 mathematics performance assessment (CSE Technical Report No. 486). Los Angeles: University of California, Nation Center for Research on Evaluation, Standards, and Student Testing.
- Siskind, T. (1993). Teachers knowledge about test modifications for students with

disabilities. *Diagnostique*, 18(2), 145-157.

- Standard & Poor's. (2006). Virginia: Statewide education highlights. Retrieved September 28, 2006, from <http://www.schoolmatters.com>.
- The Princeton Review. (2003). Testing the testers 2003: An annual ranking of state accountability systems. New York: Author.
- Thompson, S., Blount, A., & Thurlow, M. (2002). A summary of research on the effects of test accommodations: 1999 through 2001. (Technical Report 28). Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes.
- Thompson, S., & Thurlow, M. (2001). 2001 State special education outcomes: A report on state activities at the beginning of a new decade. Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes. Retrieved September 12, 2003, from <http://education.umn.edu/NCEO/OnlinePubs/2001StateReport.html>
- Thurlow, M. (2001). Use of accommodations in state assessments: What databases tell us about differential levels of use and how to document the use of accommodations. (Technical Report 30). Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes.
- Thurlow, M., & Bolt, S. (2001). Empirical support for accommodations most often allowed in state policy. (Synthesis Report 41). Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes. Retrieved September 12, 2003, from <http://education.umn.edu/NCEO/OnlinePubs/Synthesis41.html>.
- Thurlow, Elliott, J., & Ysseldyke, J. (2003). Testing students with disabilities: Practical

Strategies for complying with district and state requirements (2<sup>nd</sup> ed.). Thousand Oaks, CA: Corwin Press.

Thurlow, M. Erickson, R., Spicuzza, R., Vieburg, K., & Ruhland, A. (1996).

Accommodations for students with disabilities: Guidelines from states with graduation exams. (Minnesota Report No. 5). Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes.

Thurlow, House, Boys, Scott, & Ysseldyke, (2000). State participation and accommodations polices for students with disabilities: 1999 update. (Synthesis Report 33). Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes. Retrieved September 17, 2003, from <http://education.umn.edu/NCEO/OnlinePubs/Synthesis33.html>

Thurlow, M., Hurley, C., Spicuzza, R., & Sawaf, H. (1996). A review of the literature on testing accommodations for students with disabilities. (Synthesis Report 46). Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes. Retrieved July 23, 2003, from <http://education.umn.edu/NCEO/OnlinePubs/Synthesis46.html>

Thurlow, M., & Johnson, D. (2000). High-stakes testing of students with disabilities. *Journal of Teacher Education*, 51(4), 305-314.

Thurlow, M., Lazarus, S., Thompson, S., & Robey, J. (2002). 2001 state policies on assessment participation and accommodations (Synthesis Report 46). Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes. Retrieved July 23, 2003, from [http://education.umn.edu / NCEO/OnlinePubs/Synthesis46.htm](http://education.umn.edu/NCEO/OnlinePubs/Synthesis46.htm)

- Thurlow, M. & Wiener, D. (2000). Non-approved accommodations: Recommendations for use and reporting (NCEO Policy Directions No. 11). Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes. Retrieved September 28, 2002, from <http://education.umn.edu/NCEO/OnlinePubs/Policy11.html>
- Thurlow, M., Wiley, H., & Bielinski, J. (2003). Going public: What 2000-2001 reports tell us about the performance of students with disabilities. (Technical Report 35). Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes.
- Thurlow, M., Ysseldyke, J., & Silverstein, B. (1993). Testing Accommodations for Students with Disabilities: A review of the literature (Synthesis Report 4). Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes.
- Tindal, G., Heath, B., Hollenbeck, K., Almond, P., & Harniss, M. (1998). Accommodating students with disabilities on large-scale tests: An experimental study, *Exceptional Children*, 64(4), 439-450.
- U.S. Department of Education, Office of Special Education. (2000, August 24). Questions and answers about provisions in the Individuals with Disabilities Education Act Amendments of 1997 related to students with disabilities and state and district-wide assessments (OSEP 00-24; memorandum). Washington, DC: Office of Special Education Programs, Office of Special Education and Rehabilitative Services.
- U.S. Department of Education. (2001). Clarification of the roles of the IEP team in electing individual accommodations, modifications I administration, and alternate

assessments for state and district-wide assessments of student achievement.

January 12, 2001.

U.S. Department of Education. (2001). Twenty-fourth annual report to Congress on the implementation of the Individuals with Disabilities Education Act, Washington, D.C.

Virginia Department of Education. (1998). Licensure regulations for School Personnel. Richmond, VA: Author.

Virginia Department of Education. (2002a). Regulations governing special education programs for children with disabilities in Virginia. Richmond, VA: Author.

Virginia Department of Education. (2002b). VDOE procedures for participation of students with disabilities in the assessment component of Virginia's accountability system.. Richmond, VA: Author.

Virginia Department of Education. (2000). Virginia's Special Education State Improvement Plan Report for July 1998 – June 2000. Richmond, VA: Author.

Yell, M. (1998). The law and special education. New York: Prentice Hall.

**Appendix A**

**Precontact Postcard for the Study**

**Upcoming Survey on**  
**Virginia Teachers' Perceptions and Knowledge of Test Accommodations for**  
**Students with Disabilities**

Dear Colleague:

In one week a survey entitled *Virginia Teachers' Perceptions and Knowledge of Test Accommodations for Students with Disabilities* will be sent to you as part of a statewide survey.

The study is designed to collect information on teachers' perceptions and knowledge of test accommodations for students with disabilities. William M. Brown, a doctoral student at the College of William and Mary in Virginia, is conducting the study.

I know that your time is valuable and would greatly appreciate you taking approximately 15 minutes completing the survey when it arrives in the mail. I can be contacted by email at [wmbrow@verizon.net](mailto:wmbrow@verizon.net) or by telephone at 757-495-7606 if you have any questions.

William M. Brown, M.A.

THIS PROJECT WAS FOUND TO COMPLY WITH APPROPRIATE ETHICAL STANDARDS AND WAS EXEMPTED FROM THE NEED FOR FORMAL REVIEW BY THE COLLEGE OF WILLIAM AND MARY PROTECTION OF HUMAN SUBJECTS COMMITTEE (Phone 757-221-3966) ON 2006-08-14 AND EXPIRES ON 2007-08-14.

**Appendix B**  
**Initial Correspondence**

William M. Brown  
4721 Revere Drive  
Virginia Beach, VA 23456

August 21, 2006

Dear Colleague:

Some of most important decisions that both special education teachers and general education teachers make to ensure that students with disabilities are provided equal educational opportunities are those decisions concerning test accommodations. I am currently conducting a study on Virginia teachers' perceptions and knowledge of test accommodations for students with disabilities.

As a Virginia teacher, your perceptions and knowledge of test accommodations for students with disabilities are important to this study. The enclosed 30-question survey should take less than 15 minutes for you to complete. The results of this study will be used provide educational leaders with information to assist them in developing staff development opportunities for all teachers.

Your participation in this survey is completely voluntary and confidential. You will not be personally identified in the study. If you decide to participate your submission will indicate your consent. If you desire to receive a summary of the study's results in the spring of 2007, indicate your email address on page 1 of the survey in the space provided. Use the enclosed stamped, self-addressed envelope to return your survey by Monday, September 4, 2006. Please keep the enclosed Sacagawea dollar as a token of appreciation for your participation in this study.

If you have any questions about the survey, please contact William Brown via email at [wmbrow@verizon.net](mailto:wmbrow@verizon.net). If you have any concerns with any aspect of this survey you may report them to the Chair of the Protection of Human Subjects Committee at the College of William and Mary. The current Chair is Dr. Michael Deschenes who can be reached at 757-221-2278.

I appreciate your consideration and assistance with this study.

Sincerely,

William M. Brown  
Doctoral Candidate  
The College of William and Mary

THIS PROJECT WAS FOUND TO COMPLY WITH APPROPRIATE ETHICAL STANDARDS AND WAS EXEMPTED FROM THE NEED FOR FORMAL REVIEW BY THE COLLEGE OF WILLIAM AND MARY PROTECTION OF HUMAN SUBJECTS COMMITTEE (Phone 757-221-3966) ON 2006-08-14 AND EXPIRES ON 2007-08-14.

**Appendix C**  
**Survey Instrument**

## Virginia Teachers' Perceptions and Knowledge of Test Accommodations for Students with Disabilities

This survey is being used as part of a study on Virginia teachers' perceptions and knowledge of test accommodations for students with disabilities. Your responses are very valuable and appreciated. This survey should take less than 10 minutes to complete.

I would like a summary of the study's findings. Please email me a summary of the following address: \_\_\_\_\_

### Section One Demographic Data

**DIRECTIONS:** For each of the following statements, please check all applicable items.

1. What is your current position in the public school system?
  - General Education Teacher
  - Special Education Teacher
  
2. Which of the following best describes the school where you currently teach?
 

<input type="checkbox"/> Elementary School	<input type="checkbox"/> Alternative school
<input type="checkbox"/> Middle School	<input type="checkbox"/> Vocational/technical school
<input type="checkbox"/> Junior High School	<input type="checkbox"/> Other

---

  - High School
  
3. During the past school year, from what sources have you obtained information about test accommodations for students with disabilities
  - Undergraduate college course(s)
  - Graduate college course(s)
  - National or regional conference(s)
  - Professional journals
  - School or district staff development program(s)
  - Virginia Department of Education web site
  - I have not obtained any information on test accommodations during the past 12 months
  - Other sources \_\_\_\_\_
  
4. Have you participated in at least one Individualized Education Plan (IEP) meeting during the 2005 – 2006 school year?
  - Yes
  - No

***Please continue on page 2***

**Section Two**  
**Perceptions of Preparedness and Fairness of Test Accommodations**

**DIRECTIONS:** Please read each of the following statements carefully and circle the selection that indicates whether you **strongly agree**, **agree**, **disagree**, are **unsure**, or **strongly disagree** with the statement.

	Strongly Aagree	Agree	Unsure	Disagree	Strongly Disagree
5. I have sufficient knowledge of test accommodations for students with disabilities to participate fully in Individualized Education Plan (IEP) team decisions.	(1)	(2)	(3)	(4)	(5)
6. During my college teacher preparation program, I received adequate training on testing and test accommodations for students with disabilities.	(1)	(2)	(3)	(4)	(5)
7. During my employment as a teacher, I have received adequate staff development training on test accommodations for students with disabilities.	(1)	(2)	(3)	(4)	(5)
8. It is fair that test accommodations are made available only to students with disabilities and English as a Second Language (ESL) students when they take Virginia SOL assessments.	(1)	(2)	(3)	(4)	(5)
9. Test accommodations give an unfair advantage to students when they take the Virginia SOL assessments.	(1)	(2)	(3)	(4)	(5)
10. Test accommodations give an unfair advantage to students when they take tests as part of their daily classroom instruction.	(1)	(2)	(3)	(4)	(5)

***Please continue on page 3***

**Section Three**  
Helpfulness of Specific Test Accommodations

**DIRECTIONS:** Indicate whether you think the following test accommodations are **very helpful, helpful, somewhat helpful, or not helpful** to students with disabilities.

	Very helpful	Helpful	Somewhat Helpful	Not helpful
11. Reading of test items aloud	(1)	(2)	(3)	(4)
12. Small group testing	(1)	(2)	(3)	(4)
13. Preferential seating	(1)	(2)	(3)	(4)
14. Simplifying directions	(1)	(2)	(3)	(4)
15. Ability to mark in test booklets	(1)	(2)	(3)	(4)
16. Reading directions	(1)	(2)	(3)	(4)
17. Spelling dictionary	(1)	(2)	(3)	(4)
18. Word processor	(1)	(2)	(3)	(4)
19. Large print	(1)	(2)	(3)	(4)
20. Breaks during test	(1)	(2)	(3)	(4)

**Section Four**  
Knowledge of Test Accommodations

**DIRECTIONS:** Indicate whether each of the following statements is true or false.

	True	False
21. Accommodations for standardized tests such as the Virginia SOL should be the same accommodations that a student needs and uses when taking a classroom assessment.	(1)	(2)
22. IEP teams should consider school resources, such as the availability of classrooms, equipment, and teachers, when determining what accommodations should be made available to students with disabilities.	(1)	(2)
23. All students with disabilities must have at least one accommodation listed on their IEP.	(1)	(2)
24. As part of the IEP team, general education teachers should participate in the determination of any accommodations that will be provided for the student.	(1)	(2)

***Please continue on page 4***

	True	False
25. There is no need for general education teachers have knowledge of accommodations for students with disabilities.	(1)	(2)
26. The purpose of a test accommodation is to provide students with disabilities an equal opportunity on assessments.	(1)	(2)
27. Test accommodations should be used only for participating in the Standards of Learning (SOL) assessments.	(1)	(2)
28. All students with a learning disability should receive the same test accommodations.	(1)	(2)
29. The school principal cannot alter an IEP team's accommodation decisions.	(1)	(2)
30. An IEP team must allow any test accommodation that a student's parent requests.	(1)	(2)

Please return this survey in the enclosed self-addressed stamped envelope to William Brown, 4721 Revere Drive, Virginia Beach, VA 23456.

For Study Use Only				
(0)	(0)	(0)	(0)	(0)
(1)	(1)	(1)	(1)	(1)
(2)	(2)	(2)	(2)	(2)
(3)	(3)	(3)	(3)	(3)
(4)	(4)	(4)	(4)	(4)
(5)	(5)	(5)	(5)	(5)
(6)	(6)	(6)	(6)	(6)
(7)	(7)	(7)	(7)	(7)
(8)	(8)	(8)	(8)	(8)
(9)	(9)	(9)	(9)	(9)

***Thank you for your Participation***

**Appendix D**  
**First Follow-up Letter**

*Follow-Up Correspondence*

William M. Brown  
4721 Revere Drive  
Virginia Beach, VA 23456

September 4, 2006

Dear Colleague:

A couple of weeks ago a survey on teachers' perceptions and knowledge of test accommodations for students with disabilities was mailed to you. As of this date your survey has not been received. In the event you have already responded, please ignore this mailing.

Your knowledge and perceptions of tests accommodations for student with disabilities is important to this study. The enclosed survey should take less than 15 minutes of your time. I certainly realize how busy you are and I value your contribution to this study. The results of this study will be used provide educational leaders with information to assist them in developing staff development opportunities for all teachers.

Your participation in this survey is completely voluntary and confidential. You will not be personally identified in the study. If you decide to participate your submission will indicate your consent. If you desire to receive a summary of the study's results in the spring of 2007, indicate your email address on page 1 of the survey in the space provided. Use the enclosed stamped, self-addressed envelope to return your survey by September 18, 2006.

If you have any questions about the survey, please contact William Brown via email at [wmbrow@verizon.net](mailto:wmbrow@verizon.net). If you have any concerns with any aspect of this survey you may report them to the Chair of the Protection of Human Subjects Committee at the College of William and Mary. The current Chair is Dr. Michael Deschenes who can be reached at 757.221.2278.

I appreciate your consideration and assistance with this study. An understanding of teachers' knowledge and perceptions of test accommodations for students with disabilities gained from this study may provide educational leaders with information to assist them in developing staff development opportunities for all teachers.

Sincerely,

William M. Brown  
Doctoral Candidate  
The College of William and Mary

THIS PROJECT WAS FOUND TO COMPLY WITH APPROPRIATE ETHICAL STANDARDS AND WAS EXEMPTED FROM THE NEED FOR FORMAL REVIEW BY THE COLLEGE OF WILLIAM AND MARY PROTECTION OF HUMAN SUBJECTS COMMITTEE (Phone 757-221-3966) ON 2006-08-14 AND EXPIRES ON 2007-08-14.

Appendix E  
Second Follow-up Letter

*Second Follow-Up Correspondence*

William M. Brown  
4721 Revere Drive  
Virginia Beach, VA 23456

September 25, 2006

Dear Colleague:

A survey on teachers' perceptions and knowledge of test accommodations for students with disabilities was mailed to you in August. As of this date your survey has not been received. In the event you have already responded, please ignore this mailing.

Your knowledge and perceptions of tests accommodations for student with disabilities is important to this study. The enclosed survey should take less than 15 minutes of your time. I certainly realize how busy you are and I value your contribution to this study. The results of this study will be used to provide educational leaders with information to assist them in developing staff development opportunities for all teachers.

Your participation in this survey is completely voluntary and confidential. You will not be personally identified in the study. If you decide to participate your submission will indicate your consent. If you desire to receive a summary of the study's results in the spring of 2007, indicate your email address on page 1 of the survey in the space provided. Use the enclosed stamped, self-addressed envelope to return your survey by October 8, 2006.

If you have any questions about the survey, please contact William Brown via email at [wmbrow@verizon.net](mailto:wmbrow@verizon.net). If you have any concerns with any aspect of this survey you may report them to the Chair of the Protection of Human Subjects Committee at the College of William and Mary. The current Chair is Dr. Michael Deschenes who can be reached at 757.221.2278.

I appreciate your consideration and assistance with this study.

Sincerely,

William M. Brown  
Doctoral Candidate  
The College of William and Mary

THIS PROJECT WAS FOUND TO COMPLY WITH APPROPRIATE ETHICAL STANDARDS AND WAS EXEMPTED FROM THE NEED FOR FORMAL REVIEW BY THE COLLEGE OF WILLIAM AND MARY PROTECTION OF HUMAN SUBJECTS COMMITTEE (Phone 757-221-3966) ON 2006-08-14 AND EXPIRES ON 2007-08-14.

## Vita

## William Michael Brown

Birthdate: December 25, 1952

Birthplace: Dearborn, Michigan

Education: 1999-2007 The College of William and Mary  
Williamsburg, Virginia  
Doctor of Philosophy

1997-1998 Old Dominion University  
Norfolk, Virginia  
Master of Arts

1972-1978 The University of Maryland  
College Park, Maryland  
Bachelor of Science