

Running head: AN ANALYSIS OF EDUCATOR PRACTICES

AN ANALYSIS OF EDUCATOR PRACTICES:
LEARNING AND ASSESSMENT ACCOMMODATIONS FOR STUDENTS WITH SPECIAL
NEEDS
A DISSERTATION
SUBMITTED TO THE FACULTY
OF
THE GRADUATE SCHOOL OF APPLIED AND PROFESSIONAL PSYCHOLOGY
OF
RUTGERS,
THE STATE UNIVERSITY OF NEW JERSEY
BY
SUSAN M. POLKOWSKI
IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE
OF
DOCTOR OF PSYCHOLOGY

NEW BRUNSWICK, NEW JERSEY

OCTOBER 2017

APPROVED:

Ryan J. Kettler, PhD

Elisa S. Shernoff, PhD

DEAN:

Francine Conway, PhD

2017 Copyright by Susan M. Polkowski

Abstract

Consistency and alignment between instructional and assessment accommodations are considered educational best practices (Christensen et al., 2009). Despite this, previous research has shown that the alignment of the provision of accommodations to participants across the CL, CA, and LA conditions is low (Davies et al., 2016). The aim of this study was therefore to determine the prevalence of participants who received accommodations across the three conditions and the degree of alignment of the provision of accommodations across conditions. This study is a replication study originally conducted in Australia (Davies et al., 2016) which used the *Checklist of Learning and Assessment Adjustments for Students* (CLAAS) to evaluate educator practices related to the provision of accommodations across conditions. The current study administered the CLAAS to 45 educators in five New Jersey public schools to report on the accommodations provided to SWSNs ($n = 45$) across the three conditions. The prevalence of SWSNs who received accommodations was calculated through the Marascuilo procedure. Results indicate that at the total level, the prevalence of SWSNs who received accommodations was statistically higher during the CL compared to the LA conditions, but yielded mixed results across each of the eight accommodation domains. Cohen's h was used to identify meaningful differences in prevalence of SWSNs who received accommodations. Results indicate that at the total level, the differences in prevalence of SWSNs who received accommodations were meaningful, with a higher prevalence of SWSNs receiving accommodations during the classroom conditions compared to the LA condition, but yielded mixed results across each of the eight accommodation domains. The Porter alignment index was used to evaluate the degree of alignment of accommodations provided to SWSNs. The alignment of the provision of accommodations was greater between the two classroom conditions compared to the alignment

between the classroom conditions and LA condition. This was consistent across all eight domains considered. The results of this study suggest that alignment can be can be strengthened to allow SWSNs equal accessibility to classroom curriculum and large-scale testing material.

Acknowledgements

The defense of my dissertation is culminating a remarkable journey through graduate school. The support I have received from so many people over a number of years has undoubtedly facilitated the completion of this dissertation.

To my dissertation chair, Dr. Ryan Kettler. I am grateful for your dedication to the field of school psychology. I have learned a great deal from you about scholarly writing, and the patience and diligence it requires to produce quality work. Thank you for the opportunity to be part of your research team as early as my first year in graduate school, and for the support you continued to provide as I pursued a number of other opportunities along the way.

To my second committee member and advisor, Dr. Elisa Shernoff. I am thankful for your guidance throughout the years, concluding with my dissertation. Your scholarship is admirable, and I am extremely grateful for your consistent willingness to support me in my academic and professional pursuits.

To Sylvia Krieger. Thank you for your support throughout my years of graduate school, most memorably during the weeks leading up to my defense. I will forever be indebted to you for your support, guidance, and understanding.

To my mother, Sona Polkowski. I am so grateful for all the sacrifices you have made to provide the best lives to both of your children. For as long as I can remember, I have been in awe of your incredible generosity and genuine kindness. As you approach retirement in your field of school psychology, it is clear that you have changed the lives of not only countless students and their families, but also of your colleagues. I would be honored to follow in your footsteps.

To my late father, Joseph Polkowski. I am thankful for your memory, which includes remarkable brilliance and an emphasis on the importance of higher education and thinking outside the box.

To my sister, Alicia Zieser. As I embarked on this journey to become a psychologist, very few believed in me as much as you did. Thank you for being by my side every step of the way - I could not have done it without you and your son Austin's smiles and sense of humor. Your dedication to your work in education is notable.

To my fiancé, Michael White. You have believed in me since we met in the 5th grade. Thank you for your unconditional support, incredible patience, and kindness, especially over the course of the past year. I am so happy that this is only the beginning of our journey together.

TABLE OF CONTENTS

ABSTRACT.....	II
ACKNOWLEDGEMENTS.....	IV
TABLE OF CONTENTS.....	VI
LIST OF TABLES.....	IX
LIST OF FIGURES.....	X
INTRODUCTION.....	1
CHAPTER I: Literature Review.....	1
Characteristics of Students with Special Needs (SWSNs).....	3
Role of the State.....	6
Accommodation Conditions.....	7
Classroom Learning Accommodations.....	8
Classroom Assessment Accommodations.....	9
Large-scale Assessment Accommodations.....	10
Approaches to Accommodations.....	15
Impact of Accommodations on Learning and Assessment Constructs.....	20
Risk of Undermining Learning and Assessment Constructs.....	20
Checklist of Learning and Assessment Adjustments for Students (CLAAS).....	23
Summary.....	25

Research Questions and Predictions.....	26
CHAPTER II: Methods.....	28
Participants.....	28
Student Sample.....	29
Educator Sample.....	31
Measure.....	33
CLAAS.....	33
Procedure.....	34
Data Analysis.....	35
Prevalence of Accommodations Recommended across Conditions.....	36
Alignment of Accommodations between Conditions.....	37
CHAPTER III: Results.....	39
Data Completeness.....	39
Prevalence of Accommodations Recommended across Conditions.....	39
Marascuilo procedure.....	40
Cohen's h.....	43
Alignment of Accommodations between Conditions.....	46
Porter alignment index.....	47
CHAPTER IV: Discussion.....	49

Prevalence of Accommodations Recommended across Conditions.....	51
Prevalence Comparisons at the Total Level.....	51
Prevalence Comparisons at the Domain Level.....	53
Alignment of Accommodations between Conditions.....	57
Alignment at the Total Level.....	57
Alignment at the Domain Level	58
Comparison to Davies et al. (2016),.....	59
Implications for Practice.....	65
Limitations.....	68
Future Research.....	69
Conclusions.....	70
REFERENCES.....	72
APPENDIX A.....	77

LIST OF TABLES

Table		Page #
1	Disabilities per IDEIA.....	4
2	Accommodations by Category.....	8
3	Accommodation Comparisons.....	11
4	Classroom Assessment Accommodations for Students learning English	13
5	Student Demographic Characteristics.....	30
6	Student Classifications.....	31
7	Educator Characteristics.....	32
8	CLAAS Domains.....	34
9	Data Analytic Plan for evaluating Educators' Practices.....	35
10	Differences of Prevalence of Participants who received Accommodations across Conditions.....	41
11	Effect Size of Prevalence Differences of Participants who received Accommodations Across Conditions.....	45
12	Alignment of Accommodations between Conditions and Aggregated across SWSNs.....	47
13	Prevalence Differences of SWSNs receiving Accommodations between Studies.....	61
14	Effect Size of Prevalence Differences of SWSNs receiving Accommodations between Studies.....	63

LIST OF FIGURES

Figure		Page #
1	Alignment between Conditions and Common Core State Standards	14
2	Differential Boost.....	19

Chapter I

Literature Review

Research has shown that the provision of accommodations to students with special needs (SWSNs) during classroom learning (CL), classroom assessment (CA), and large-scale assessment (LA) is necessary for effective instruction and overall educational value for students (Davies, Elliott, & Cumming, 2016). Alignment between classroom curriculum and state testing has been a central focus of educational reform. In consideration of this, it is important to evaluate the degree of alignment of accommodations provided to SWSNs across the learning and assessment conditions (Linn, Baker, & Betenbenner, 2002). Services provided to SWSNs include accommodations during instruction and assessments. The term “*accommodations*” as used in this document is an adaptation that allows SWSNs to receive the same instruction or complete the same test as other students, but with changes in the presentation, response, setting, or scheduling (Kettler & Elliott, 2010). Accommodations to classroom instruction and assessment practices are considered essential for effective services to be provided to SWSNs (Elliott, Kettler, Beddow, & Kurz, 2011). Accommodations allow for equal accessibility in the classroom and assessment conditions for all SWSNs. Accommodations allow SWSNs to fully access the learning material and participate in the educational experience. Educators do this by adjusting the process within the classroom or by making changes to the material (Christensen, Thurlow, & Wang, 2009).

SWSNs are students who are: (1) classified as having a disability and receive services through individualized education programs (IEPs) as indicated by the Individuals with Disabilities Education Improvement Act of 2004 (IDEIA), (2) in general education who receive services through Section 504 of the Rehabilitation Act of 1973, and (3) learning English (EL)

who receive services through IEPs as indicated by the Every Student Succeeds Act (ESSA) of 2015. A “free appropriate public education” (FAPE) is an educational right of children with disabilities in the United States. The Rehabilitation Act of 1973 and IDEIA, the federal special education law, protects this right. FAPE includes special education and related services documented in IEPs. An “appropriate” education varies in accordance with the SWSNs’ disabilities, strengths, and established goals. IDEIA indicates that schools provide supports and services to SWSNs as listed in their respective IEPs in order for the SWSNs to reach their personal goals (IDEIA, 2004). Section 504 of the Rehabilitation Act of 1973 protects individuals who are handicapped from being prohibited from participating in any program or activity that receives government funds (Section 504). For students who are EL, educators must provide accommodations as indicated by the ESSA, which mandates LA aimed at improving student outcomes in education. Under ESSA, educators must demonstrate the adoption of academic standards for students who are EL aligned with the academic standards of the state (ESSA, 2015).

LA have become a primary focus of the U.S. Department of Education (ED). The Common Core State Standards (CCSS) Initiative documents the knowledge kindergarten through twelfth grade students should have in English/language arts and mathematics at the end of each grade (CCSS, 2010). The initiative established consistent educational standards across the states, as well as ensured that students graduating from high school are equipped to enroll in credit-bearing courses at two- or four-year college programs, or to enter the workforce. In 2010, the ED funded a project to develop assessment systems that aligned with the CCSS. Initiatives focused on improving education through assessments aligned to the CCSS include the Race to the Top (RTT) Fund of 2011. RTT is a grant program created by the ED to encourage

innovation in state and local school district education. The Education Recovery Act as part of the American Recovery and Reinvestment Act (ARRA) of 2009 funds RTT. States receive awards for meeting educational requirements, including administering high-quality assessments aligned to the CCSS (Race to the Top Fund, 2011). One assessment was developed and named Partnership for Assessment of Readiness for College and Careers (PARCC, 2013), designed to measure student achievement in English/language arts and mathematics in grades three through eight, in addition to one grade at the high school level (PARCC, 2013). In designing the PARCC, educators increased accessibility so that a diverse set of students could be included in LA (Kettler, 2015; PARCC, 2013). In addition to the PARCC, the other winning proposal of RTT grants was the Smarter Balanced Assessment Consortium (SBAC, 2012). SBAC is a standardized test consortium that designs CCSS-aligned assessments for use by multiple states. Educators administer assessments in grades three through eight, and grade eleven, in the content areas of English/language arts and mathematics (SBAC, 2012).

IDEIA (2004) notes that “a state must ensure that all children with disabilities are included in all general state and district-wide assessment programs, with appropriate accommodations and alternate assessments as indicated in their respective IEPs. The state's [or, in the case of a district-wide assessment, the local education agency's (LEA's)] guidelines must identify only those accommodations for each assessment that do not invalidate the score” (IDEIA, 2004).

Characteristics of Students with Special Needs (SWSNs)

The first category of SWSNs includes students who receive services through IEPs after educators have identified them as having a disability. The IEP is “the basis for the handicapped child’s entitlement to an individualized and appropriate education,” which educators must create

to meet the individual needs of SWSNs (IDEIA, 2004). Students are eligible for special education and related services if their disabilities adversely affect their educational performances. A “child with a disability” means a child evaluated and classified in accordance with IDEIA guidelines. The definition of “disability” as indicated in IDEIA includes 13 categories within which students are eligible to receive protection and services promised by law as listed in Table 1. IDEIA stipulates that educators provide supports and services to SWSNs as indicated in their respective IEPs in order for SWSNs to reach their personal goals. Overall, the goal of IDEIA is to provide SWSNs the same opportunity to access education as students without special needs (SWOSNs).

Table 1
Disabilities per IDEIA

Categories
Autism
Blindness
Deafness
Emotional Disturbance
Hearing Impairment
Intellectual Disability
Multiple Disabilities
Orthopedic Impairment
Other Health Impaired
Specific Learning Disability
Speech or Language Impairment
Traumatic Brain Injury
Visual Impairment

The second category of SWSNs includes students who receive services through 504 Plans. Section 504 requires educators to provide accommodations to SWSNs even in cases in which they are not eligible for special education services under IDEIA. Students with Section

504 Plans “may have a physical or mental impairment that substantially limits one or more major life activities, have a record of such an impairment, or are regarded as having such an impairment, but do not qualify for special education services.” Examples of SWSNs who may receive accommodations based on their 504 Plans include SWSNs with: communicable diseases and temporary disabilities from accidents who may need short-term hospitalization or homebound recovery, allergies or asthma, substance use disorders, environmental illnesses, and attention difficulties (Section 504).

The third category of SWSNs includes students who are learning English as a second language (EL). ESSA requires that these students be included in LA such as the PARCC, with an exception offered to students who are EL in their first year of instruction in the United States (PARCC, 2013). States must measure SWSNs' progress toward English-language proficiency on statewide assessments administered annually to all students who are EL (ESSA, 2015).

Educators identify students who are EL by their level of performance in relation to district and state academic standards and current English proficiency levels. Educators assess students who are EL on their proficiencies in all four domains of English: speaking, listening, reading, and writing (PARCC, 2013). Educators should administer assessments “ensuring the provision of appropriate accommodations available to students who are EL and children with disabilities to improve the rates of inclusion in regular assessment of such children...” Additionally, the government disburses funds to local educational agencies to “provide for appropriate accommodations to maximize inclusion of children with disabilities and students who are learning English participating in assessments.” Through ESSA, educators provide appropriate accommodations to students who are EL as documented in their IEPs (ESSA, 2015).

Role of the State

Federal and state policies recognize that IEP teams are in the best position to decide on SWSNs' assessment accommodations (Kettler & Elliott, 2010). States are to establish and employ clear and appropriate guidelines. Despite federal policy that requires states to ensure that educators are skilled at administering assessments and using appropriate accommodations, it is ultimately the states' responsibilities to confirm this takes place (Christensen et al., 2009).

The State of New Jersey Department of Education (NJDOE) publishes information on special education and 504 Plans as they relate to the provision of accommodations. The state notes, "special education and 504 Plan students are permitted accommodations and modifications when specified in their educational plans. Similarly, students who are learning English may be tested with one or more accommodations or modifications to the testing procedures." The New Jersey statewide assessments measure the level of access students have to the CCSS. A list of permissible accommodations is available within the Accommodations and Modifications of Test Administration Procedures as listed by the NJDOE. Educators must specify SWSNs' accommodation plans align with the instruction and assessment protocols as listed under Section 504. Students who are EL must take the New Jersey statewide assessments and can test with one or more accommodations (NJDOE).

New Jersey does not indicate any set procedures as they relate to the decisions about accommodations, use of accommodations, and evaluation of accommodations. Christensen et al. (2009) designed a document to provide guidelines for school districts and states to follow in evaluating accommodation use for instruction and assessment titled "*Improving Accommodation Outcomes*." The document provides guidance about being familiar with the rules and regulations

of accommodations, and documents decisions related to the provision and use of accommodations (Christensen et al., 2009).

Accommodation Conditions

Educators need tools and guides to assist in selecting, documenting, and planning appropriate accommodations to provide to SWSNs as highlighted by ED, Office of Special Education Programs (OSEP; Christensen et al., 2009). It is important that there is alignment between accommodations provided during the CL condition and the assessment conditions (Christensen et al., 2009; Davies et al., 2016). State governments monitor the alignment of accommodations provided between instruction and assessment as indicated in the provisions of the Elementary and Secondary Education Act (ESEA). ESEA was enacted in 1965 and is the national education law supporting equal opportunity for all students (Bailey & Mosher, 1968). There is a need for educators to record their activities related to providing accommodations and related services to SWSNs to comply with government guidelines (Christensen et al., 2009).

SWSNs may require accommodations to their instruction and assessments in order to participate fully. *Presentation accommodations* alter the method or format used in the CL or assessment conditions to increase accessibility for SWSNs. *Response accommodations* allow SWSNs to record their work in alternate ways or to organize their work using some type of material or device. *Setting accommodations* change the location or condition in which educators provide instruction or administer assessments. *Scheduling accommodations* adjust the permitted length of time for assignments and assessments, and may adjust how time is structured (Christensen, Lazarus, Crone, & Thurlow, 2008; Ketterlin-Geller & Jamgochian, 2011; Rivera, Stansfield, Scialdone, & Sharkey, 2000; Thurlow, Elliott & Ysseldyke, 2002). Table 2 contains a list of accommodations organized by the abovementioned categories.

Table 2

Accommodations by Category

Presentation Accommodations
Braille edition
Large print
Audio amplification devices, hearing Aids
Response Accommodations
Use of a braille typewriter
Use of scribe
Pencil grips
Setting Accommodations
Individual
Small group
Minimal distractions environment
Scheduling Accommodations
Extended time
Frequent breaks during testing
Specific time of day

Classroom learning accommodations. *CL accommodations* allow for SWSNs to fully access the learning material and participate in the educational experience. Educators do this by adjusting the process within the classroom or changing the material taught (Christensen et al., 2009). SWSNs who use CL accommodations are required to learn the same content as SWOSNs (Laprairie, Johnson, Rice, Adams, & Higgins, 2010; Thompson, Morse, Sharpe, & Hall, 2005). These CL accommodations increase accessibility of instruction for SWSNs and enhance the learning experience overall (Ketterlin-Geller & Jamgochian, 2011; McLeskey, Landers, Hoppey, & Williamson, 2011).

Presentation accommodations in the CL condition may include Braille-edition course materials or tactile graphics such as a raised world map for classroom instruction. Response accommodations within the classroom may include communicating with the use of a braille

typewriter, scribing for classroom assignments, or using a calculation device during mathematics classwork. A braille typewriter is a typewriter with a key corresponding to each of the braille codes. Setting accommodations may include sitting in front of the class during instruction (Christensen et al., 2008; Ketterlin-Geller & Jamgochian, 2011; Rivera et al., 2000; Thurlow, et al., 2002). Scheduling accommodations during the CL condition may include posting SWSNs' daily schedules on the classroom blackboard (Ketterlin-Geller & Jamgochian, 2011).

Classroom assessment accommodations. *Assessment accommodations* are “changes in the standard assessment process made because an individual’s disability requires changes for the test to be a valid measure” (Kettler & Elliott, 2010). Elliott, Kratochwill, and McKeivitt (2001) noted that since an accommodation is an “alteration to a test,” the chance exists that the use of accommodations could consequently alter test measurements. This translates to the potential risk that the validity of inferences that educators can make from the test are also jeopardized. CA include assessments that take place independently of state or national testing requirements, but that educators administer periodically to evaluate students' performance and knowledge of grade-level standards. LA are administered to meet state or national testing requirements, including the PARCC.

Presentation accommodations in the CA condition may include video of a human interpreter who presents items, response options, and passages. Read-aloud accommodations involve educators reading text aloud to SWSNs (Tindal & Fuchs, 1998). Response accommodations within the CA condition may include a braille note-taker, scribing, or speech-to-text for constructed responses. Setting accommodations may include small group testing, separate location testing, or minimal distraction testing environments. Scheduling accommodations during classroom assessments may offer assessments over several days or

provide frequent breaks during testing (Christensen et al., 2009; Ketterlin-Geller & Jamgochian, 2011; Kettler, 2015; Kettler & Elliott, 2010; PARCC, 2013; Rivera et al., 2000; Thurlow, et al., 2002).

Large-scale assessment accommodations. For LA such as the PARCC, accommodations are adjustments to the assessment situation, assessment format, or assessment administration that allow for equal access to the PARCC material. Accommodations permitted on the PARCC overlap with those listed under the aforementioned CA accommodations, including presentation, response, setting, and scheduling accommodations (PARCC, 2013). There are specific guidelines on the allowable accommodations permitted while completing the PARCC for SWSNs (PARCC, 2013). (For a detailed review of accommodations permitted on the PARCC, the reader is directed to PARCC, 2013).

Educators should review the decisions for the provision of accommodations at least annually (Christensen et al, 2009; IDEIA, 2004). Examples of accommodations provided in both the learning and assessment conditions are included in Table 3. The chart below includes information from sources published by PARCC (2013), Rivera et al. (2000), and Thurlow et al. (2002).

Table 3
Accommodation Comparisons

	Learning Condition	Assessment Condition
Presentation Accommodations		
Audio Tape	Text-to-Speech during CL including response options and passages	Text-to-Speech or video of a human interpreter for the ELA/literacy assessments, including items, response options, and passages
Braille Edition	Printed course materials that are available in braille	Braille edition of ELA/literacy and mathematics assessments (Hard-copy braille tests and refreshable braille displays for ELA/literacy)
Closed-Captioning	Closed-captioning of multimedia instruction in the classroom	Closed-captioning of multimedia passages on the ELA/literacy assessments
Tactile Graphics	Raised world map for classroom instruction	Raised graph of ELA/literacy and mathematics assessments
Read Directions to Students	Human interpreter for class instruction	Video of a human interpreter for test directions
Response Accommodations		
Braille typewriter	Communicating in class with use of a braille typewriter	Braille note-taker during ELA/literacy and mathematics assessments
Scribe	Scribing for classroom exercise (i.e. spelling practice)	Scribing or speech-to-text for constructed responses on the ELA/literacy and mathematics assessments
Calculator	Calculation device for classroom exercise on word problems	Calculation device for non-calculator session of mathematics assessments on word problems

Table 3 - Continued

Setting		
Accommodations		
Small Group	Small group instruction	Small group testing
Separation Locations	Separate location instruction	Separate location testing
Minimal Distraction Environment	Minimal distraction learning environment	Minimal distraction testing environment
Scheduling		
Accommodations		
Extended Time	Extended time for classroom material to be processed prior to introducing the next topic	Extended time on the ELA/literacy and mathematics assessments
Time of Day	Schedule of classes during optimum time of day for student	Administration of assessments during optimum time of day for student
Frequent Breaks	Breaks during classroom instruction	Breaks during assessment administration

Educators also offer accommodations categorized in the same way to students who are EL. Examples of CA accommodations provided to students who are EL are listed in Table 4; extracted from Rivera et al., 2000.

Table 4

Classroom Assessment Accommodations for Students Learning English

Presentation Accommodations

- Oral presentation of assessment questions and directions in English
- Replication of the assessment in native language
- Basic version of the test in English

Response Accommodations

- Responses provided in native language
- Use of translation dictionary

Setting Accommodations

- Assessments conducted with a small group of similar students
- Assessments conducted on individual basis

Scheduling Accommodations

- Extended breaks during assessments
 - Assessments administered during optimum time for students
-

CL, CA, and LA, and alignment between these three facets of accommodation, are depicted in Figure 1. Equal signs between the conditions indicate alignment. Fundamental to the provision of accommodations across these three conditions is the ultimate goal for SWSNs to have access to the CCSS, which is central to the figure.

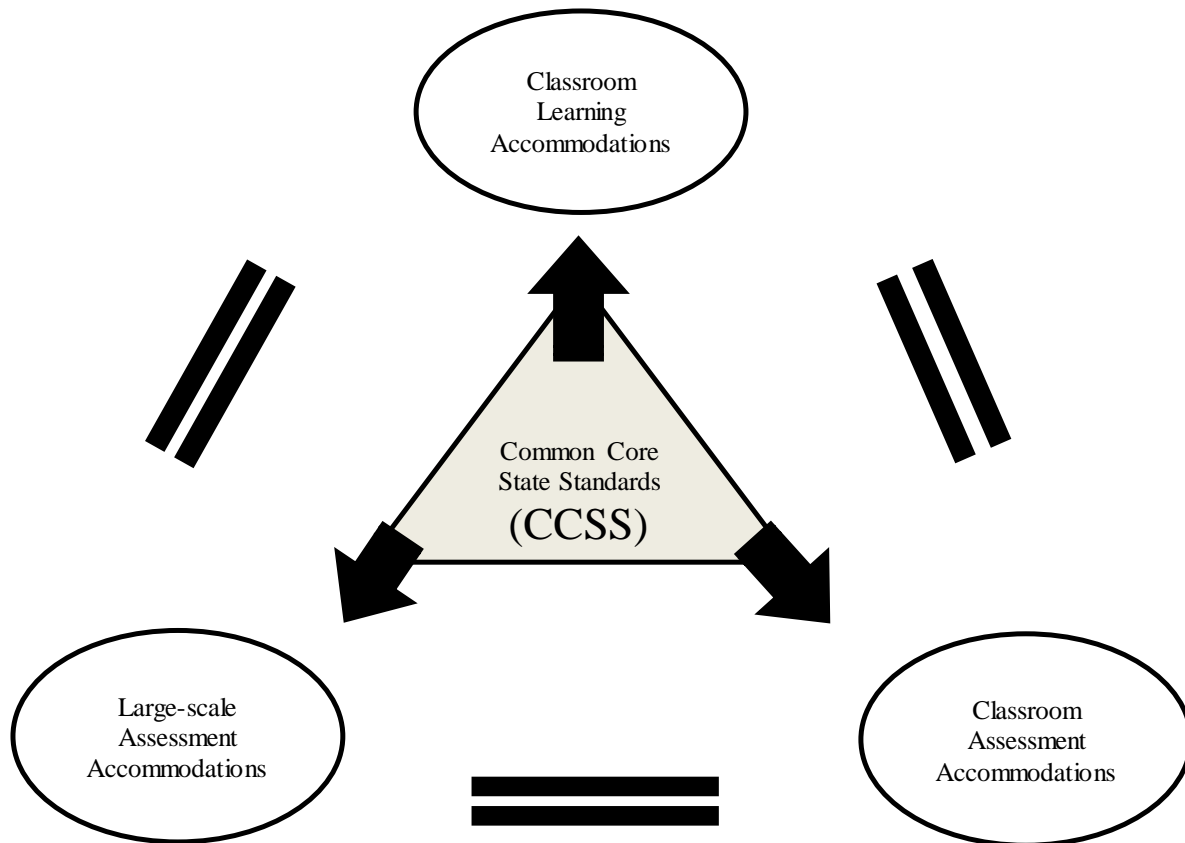


Figure 1. Alignment of accommodations symbolized by equal signs with central focus being access to CCSS.

Alignment between accommodations offered across these three conditions is reportedly low (Davies et al., 2016). For example, in one study of accommodation practices of 100 educators in the United States, the researchers found minimal alignment across the three conditions (DeStefano, Shriner, & Lloyd, 2001). Educators should consider CL accommodations when deciding on assessment accommodations (Christensen et al., 2009; Davies et al., 2016). In cases in which SWSNs are provided a particular accommodation (e.g. extra time) while in the CL condition, and are not granted the same accommodation on the LA such as the PARCC, the SWSNs are less likely to participate to the best of their abilities. Even

when SWSNs do participate without accommodations, it is less probable that their knowledge and overall skills will be indicated in assessment results (Davies et al., 2016).

Approaches to Accommodations

IDEIA mandates that all students be included in large-scale school accountability systems to the greatest extent possible. The logic for this was to increase participation in general achievement testing (e.g. PARCC) to increase access to grade-level content standards (Elliott et al., 2001; Kettler, 2015). For all students to be included in instruction and assessment, educators must grant SWSNs access to instruction and assessment procedures used with the general student population. For instruction, access is the opportunity for SWSNs to learn the content of the intended curricula (Kettler, 2012). For LA, access is the opportunity for SWSNs to perform at a level that indicates they are knowledgeable and skilled in a specific topic (e.g. English or mathematics) (Kettler, 2015). In general, educators should consider access as the interface between SWSNs and the actual specifics of the test (Kettler, Elliott, & Beddow, 2009).

The approach to accommodations is particularly important in the context of measurement precision related to access skills and target skills. An access skill is “necessary to demonstrate what a person knows or does not know on a test” (Kettler, 2012). Students must develop access skills above a specified threshold in order to participate meaningfully in assessments (Carrizales & Tindal, 2009). Kettler (2012) suggests that educators should consider access skills in relation to target skills. A target skill is a “construct that should be reflected by test scores.” Educators and policy-makers can rely on test scores to determine the achievement levels of SWSNs’ particular target skills when SWSNs develop access skills to demonstrate target skills. For example, an access skill for a mathematics exam may be reading comprehension and the target skill may be computation. SWSNs must have the access skill of reading comprehension to read

the word problem in order to demonstrate their computational skills. When access skills are underdeveloped, SWSNs have functional impairments. Educators provide accommodations to SWSNs to lessen the deficit in access skills so that SWSNs can demonstrate target skills and assessment scores can be a dependable source for valid inferences (Kettler, 2012).

The PARCC Accessibility Features and Accommodations Manual (2013) clearly indicates the approach to deciding on and providing accommodations on the PARCC. To receive accommodations on the PARCC, one must complete a Personal Needs Profile (PNP). PNPs are a collection of SWSNs' information, including demographic information, the computer-based accessibility features needed by the students, and accommodations (PARCC, 2013). For students with disabilities, the IEP or 504 team will create the PNPs. As for students who are EL, the educators responsible for selecting accommodations (or an English learner team, when available) will identify the accessibility features in the PNPs (PARCC, 2013).

Despite guidelines and administration manuals, educators' approaches to providing accommodations vary (Lazarus, Thompson, & Thurlow, 2006). Educators can effectively provide accommodations through changes in the way that educators comprehend accountability, the link between instruction and assessment, and the role of IEPs (DeStefano et al., 2001). The Educational Policy Reform Research Institute (EPRRI), financed by the Office of Special Education Programs in the ED, conducts research related to how educators can include SWSNs in accountability systems. The EPRRI conducted a survey of special education teachers from eight school districts to determine how decisions about which accommodations to use for instruction and assessment are selected, which accommodations are most commonly used in instruction and assessment, and the process used to ensure that assessment accommodations are

provided on the day of assessment (Lazarus et al., 2006). The results of the study reflected inconsistencies among educators in the factors that educators and IEP teams considered to make accommodation decisions. Over half of the special education teachers surveyed indicated that the accommodations used during classroom instruction influence decisions around accommodations provided during assessments. According to Thurlow et al. (2002), this is an appropriate criterion for IEP teams to consider because SWSNs should learn the correct methods to use accommodations instead of educators abruptly introducing them during assessments. Thurlow, Lazarus, Thompson, and Morse (2004) discovered that 28 states require that SWSNs use accommodations in the CL condition prior to educators making the accommodations available during assessment conditions. Researchers surveyed educators on the role that state policies play in their decision-making. Only 29 percent of teachers agreed that states' policies were a necessary factor. These results demonstrated a need for state education agencies (SEAs) and school districts to ensure that educators understand effective protocol around making decisions on the selection of instructional and assessment accommodations (Lazarus et al., 2006).

Researchers suggest that educators struggle with identifying accommodations amongst a number of services provided to SWSNs during instruction and assessments. Choosing accommodations that benefit SWSNs also challenges educators. Theory suggests that improving the quality of decision-making for accommodations increases outcomes for SWSNs. Additionally, there is minimal proof that state and local educational agencies are providing professional development on accommodation decision-making by educators (Hemmer & Baker, 2011).

In a study published by Fuchs, Fuchs, Eaton, Hamlett, and Karns in 2000, researchers concluded that there are varied results about educator judgments as they relate to the selection and provision of accommodations. In some areas, educators over-identified students who would benefit from accommodations and in other areas under-identified students. Despite this, objective data sources can support educators' judgments to improve accommodation decisions. It is important that more tools be developed for use by educators to make appropriate decisions related to the provision of accommodations (Fuchs et al., 2000).

There are certain approaches and techniques that educators can use to decide whether to provide accommodations. Teaching to a diverse set of SWSNs, educators can provide general accommodations by considering the unique functional impairments of SWSNs (Kettler & Elliott, 2010). There may be a number of functional impairments that may have yet to be identified. For example, providing all SWSNs with hearing difficulties sound amplification systems may improve access through hearing, but will not address a processing speed deficit identified once hearing difficulties are addressed. It is important to consider all functional impairments and whether the functional impairments influence access skills (e.g. letter recognition) required in order for SWSNs to participate fully in the assessments. Once educators identify the functional impairments, they must determine whether accommodations are available for SWSNs to assist them in overcoming their functional impairments to access the assessments. Once the functional impairments and appropriate accommodations have been selected for each of the SWSNs, educators must confirm that by providing the accommodations the constructs or target skills (e.g. reading fluency) will not be changed (Kettler, 2012).

For an accommodation to be appropriate, educators must determine whether the accommodation will change the target skill or knowledge measured through the assessment. One

way to determine whether the construct will be compromised through accommodations is by using the differential boost interpretive framework (Fuchs & Fuchs, 2001; Fuchs, Fuchs, Eaton, Hamlett, & Karns, 2000). Educators can deem accommodations appropriate when the accommodations translate to improved access to the learning and assessment material for SWSNs. In situations in which educators provide SWOSNs the same accommodations, their experiences should not be notably different from their experiences without the accommodations. Therefore, SWSNs would experience the “boost” in access and consequently test scores, and SWOSNs would not experience the “boost” through accommodations (Kettler, 2012). Educators can calculate differential boost by comparing score improvements between SWSNs and SWOSNs such that SWSNs’ scores should increase more than SWOSNs’ scores (Fuchs et al).

Figure 2 illustrates the differential boost.

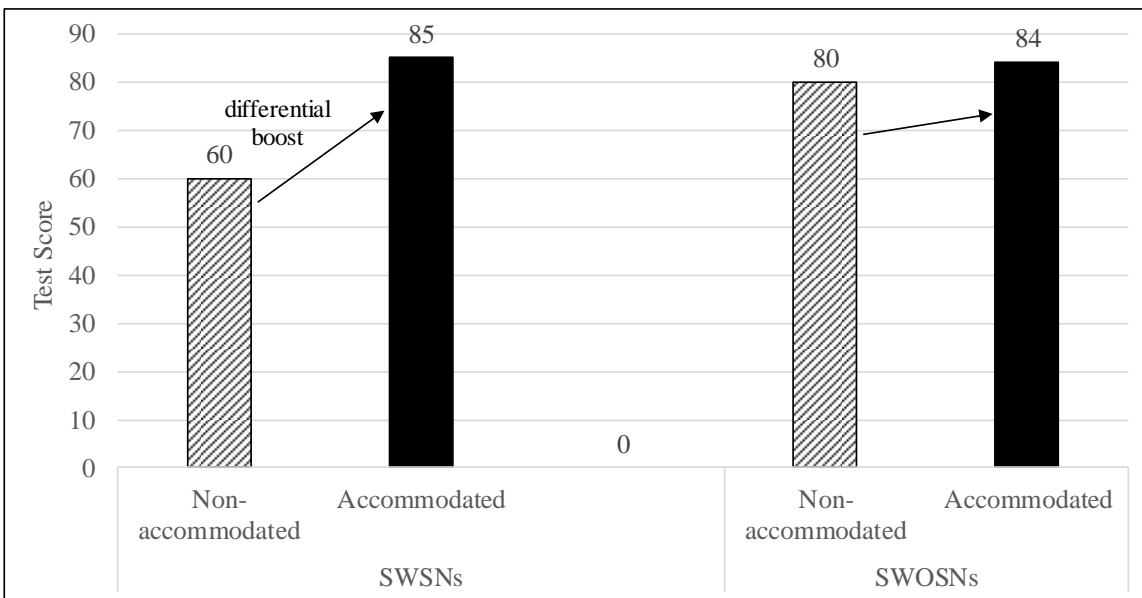


Figure 2. Differential boost for SWSNs compared to SWOSNs

Impact of Accommodations on Instruction and Assessment Constructs

Accommodations are often necessary in order for educators to compare the scores of SWOSNs to the scores of SWSNs. This is in order to recalibrate and balance testing experiences for SWOSNs and SWSNs so that the “validity of inferences” that can be made from assessment results is useful to those making decisions around policy and curriculum (Kettler, 2012). The main difficulty is to match functional impairments of SWSNs with assessment accommodations that will not jeopardize the ability to interpret the results of the actual assessment. Educators must identify students who truly are in need of accommodations from those who would favor the additional support without any need. It is important to remember that test score interpretation may still be invalidated even when SWSNs receive accommodations needed for accessibility reasons (Phillips, 2011).

Research initiatives have focused on the effects of accommodations on the assessment of SWSNs. For example, concerning SWSNs, Sireci, Li, and Scarpati, (2003) reviewed 26 studies and findings indicate that there are “no unequivocal conclusions” that highlight the effects of accommodations on SWSNs' test performance. Overall, Sireci et al. (2003) determined that all student groups (students with disabilities, students who are EL, and general education students) had score gains under accommodated conditions.

Risk of undermining learning and assessment constructs. Assessment accommodations refer to “nonstandard test administrations that produce comparable scores” and improve access to the assessment material (Phillips, 2011). It is essential that access through accommodations does not compromise the “content or skills” that are to be evaluated by the assessment. A “construct is a skill that is measured by a test” (Phillips, 2011). In order to protect the test construct, educators must uphold the requirements of the assessment and the

mental power required to complete the assessment. In order for results from accommodated and non-accommodated test administrations to be comparable, SWSNs should earn scores that are appropriate for the purposes of making inferences related to SWSNs' levels of proficiency compared to the levels of proficiency of SWOSNs (Kettler & Elliott, 2010; Phillips, 2011).

Before test administration, SWSNs learn during classroom instruction. There is significant debate about the implications of CL accommodations on constructs such as reading and mathematical skills. Additionally, questions arise as to whether educators should provide accommodations available during CL conditions also during CA and LA conditions (Henry, 1999). This is particularly true because LA usually have strict guidelines on the number and type of accommodations permitted.

Samuel Messick described "threats to the validity of interpretations based on test scores come from two sources: *construct under-representation* and *construct-irrelevant variance*" (Sireci, 2004). Construct under-representation occurs in cases in which a test only assesses a portion of the construct. For example, accommodations such as reading test material aloud to a SWSN may significantly change the construct measured by the assessment. Whether educators present reading test material orally to SWSNs, educators alter the construct from "reading comprehension" to "oral comprehension." Construct-irrelevant variance occurs when an assessment tests achievement levels "irrelevant" to the construct. An example of construct-irrelevant variance is the format of the exam (e.g. computerized mathematics test) which may influence the performance on an assessment (Elliott et al., 2011; Sireci, 2004). Although the construct tested is mathematics, variance in test scores may result due to the interaction between SWSNs and computers. SWSNs who have had more exposure to computers than others may perform better, which contributes to construct-irrelevant (not related to mathematics) variance.

Construct-irrelevant variance may occur due to “standardized” testing conditions. *Standardized* means that “test content, scoring, and administration conditions are uniform for all test takers” (Sireci, 2004). Since SWSNs have unique, individualized needs, “uniform” testing conditions may prevent SWSNs from demonstrating their true abilities. For example, if SWSNs were deaf then the inability to hear would present a construct-irrelevant difficulty for SWSNs participating in a spelling exam (Sireci, 2004). Educators sometimes mitigate construct-irrelevant variance by the provision of assessment accommodations. Assessment accommodations address the lack of access skills often experienced by SWSNs completing tests (Elliott et al., 2011).

One intended purpose of assessment results is that they drive instructional reform (Henry, 1999). Similar to assessment accommodations that may result in construct under-representation or construct-irrelevant variance, the same risk exists in the application of CL accommodations. For example, when the instructional objective requires SWSNs to use letter-sound correspondence to pronounce novel words, providing a read-aloud accommodation alters the instructional goals (Kettler, 2015). For presentation accommodations, text-to-speech accommodations may alter the learning task from reading comprehension to auditory processing and comprehension. For response accommodations, educators may alter the instructional goal of penmanship when a scribe is used. Setting accommodations such as separate location instruction, may compromise the instructional goals of strengthening the ability to focus. In regards to scheduling accommodations within the classroom, providing extended time for instruction related to improving processing speed may also jeopardize the instructional goals. Additionally, accommodations permitted during CL may not be allowable on LA, which complicate decisions around alignment. IEP teams should reference state accommodation

policies for permitted accommodations prior to decision-making (Christensen et al., 2009; Elliott et al., 2011).

Educators should ask a number of questions to determine the validity of inferences they can make across conditions. Sireci (2004) outlined four main items to confirm including: (1) providing specific accommodations to particular SWSNs improves measurement of the SWSNs' knowledge, skills, and abilities; (2) providing particular accommodations does not provide an unfair advantage; (3) providing particular accommodations does not change the test constructs; and (4) scores from the accommodated and non-accommodated tests are comparable. These highlighted criteria drafted by Sireci (2004) align with a number of frameworks previously described. For example, accommodations improve measurement of SWSNs' levels of proficiency, protect the test construct, and allow for score comparability between results from non-accommodated and accommodated tests (Kettler & Elliott, 2010; Phillips, 2011).

Checklist of Learning and Assessment Adjustments for Students (CLAAS)

In order to support educators in the United States in designing appropriate testing accommodation plans for SWSNs, Elliott, Kratochwill, and Schulte (1999) created the *Assessment Accommodations Checklist* (AAC). The AAC is composed of 67 items representative of accommodations categorized within eight domains. Designed directly from the AAC, with some adjustments to reflect specifics to the Australian education system, Michael Davies, Stephen N. Elliott, and Joy Cumming designed and applied the *Checklist of Learning and Assessment Adjustments for Students* (CLAAS). The 67-item tool was created to provide a guide to educators so that they may “select, plan, and document” accommodations within the learning and assessment conditions, including LA (e.g. PARCC in the United States) for

SWSNs. The CLAAS aligns with policies that promote educational opportunities for SWSNs (Davies et al., 2016).

Davies et al. conducted a study in Australia using the CLAAS (Davies et al., 2016). Results of this study indicated “gaps” in accommodations provided to SWSNs across CL, CA, and LA conditions. Educators construct and administer classroom assessments for formative and summative purposes to evaluate students’ performance. Educators administer LA to measure students’ real-world skills, including problem-solving and critical thinking. Davies et al. used the CLAAS to examine its application in determining the alignment of accommodations offered across the three conditions including CL, CA, and LA; the National Assessment Program – Literacy and Numeracy [NAPLAN] in Australia (Davies et al., 2016).

After development of the CLAAS, Davies et al. conducted a study to determine the efficacy of its use by educators to assess the alignment of accommodations provided across the three conditions. The study included 21 educators in Queensland. Educators completed the CLAAS by considering up to six students with learning disabilities or additional learning needs. Educators assigned codes to SWSNs, and provided descriptions of their unique educational needs and accommodations across the three conditions including CL, CA, and LA. Educators provided general comments about the CLAAS regarding its usefulness, comprehensiveness, and utility (Davies et al., 2016).

Davies et al. (2016) report that the CLAAS acts as a reliable tool to record the accommodations provided to SWSNs in each of the three conditions. Across all accommodations, 33% of SWSNs received accommodations in the CL condition, 35% of SWSNs received accommodations during the CA condition, and 10% of SWSNs received accommodations during the LA condition. By recording the accommodations provided to each

student across conditions, educators have information to calculate the relative alignment of accommodations provided to each student. The researchers characterized results using a comparison of the percentage of allowable accommodations across conditions. For example, 39.9% of the allowable accommodations during the CL condition, 35.9% of the allowable accommodations during the CA condition, and 18.7% of the allowable accommodations during the LA condition. Educators indicated that through using the CLAAS they became more aware of the number of accommodation options to offer SWSNs (Davies et al., 2016).

This study indicated that the CLAAS is a beneficial tool to educators. Davies et al. (2016) also note that nowhere else, including Australia, is a similar tool for recording the provision of accommodations available. For example, Davies et al. (2016) reported that some educational agencies do have mandated recording on the use of accommodations; however, those reviewed are not ample and do not concentrate on the specific use of accommodations. Some educational agencies are without any tool to record the provision of accommodations (Davies et al., 2016).

Summary

Educators provide accommodations to SWSNs for instruction and assessment to allow for quality inclusive teaching and overall educational effectiveness (Davies et al., 2016). Educators should consistently provide accommodations to SWSNs across three conditions including the CL condition, CA condition, and LA condition. When educators do not provide SWSNs the same accommodations across conditions, these SWSNs may not respond in a way that reflects their potential. Consistent accessibility via accommodations is essential to effective learning and assessment (Davies et al., 2016). There is a need for educators to record their activities related to providing services to SWSNs, as little is currently known about educators'

use of accommodations. As educators align LA with the CCSS, accommodations provided during assessments will be an essential focus for educational decision-making and reform. Therefore, educators cannot meaningfully evaluate their best practices as teachers, or the performance of SWSNs, without proper documentation and monitoring of their use of accommodations across the three conditions.

The current study is designed to provide insight into the recommendation of accommodations per condition and the degree of alignment between the provision of accommodations across conditions. Findings have the potential to provide insight into educators' practices as they relate to providing accommodations to SWSNs. The CLAAS provides opportunities for educators to consider the alignment of accommodations provided across the three conditions and to be in observance of the required accommodations as indicated by IEPs, 504 Plans, and ESSA. Educators must make decisions regarding curriculum, and in turn provide instructional and assessment accommodations. This process is necessary for SWSNs to have the opportunity to show their knowledge with the support of the accommodations provided across conditions. This study may have implications on the accommodations allowed through PARCC in future years in consideration of SWSNs' disabilities and the accommodations that have proven to be beneficial in supporting SWSNs in demonstrating their knowledge and capacity in particular areas. In addition, educators may align more strongly with their professional obligations to provide SWSNs a "free appropriate public education."

Research Questions and Predictions

- 1. Does the prevalence of accommodations for students with special needs (SWSNs) vary by condition: CL, CA, and LA? It is predicted that the recommendation of accommodations for SWSNs will vary across condition. It is predicted that accommodations are recommended*

most frequently during the CL condition and recommended least frequently during the LA condition. This prediction was made because previous research indicates that accommodations are most frequently recommended during the CL condition and least frequently during the LA condition (Davies et al., 2016). Additionally, regulations related to accommodations are most strict during LA (PARCC, 2013).

2. *What is the level of alignment between the provision of accommodations during CL, CA, and LA (e.g. PARCC)?* It is predicted that the level of alignment between the provision of accommodations will be highest between the CL condition and CA condition. It is predicted that the level of alignment between the provision of accommodations will be lowest between the CL condition and LA condition. This prediction was made because previous research indicates these levels of alignment across conditions, in addition to the CL and CA conditions being more similar than the LA condition (Davies et al., 2016).

Chapter II

Method

Participants

The participants in this study included educators ($n = 45$), including 15 general education teachers, 25 special education teachers, and 5 paraprofessionals. Participants were recruited from three public school districts including Neptune, Red Bank, and Ridgefield throughout New Jersey. Recruitment was initiated through direct email communications with approximately twenty directors of special services, principals, and district superintendents. Contact information was secured from the New Jersey Department of Education. Upon district personnel agreeing to participate in the survey, they were emailed the survey link with instructions to distribute to educators who were responsible for providing accommodations to SWSNs. It is unclear the total number of educators who were distributed the link, but of those who received the link, 45 completed it and 81 started the survey and did not complete it. This information was captured through the online survey status available through Qualtrics. Educators are those responsible for providing accommodations to SWSNs across the three conditions including CL, CA, and LA. Educators provided information on accommodations provided to 45 SWSNs who were: (1) classified as having a disability and receive services through IEPs as indicated by IDEIA, (2) in general education who receive services through Section 504, and (3) EL who receive services through IEPs as indicated by the ESSA of 2015. Anonymous consent forms were distributed to the educators. The educators responsible for providing accommodations to SWSNs are the primary data sources because they reported the SWSNs' disabilities, learning needs, and accommodations provided. The SWSNs in the participating schools are the secondary data sources.

Student sample. Each educator evaluated accommodations provided to one SWSN across the three conditions (CL, CA, LA) through the CLAAS. The student sample included 28 males (62%) and 17 females (38%), and was predominantly European American (18 = 40%). In addition, most SWSNs reported on were in grades 9 (27%) and 10 (27%), with nine grades represented in the SWSN population. The majority of SWSNs in the sample received accommodations based on their IEPs (88%). Table 5 depicts the demographic characteristics and Table 6 depicts the classification categories of the student sample.

Student characteristics of the three school districts including Neptune, Red Bank, and Ridgefield were evaluated to determine socioeconomic status through the percent of students who are eligible for free or reduced lunch, in addition to ethnicities represented compared to the national statistics. The Neptune population includes 59.8% students who are eligible free or reduced lunch and the majority of the students are African American and Latino American. The Red Bank population includes 23% students who are eligible for free or reduced lunch, and the majority of the students are European American. The Ridgefield population includes 28% students who are eligible for free or reduced lunch, and the majority of students are European American and Asian American. The latest statistics available through the National Center for Education Statistics (NCES) include 2010 to 2011 academic year figures. The percent of students eligible for free or reduced lunch for New Jersey is 32.8%, and across the United States student population 48.1% of students are eligible. The percentage of students enrolled in public schools as of the 2013 to 2014 academic year includes 50% European American followed by Latino-American constituting 25%.

The distribution of students classified under each of the disability categories in this sample was compared to the United States distribution of students under each of the disability categories as reported by the NCES. The most recent results are reported from the 2013 to 2014 academic year. Distribution results between the research sample and United States population are similar, within 5 percentage points for a majority of classifications. The following percentages by classification differed by more than five percentage points in the current sample: Autism (+13 percentage points), Multiple Disabilities (+17 percentage points), and Speech or Language Impairment (-21 percent points difference).

Table 5
Student Demographic Characteristics

		Overall Sample n (%)	
Gender			
	Male	28	62%
	Female	17	38%
	Other	0	0%
Grade			
	3	5	11%
	4	1	2%
	5	1	2%
	6	1	2%
	7	0	0%
	8	1	2%
	9	12	27%
	10	12	27%
	11	6	13%
	12	6	13%
Ethnicity			
	European American	18	40%
	African American	5	11%
	Latino-American	11	24%
	Native American	0	0%

Table 5 - continued

Asian American/Pacific Islander	1	2%
Other	10	22%

Table 6

Student Classifications

Classification	Severity						Total	Total
	Low		Moderate		High			
Autism	1	7%	6	22%	3	25%	10	19%
Blindness	0	0%	0	0%	0	0%	0	0%
Deafness	0	0%	1	4%	0	0%	1	2%
Emotional Disturbance	1	7%	1	4%	1	8%	3	6%
Hearing Impairment	0	0%	0	0%	0	0%	0	0%
Intellectual Disability	2	14%	0	0%	1	8%	3	6%
Multiple Disabilities	1	7%	4	15%	4	33%	9	17%
Orthopedic Impairment	0	0%	0	0%	0	0%	0	0%
Other Health Impaired	2	14%	3	11%	1	8%	6	11%
Specific Learning Disability	5	36%	8	30%	2	17%	15	28%
Speech or Language Impairment	0	0%	0	0%	0	0%	0	0%
Traumatic Brain Injury	0	0%	0	0%	0	0%	0	0%
Visual Impairment	0	0%	0	0%	0	0%	0	0%
Section 504 plan	2	14%	2	7%	0	0%	4	8%
Students who are EL	0	0%	2	7%	0	0%	2	4%

Note: 6 students of the 45 were classified under more than 1 classification

Educator sample. The educator sample consisted of general education teachers ($n = 15$), special education teachers ($n = 25$), and paraprofessionals ($n = 5$) who were mainly female (87%) and European American (69%). The educators were in their current roles from 0 to 5 years (27%) to over 21 years (16%).

The general education teacher sample included the greatest percent being in their current roles between 6 to 10 years (33%). The most common highest degree general education teachers earned was master's degrees (60%). The most common highest degree special education teachers earned was the master's degrees (96%) and the greatest percent was in their current roles between 6 to 10 years (32%). The most common highest degree paraprofessionals earned was the bachelor's degree (80%) and the greatest percent were in their current roles between 6 to 10 years (33%). Table 7 depicts the demographic characteristics of the educator sample.

Table 7
Educator Characteristics

	<u>General Education Teachers</u>		<u>Special Education Teachers</u>		<u>Para-professionals</u>		<u>Total Participants</u>	
	n	(%)	n	(%)	N	(%)	n	(%)
Gender								
Male	3	20%	3	12%	0	0%	6	13%
Female	12	80%	22	88%	5	100%	39	87%
Other	0	0%	0	0%	0	0%	0	0%
Ethnicity								
European American	10	67%	18	72%	3	60%	31	69%
African American	0	0%	1	4%	0	0%	1	2%
Latino-American	1	7%	0	0%	2	40%	3	7%
Native American	0	0%	0	0%	0	0%	0	0%
Asian American/Pacific Islander	0	0%	0	0%	0	0%	0	0%
Other	4	27%	6	24%	0	0%	10	22%
Years Providing Accommodations								
0 to 5	3	20%	6	24%	1	20%	10	22%
6 to 10	6	40%	7	28%	1	20%	14	31%
11 to 15	0	0%	4	16%	2	40%	6	13%
16 to 20	5	33%	3	12%	0	0%	8	18%
21 +	1	7%	5	20%	1	20%	7	16%

Table 7 - continued

Years Working with SWSNs

0 to 5	3	20%	7	28%	1	20%	11	24%
6 to 10	6	40%	6	24%	1	20%	13	29%
11 to 15	0	0%	3	12%	2	40%	5	11%
16 to 20	4	27%	3	12%	0	0%	7	16%
21 +	2	13%	6	24%	1	20%	9	20%
0 to 5	4	27%	7	28%	1	20%	12	27%
6 to 10	5	33%	8	32%	2	40%	15	33%
11 to 15	0	0%	5	20%	1	20%	6	13%
16 to 20	3	20%	1	4%	1	20%	5	11%
21 +	3	20%	4	16%	0	0%	7	16%

Highest Degree Earned

High School Diploma	0	0%	0	0%	0	0%	0	0%
Associates	0	0%	0	0%	1	20%	1	2%
Bachelor's Degree	6	40%	1	4%	4	80%	11	24%
Master's Degree	9	60%	24	96%	0	0%	33	73%
Doctorate	0	0%	0	0%	0	0%	0	0%

Measure

Checklist of Learning and Assessment Adjustments for SWSNs (CLAAS). The CLAAS was formed and first applied in Australia (Davies et al., 2016). The 67-item checklist includes each accommodation and was designed to assist educators in selecting, planning, and documenting accommodations during CL and CA, in addition to LA (i.e., PARCC in the United States and NAPLAN in Australia) for SWSNs (Davies et al., 2016).

The CLAAS is designed for educators to complete on behalf of up to six SWSNs. Each SWSN is in one of two categories: (1) student with a disability and (2) student with additional learning needs. The measure includes fields for educators to identify SWSNs' disability categories and endorse the levels of severity (i.e. low, moderate, high). Similarly, a field is

available for educators to list the category of learning needs of SWSNs across low, moderate, and high levels of severity. Three columns for each condition (CL, CA, LA) are listed for educators to record each accommodation provided to SWSNs, in addition to indicating the intensity at which the accommodation was offered per condition. For example, alongside each of the 67 listed accommodations within the CLAAS, educators may indicate the level of support per accommodation, per condition. Educators can endorse one of four levels of support including: (a) *support provided within quality differentiated teaching practice*, (b) *supplementary*, (c) *substantial*, or (d) *extensive*. "No" for not applicable is also a response option. The 67 items listed on the CLASS fall within one of eight accommodation domains as listed in Table 8.

Table 8
CLAAS Domains

Domain	Items
Motivational Adjustments for Learning and Assessment	5
Scheduling Adjustments for Learning and Assessment	4
Setting Adjustments for Learning and Assessment	10
Assistance with Learning and Assessment Directions	10
Table 8 – continued	
Assistance During the Assessment	12
Assistance Prior to Administering a Test	2
Table 8 - continued	
Equipment or Assistive Technology	18
Learning and Assessment Formats	6

Procedure

In completing the CLAAS, educators were asked to consider one SWSN to whom they were responsible for providing accommodations. Educators provided brief information about the

nature of the SWSNs' needs as listed in their IEPs or 504 plans. Educators identified which accommodations were provided during each condition (CA, CL, LA). Since PARCC is the approved national test administered during grades three through eight, in addition to one grade at the high school level in New Jersey (in addition to seven other fully-participating states during the 2015 to 2016 academic year; PARCC, 2013), the PARCC was the identified LA considered when completing the CLAAS.

Data Analysis

This study is designed to evaluate the prevalence and alignment of accommodations provided to SWSNs across the three conditions. Basic descriptive statistics were used to calculate the prevalence and alignment of SWSNs receiving accommodations between conditions. The Marascuilo procedure (1967) was used to determine whether the prevalence of SWSNs receiving accommodations in each condition significantly differ. Cohen's h (1977) was used to determine the effect size of the prevalence differences between conditions. Effect sizes were then compared to a criterion value to test for significance. The Porter alignment index (2002) was used to analyze the degree of alignment of accommodations provided to SWSNs between conditions.

Table 9	
<i>Data Analytic Plan for Evaluating Educators' Practices</i>	
	Data Analytic Techniques
Prevalence by Condition (RQ #1)	Marascuilo procedure, Cohen's h
Degree of Alignment of Accommodations Provided (RQ #2)	Porter alignment index

Prevalence of accommodations recommended across conditions. Basic descriptive statistics were used to calculate the prevalence of SWSNs receiving accommodations during specific conditions. These figures were reported at the domain and total levels. These results were analyzed to identify significant differences between the prevalence of SWSNs receiving accommodations between conditions through the Marascuilo procedure. The Marascuilo procedure was used to compare the prevalence of SWSNs receiving accommodations across the three conditions. Cohen's h was used to determine the effect size of the differences of the prevalence of SWSNs receiving accommodations across the three conditions.

The Marascuilo procedure was selected to compare the prevalence of SWSNs receiving accommodations because it allows for multiple differences and identifies which prevalence of SWSNs receiving accommodations differs. Absolute differences in the prevalence of SWSNs receiving accommodations were computed between conditions, along with the corresponding critical ranges (CR). The overall level of significance of 0.05 using the upper-tail critical value of the test statistic for a chi-square distribution having $(c-1) = 2$ degrees of freedom is 5.991, where “c” is the number of comparisons. The number of comparisons in this study is three (CA – CL, CA – LA, CL – LA). Therefore, $\sqrt{X^2} = \text{Critical Value} = \sqrt{5.991} = 2.448$. The absolute differences of the prevalence and critical ranges were calculated as follows, where “p” is prevalence and “n” is sample size:

Absolute Differences of Prevalence

$$(\Delta) = |p_x - p_y|$$

Critical Range

$$CR = 2.448 \sqrt{\frac{p_x(1-p_x)}{n_x} + \frac{p_y(1-p_y)}{n_y}}$$

If the absolute difference in sample prevalence is greater than the associated CR, the prevalence of SWSNs receiving accommodations significantly differ.

Although significant differences of the prevalence of SWSNs receiving accommodations were identified through the Marascuilo procedure, identifying meaningful differences was achieved through computing Cohen's h (1977). The prevalence of SWSNs receiving accommodations were compared between conditions. These figures were reported at the domain and total levels. Cohen's h , the effect size statistic, was calculated for arcsine transformed proportion differences. The reason for the arcsine transformation was to make the proportions comparable for effect size calculations. Differences in proportions in raw form are not equally detectable, as is the case using the Marascuilo procedure. The arcsin transformation corrects for this. Once transformed, differences in proportions are equally detectable.

$$\text{Cohen's } h = \Phi_x - \Phi_y$$

$$\Phi_x = 2\arcsin\sqrt{p_x}$$

$$\Phi_y = 2\arcsin\sqrt{p_y}$$

A small effect size was defined as 0.20 to 0.50, a medium effect size was defined as 0.50 to 0.80, and a large effect size was defined as greater than 0.80 (Cohen, 1977). This effect size analysis was used as a means of identifying meaningful differences of prevalence of accommodations offered between conditions.

Alignment of accommodations between conditions. Porter's alignment index (2002) was used to analyze the degree of alignment between accommodations provided to SWSNs between conditions. Alignment was calculated for each SWSN, and then aggregated across all SWSNs. This differs from the Marascuilo procedure and Cohen's h results that were not calculated at the individual level, but only at the aggregate level. The Porter alignment index produced a single alignment index, ranging from 0 to 1, to indicate how closely the accommodations offered across the three conditions were aligned for each SWSN. The Porter

alignment index, P , was computed in four steps including determining the ratio of accommodations provided to the total number of accommodations available to each SWSN. Tables of frequencies (ex. Table A and Table B) of accommodations provided per condition, per SWSN were created. For each cell in tables A and B, the ratio of accommodations was computed. For every row j and column k in tables a and b (the tables of ratios), the absolute value of the discrepancy between the ratios was calculated. The alignment index was calculated using the following equation:

$$P = 1 - \frac{\sum_{k=1}^K \sum_{j=1}^J |a_{jk} - b_{jk}|}{2}$$

The Porter alignment index was calculated at the domain and total levels. Alignment was evaluated per SWSN and alignment indices were averaged across all SWSNs to provide an overall view of the degree of alignment of accommodations provided between conditions.

Chapter III

Results

To address the two research questions, quantitative techniques were used to evaluate the prevalence of participants who received accommodations across conditions, differences of proportions between conditions, and degree of alignment of accommodations provided to participants between conditions. Survey methods and causal-comparative designs were used to provide answers to these research questions.

Data Completeness

Based on an examination of the CLAAS results, all respondents completed the survey and related questions. The survey was administered and completed online and was designed so that respondents could not proceed to the next screen without completing all items. Educators completed all items and replied appropriately. For example, only numeric values were entered for "years of experience teaching participants." No data points needed to be recoded.

Prevalence of Accommodations Recommended across Conditions

Data from the overall sample ($n = 45$) were used to calculate the prevalence of participants receiving accommodations during specific conditions. The prevalence of participants receiving each of the 67 accommodations across the three conditions was averaged at the total and domain levels. The prevalence of participants was analyzed as proportions through the Marascuilo procedure (1967) to identify significant differences of prevalence of participants who received accommodations across conditions. The sizes of prevalence differences were found using Cohen's h (1977) to identify meaningful differences in the prevalence of participants who received accommodations.

Marascuilo procedure. Significant differences between the prevalence of participants who received accommodations were found using the Marascuilo procedure across the total and domain levels. At the total level, educators reported that on average, a lower prevalence of participants received accommodations during the LA condition (28%) compared to during the CA condition (46%) and the CL condition (49%). During the CL condition, the lowest prevalence of participants received Equipment and Assistive Technology domain accommodations (26%) and the highest prevalence of participants received Motivational Adjustments and Learning Assessment domain accommodations (86%). During the CA condition, the lowest prevalence of participants received Equipment or Assistive Technology domain accommodations (24%) and the highest prevalence of participants received Motivational Adjustments for Learning and Assessment domain accommodations (82%) and Scheduling Adjustments for Learning and Assessment domain accommodations (82%). During the LA condition, the lowest prevalence of participants received Equipment and Assistive Technology domain accommodations (15%) and the highest prevalence of participants received Scheduling Adjustments for Learning and Assessment domain accommodations (54%). Refer to Table 10 for the prevalence of SWSNs who received accommodations by condition and domain at the total and domain levels.

Table 10

Differences of Prevalence of Participants who received Accommodations across Conditions

Domain	Prevalence			Marascuilo Procedure: Differences of Prevalence					
	<u>CL</u>	<u>CA</u>	<u>LA</u>	<u>CL-CA</u>		<u>CL-LA</u>		<u>CA-LA</u>	
	P1	P2	P3	P1-P2	CR	P1-P3	CR	P2-P3	CR
Motivational Adjustments for Learning and Scheduling	.86	.82	.49	.04	.14	.37	.19	.33	.20
Adjustments for Learning and Setting	.81	.82	.54	.03	.18	.27	.22	.28	.21
Adjustments for Learning and Assessment	.41	.41	.28	.04	.18	.13	.19	.13	.19
Assistance with Learning and Assessment	.62	.56	.30	.05	.18	.31	.19	.26	.20
Directions									
Assistance During the Assessment	.57	.54	.31	.04	.21	.26	.21	.23	.22
Assistance Prior to Administering a Test	.47	.46	.31	.01	.24	.22	.24	.21	.24
Equipment or Assistive Technology	.26	.24	.15	.02	.18	.12	.17	.10	.16
Learning and Assessment Formats	.40	.38	.20	.03	.21	.20	.19	.19	.19
Total	.49	.46	.28	.04	.19	.21	.19	.19	.19

Note: P = prevalence, CL = classroom learning, CA = classroom assessment, LA = large-scale assessment, CR = Critical Range

The overall level of significance of .05 using the upper-tail critical value of the X^2 test statistic for a chi-square distribution having 2 degrees of freedom is 5.991

Critical Range for Marascuilo procedure = $\sqrt{X^2 * (\sqrt{px(1-px)/nx + py(1-py)/ny})}$

p < 0.05 are in boldface; differences of proportions (test statistic) that exceed the critical ranges are significant at the .05 level

Significance testing was conducted through the Marascuilo procedure to allow for an assessment of the null hypothesis ($H_0: P_{CL} = P_{CA} = P_{LA}$) in consideration of the sample data. Three differences of prevalence at the total level were conducted through the Marascuilo procedure and one of the three differences of prevalence was significant. The difference between the CL and LA conditions at the total level were significant (Marascuilo procedure, $U'_0 = 0.21$, $df = 2$, $p < .05$). The difference between the CL and CA conditions at the total level was non-significant (Marascuilo procedure, $U'_0 = 0.04$, $df = 2$, $p > .05$). The results of the differences of prevalence between the CA and LA conditions at the total level were non-significant (Marascuilo procedure, $U'_0 = 0.19$, $df = 2$, $p > .05$).

Twenty-four differences of prevalence at the domain level were conducted through the Marascuilo procedure and nine of the twenty-four differences were significant. Eight differences of prevalence at the domain level were conducted between the CL and CA conditions and all eight were non-significant. Differences of prevalence ranged from .01 (Assistance Prior to Administering a Test domain) to .05 (Assistance with Learning and Assessment Directions domain). Eight differences of prevalence at the domain level were conducted between the CL and the LA conditions and five of the eight differences were significant. Differences of prevalence ranged from .12 (Equipment or Assistive Technology domain) to .37 (Motivational Adjustments in Learning and Assessment domain). The results of the differences of prevalence were significant across the Motivational Adjustments for Learning and Assessment domain (Marascuilo procedure, $U'_0 = 0.37$, $df = 2$, $p < 0.05$), the Scheduling Adjustments for Learning and Assessment domain (Marascuilo procedure, $U'_0 = 0.27$, $df = 2$, $p < 0.05$), the Assistance with Learning and Assessment Directions domain (Marascuilo procedure, $U'_0 = 0.31$, $df = 2$, $p < 0.05$), the Assistance during the Assessment domain (Marascuilo procedure, $U'_0 = 0.26$, $df = 2$, p

< 0.05), and the Learning and Assessment Formats domain (Marascuilo procedure, $U'_0 = 0.20$, $df = 2$, $p < 0.05$). Eight differences of prevalence at the domain level were conducted between the CA and the LA conditions and four of the eight differences of prevalence were significant. Differences of prevalence ranged from .10 (Equipment or Assistive Technology domain) to .33 (Motivational Adjustments in Learning and Assessment domain). The results of the differences of prevalence were significant across the Motivational Adjustments for Learning and Assessment domain (Marascuilo procedure, $U'_0 = 0.33$, $df = 2$, $p < 0.05$), the Scheduling Adjustments for Learning and Assessment domain (Marascuilo procedure, $U'_0 = 0.28$, $df = 2$, $p < 0.05$), the Assistance with Learning and Assessment Directions domain (Marascuilo procedure, $U'_0 = 0.26$, $df = 2$, $p < 0.05$), and the Assistance during the Assessment domain (Marascuilo procedure, $U'_0 = 0.23$, $df = 2$, $p < 0.05$).

Cohen's h. Cohen's h (1977) was used to identify meaningful size differences of prevalence of participants who received accommodations across conditions. Cohen's h , the effect size statistic, was calculated for the arcsin transformed proportion differences of participants who received accommodations. The detectability of some given value of the raw differences of proportions under a set significance level and sample size would vary depending upon at which point along the scale of proportion between zero and one that value of the raw proportion occurred. The arcsin transformation allows for equally detectable differences of proportions, rather than raw differences of proportions. A small effect size is defined as 0.20 to 0.50, a medium effect size is defined as 0.50 to 0.80, and a large effect size is defined as greater than 0.80 (Cohen, 1977).

Significance testing was conducted on Cohen's h to allow for an assessment of the null hypothesis (H_0 : arcsin transformation of $P_{CL} = P_{CA} = P_{LA}$) in consideration of the sample data.

Observed Cohen's h effect sizes greater than the criterion value of 0.414 ($n = 45$) are considered statistically significant at the .05 level. The effect sizes between prevalence of participants who received accommodations were found using Cohen's h across the total and domain levels. Three differences of prevalence at the total level were conducted through Cohen's h and two of the three comparisons were significant. The effect size of the difference of prevalence between the CL and LA conditions at the total level was significant (Cohen's $h = 0.51$, $p < .05$) and was within the medium effect size range. The effect size of the difference of prevalence between the CA and LA conditions at the total level was significant (Cohen's $h = 0.44$, $p < .05$) and was within the medium effect size range. The effect size of the difference of prevalence between the CL and CA conditions at the total level was non-significant (Cohen's $h = 0.07$, $p > .05$).

Twenty-four differences of prevalence at the domain level were conducted through Cohen's h and ten of the twenty-four comparisons were significant. Eight differences of prevalence at the domain level were conducted through Cohen's h between the CL and CA conditions and all eight were non-significant as none of the effect sizes equaled or exceeded the criterion value of Cohen's $h = 0.414$. Refer to Table 11 for Cohen's h effect sizes at the total and domain levels.

Table 11
*Effect Size of Prevalence Differences of Participants receiving Accommodations
 across Conditions*

Domain	Cohen's h: Test of Effect Size		
	CL-CA	CL-LA	CA-LA
Motivational Adjustments for Learning and Assessment	0.21	1.04	0.83
Scheduling Adjustments for Learning and Assessment	-0.04	0.64	0.68
Setting Adjustments for Learning and Assessment	0.03	0.32	0.29
Assistance with Learning and Assessment Directions	0.13	0.70	0.57
Assistance During the Assessment	0.08	0.59	0.51
Assistance Prior to Administering a Test	0.02	0.32	0.29
Equipment or Assistive Technology	0.05	0.28	0.23
Learning and Assessment Formats	0.04	0.52	0.48
Total	0.07	0.51	0.44

Note: CL=Classroom Learning, CA=Classroom Assessment, LA=Large-scale Assessment

Cohen's h. A small effect size is defined as 0.20 to 0.50, a medium effect size is defined as 0.50 to 0.80, and a large effect size is defined as greater than 0.80. $p < .05$ are in boldface; meaningful differences of proportions that exceed the criterion value of 0.414 ($n = 45$) are significant at the .05 level.

Eight differences of prevalence at the domain level were conducted through Cohen's h between the CL and the LA conditions and five of the eight comparisons were significant. The effect size across the Motivational Adjustments for Learning and Assessment domain was significant (Cohen's $h = 1.04$, $p < .05$) and was within the large effect size range. The effect size across the Scheduling Adjustments for Learning and Assessment domain was significant (Cohen's $h = 0.64$, $p < .05$) and was within the medium effect size range. The effect size across the Assistance with Learning and Assessment Directions domain was significant (Cohen's $h = 0.70$, $p < .05$) and was within the medium effect size range. The effect size across Assistance during the Assessment domain was significant (Cohen's $h = 0.59$, $p < .05$) and was within the

medium effect size range. The effect size across the Learning and Assessment Formats domain was significant (Cohen's $h = 0.52$, $p < .05$) and was within the medium effect size range.

Eight differences of prevalence at the domain level were conducted through Cohen's h between the CA and the LA conditions and five of the eight comparisons were significant. The effect size across the Motivational Adjustments for Learning and Assessment domain was significant (Cohen's $h = 0.83$, $p < .05$) and was within the large effect size range. The effect size across the Scheduling Adjustments for Learning and Assessment domain was significant (Cohen's $h = 0.68$, $p < .05$) and was within the medium effect size range. The effect size across the Assistance with Learning and Assessment Directions domain was significant (Cohen's $h = 0.57$, $p < .05$) and was within the medium effect size range. The effect size across Assistance during the Assessment domain was significant (Cohen's $h = 0.51$, $p < .05$) and was within the medium effect size range. The effect size across the Learning and Assessment Formats domain was significant (Cohen's $h = 0.48$, $p < .05$) and was within the small effect size range.

Alignment of Accommodations between Conditions

Data from the overall sample ($n = 45$) were used to calculate the degree of alignment of accommodations provided across specific conditions. The Porter alignment index (2002) was used to analyze the degree of alignment between accommodations provided to participants between conditions. The index produces a single alignment that ranges from 0 to 1, to indicate how closely the proportions of accommodations provided between conditions were aligned. The Porter alignment index, P , was calculated at the total and domain levels by averaging the item level results. Alignment was evaluated by participant and alignment indices were averaged across all participants to provide an overall view of the degree of alignment of accommodations provided between conditions.

Porter alignment index. The Porter alignment indices were calculated at the total and domain levels. The degree of alignment of accommodations provided between the CL and CA conditions was $P = .95$. The degree of alignment between the CL and LA conditions was $P = .75$. The degree of alignment of accommodations provided between the CA and LA conditions was $P = .78$. Refer to Table 12 for Porter alignment indices at the total and domain levels.

Table 12

Domain	<u>CL &</u>	<u>CL &</u>	<u>CA &</u>
	<u>CA</u>	<u>LA</u>	<u>LA</u>
	<i>P</i>	<i>P</i>	<i>P</i>
Motivational Adjustments for Learning and Assessment	0.91	0.60	0.66
Scheduling Adjustments for Learning and Assessment	0.91	0.63	0.68
Setting Adjustments for Learning and Assessment	0.95	0.83	0.84
Assistance with Learning and Assessment Directions	0.93	0.64	0.70
Assistance During the Assessment	0.94	0.71	0.74
Assistance Prior to Administering a Test	0.97	0.67	0.70
Equipment or Assistive Technology	0.97	0.86	0.88
Learning and Assessment Formats	0.96	0.75	0.76
Total	0.95	0.75	0.78

Note: CL=CL, CA=Classroom Assessment, LA=LA, *P*=Porter Alignment Index

The Porter alignment indices were calculated at the domain level. Across the eight domains, the degree of alignment was consistently highest between the CL and CA conditions. Similarly, the degree of alignment was consistently lowest between the CL and LA conditions. Between the CL and CA conditions, the Porter alignment indices ranged from .91 (Motivational Adjustments for Learning and Assessment domain and Scheduling Adjustments for Learning and Assessment domain) to .97 (Assistance Prior to Administering a Test domain and Equipment or Assistive Technology domain). Between the CL and LA conditions, the Porter alignment indices

ranged from .60 (Motivational Adjustments for Learning and Assessment domain) to .86 (Equipment or Assistive Technology domain). Between the CA and LA conditions, the Porter alignment indices ranged from .66 (Motivational Adjustments for Learning and Assessment domain) to .88 (Equipment or Assistive Technology domain).

Chapter IV

Discussion

Consistency and alignment between instructional and assessment accommodations are considered educational best practices (Christensen et al., 2009). Despite this, previous research has shown that the alignment of the provision of accommodations to participants across the CL, CA, and LA conditions is low (Davies et al., 2016). Therefore, the aim of this study was to determine the prevalence of participants who received accommodations across the three conditions and the degree of alignment of the provision of accommodations across conditions. The main findings of this study include that at the total level, the differences in the prevalence of participants who received accommodations between the CL and LA conditions were statistically different. The differences in the prevalence of participants who received accommodations across four of the eight domains between the CL and LA conditions and the CA and LA conditions were consistently statistically different. Additionally, in regards to alignment, the lowest degree of alignment was consistently found across the total and domain levels between the CL and LA conditions. The highest degree of alignment was consistently found across the total and domain levels between the CL and CA conditions. The main findings of this study include a higher prevalence of participants received accommodations in the two classroom conditions, compared to the large-scale condition, and that alignment was greater between the two classroom conditions compared to the LA condition.

The prevalence of participants who received accommodations across conditions was assessed by analyses of standard proportion calculations. In this sample, these analyses indicated that at the total level, the lowest prevalence of participants received accommodations in the LA condition and the highest prevalence of participants received accommodations in the CL

condition. Differences of the prevalence of participants who received accommodations between conditions were assessed. At the total level, significant differences of the prevalence of participants who received accommodations were found between the CL and LA condition. At the domain level, five of the eight differences were significant between the CL and LA conditions and five of the eight differences were significant between the CA and LA conditions. An effect size statistic was used to identify meaningful differences of the prevalence of participants who received accommodations across conditions. Meaningful differences were identified between the LA condition and the CL and CA conditions at the total level. At the domain level, five of the eight effect sizes were significant between the CL and LA conditions and four of the eight effect sizes were significant between the CA and LA conditions.

The degree of alignment of accommodations provided to participants between conditions was assessed through an alignment index. Alignment was evaluated per participant, per accommodation. Alignment was calculated per participant in order to calculate the degree of alignment each participant experienced with each accommodation across conditions. The degree of alignment ranging from zero to one per participant, per accommodation, was then averaged to evaluate the degree of alignment of accommodations provided between conditions. This differs from prevalence analyses because it allows for identification of degree of alignment of accommodations provided to each participant. Prevalence analyses identify the proportion of participants who receive a specific accommodation in a specific condition; prevalence analyses do not isolate the degree of alignment of accommodations. In this sample at the total level, the alignment was greater between the two classroom conditions compared to the LA condition.

Prevalence of Accommodations Recommended across Conditions

To address Research Question 1, the prevalence of participants who received accommodations was analyzed across the three conditions at the total and domain levels. Across the eight domains, results within the current sample consistently indicate that in the LA condition the lowest prevalence of participants received accommodations and in the CL condition the highest prevalence of participants received accommodations.

Prevalence comparisons at the total level. In order to identify significant differences between the prevalence of participants who received accommodations between conditions, a procedure to identify multiple significant prevalence differences was used. At the total level, the difference of prevalence of participants who received accommodations between the CL and LA conditions was significant. In this sample, differences in the prevalence of participants who received accommodations between the CA and CA conditions were non-significant. In this sample, differences in the prevalence of participants who received accommodations between the CL and CA conditions were non-significant at the total or domain levels. The differences in the prevalence of participants who received accommodations between the CA and LA conditions were significant across the same domains as those significantly different between the CL and LA conditions. One additional difference in the prevalence of participants who received accommodations was found significant across the Learning and Assessment Formats domain between the CL and LA conditions. The objective of CL accommodations is to allow participants to fully access the learning material and participate in the educational experience. Educators do this by adjusting the process within the classroom or changing the material taught (Christensen et al., 2009). This same flexibility is likely not available when providing accommodations during LA because there are a limited number of accommodations (i.e.

schedule, setting, response or format) permitted within the confines of the assessment (PARCC, 2013).

In this sample, differences of the prevalence of participants who received accommodations between the CA and LA conditions were similar to those reflected between the corresponding CL and LA conditions, but to a lesser degree. The CA condition is more similar to the LA condition than the CL condition is. Both CA and LA conditions involve the administration of assessments that may require accommodations such as "read assessment expectations and content to student" unique to assessment conditions. Because there are a number of accommodations only associated with the assessment conditions, this may contribute to the marginally closer prevalence found in the CA condition to the LA condition, than the CL condition was to the LA condition.

Differences in the prevalence of participants who received accommodations between conditions were further evaluated using an effect size statistic. The prevalence of participants who received accommodations was computed for arcsin-transformed differences (Cohen, 1977). In this sample, at the total level, the smallest effect size (Cohen's $h = 0.07$, $p > .05$) was identified between the CL and CA conditions and was non-significant and the largest effect size (Cohen's $h = 0.51$, $p < .05$) was identified between the CL and LA conditions and was significant. The effect size at the total level between the CA and LA conditions was within the small range (Cohen's $h = 0.44$, $p < .05$) and was significant.

One reason for the small differences across the two classroom conditions (learning and assessment) is the consistency in setting, scheduling, personnel, and resources. It is likely that the educators who provided accommodations during CL also provided accommodations during CA. This common factor alone may contribute to similar prevalence of participants who

received accommodations between the two classroom conditions. For example, if a participant was provided an accommodation such as an audio amplifier during CL, the same resources and equipment were likely available during the CA condition. Other explanations include the greater level of educator autonomy in the classroom conditions compared to the LA conditions. Additionally, accommodations may be restricted more so in the LA condition due to the perceived higher stakes of PARCC testing compared to CL and CA. The high level of standardization of LA limits the flexibility around educator practices, whereas educator practices within the classroom conditions are likely more adaptable. It is also possible that differences do exist in accommodation use across the two classroom conditions, and that the current study did not have the statistical power to identify such differences.

Prevalence comparisons at the domain level. Differences in the prevalence of participants who received accommodations between the CL and LA and CA and LA conditions were significant in the Motivational Adjustments for Learning and Assessment (Domain 1), the Scheduling Adjustments for Learning and Assessment (Domain 2), the Assistance with Learning and Assessment Directions (Domain 4), and the Assistance During the Assessment (Domain 5). Differences in the prevalence of participants who received accommodations between the CL and LA condition were also significant in and the Learning and Assessment Formats (Domain 8). Motivational Adjustments for Learning and Assessment included “motivational” accommodations such as providing snacks, treats, or prizes to participants. It is likely that snacks and prizes were not permitted during the LA, but were permitted during CL and CA. For example, snacks can only be eaten during during the scheduled "medical breaks" accommodation if listed in a student's personal needs profile (PNP) during the PARCC (PARCC, 2013). Significant differences of prevalence of participants who received accommodations may have

resulted, in part, from circumstances and strict guidelines around accommodations permitted during LA compared to guidelines that are more flexible during the CL and CA conditions.

A significantly higher prevalence of participants received Scheduling Adjustments for Learning and Assessment domain accommodations during the CL and CA conditions than during the LA condition. Accommodations such as “allow frequent or extended rest breaks,” “schedule learning or assessment over extra days,” and “undertake assessment at a time most beneficial to the student” may be difficult or prohibited during the LA condition. Scheduling during the CL and CA environments is likely more flexible than during large-scale testing such as the PARCC. PARCC test administrators must adhere to the all requirements for testing conditions and testing security (PARCC, 2013). There are guidelines around providing “frequent breaks” during the PARCC when testing time does not stop. These guidelines were likely not in place during the CL and CA conditions and contribute to the significant difference in the prevalence of participants who received accommodations between conditions.

A significantly higher prevalence of participants received Assistance with Learning and Assessment Directions domain accommodations during the CL and CA conditions than during the LA condition. Assistance with Learning and Assessment Directions domain accommodations include “reread directions for each subtask as needed” and “underline verbs in learning and assessment instruction.” It is likely that rereading directions or underlining verbs during a LA was less likely permitted than during the CL and CA conditions. The PARCC Accessibility Features and Accommodations Manual (2013) includes a number of accommodations prohibited during PARCC administrations unless specified in participants’ PNP. During CL, it may be instructionally necessary to engage in rereading directions. These

contextual differences between conditions may have contributed to the significant prevalence differences between the two classroom conditions and LA condition across this domain.

A significantly higher prevalence of participants received Assistance during the Assessment domain accommodations during the CL and CA conditions than during the LA condition. Assistance during the Assessment domain accommodations include “read assessment expectations and content to student,” “restate assessment task with more appropriate vocabulary or define unknown vocabulary in question,” or “have teacher sit near student.” During the CL and CA conditions, it would be likely that a teacher would sit alongside a student to aid in the instructional and assessment processes or define unknown vocabulary. During a LA, receiving such an accommodation as having unknown words defined may compromise the content of the assessment. PARCC guidelines also limit the involvement of school personnel to such roles as “Human Reader” or “scribe,” versus allowing them to provide general assistance (PARCC, 2013). The flexibility of accommodations permitted during the CL and CA conditions and restrictions during LAs around defining unfamiliar words may have contributed to the significant differences in prevalence of participants who received accommodations between conditions across this domain.

A significantly higher prevalence of participants received Learning and Assessment Formats domain accommodations during the CL condition than during the LA condition. Learning and Assessment Formats domain accommodations include “use lined or grid paper for recording student work when only blank space is provided for other students” and “provide a separate copy of diagrams/tables needed for learning and assessments so student does not have to flip back and forth in materials.” Lined or grid paper may be beneficial during the CL condition for instructing on geometry or penmanship, for example, but is likely not available during LA.

The PARCC assessments use a computer-based assessment delivery platform and therefore there is no need to “flip back and forth in materials.” The significant differences in the format and presentation of CL compared to LA across this domain likely contributed to the significant difference in the prevalence of participants who received the Learning and Assessment Formats domain accommodations between conditions.

In this sample, significant effect size results reconcile with each of the significant results found through the Marascuilo procedure. Additionally, through Cohen's h analysis, effect sizes were significant between the CA and LA conditions both in the Learning and Assessment Formats domain and at the total level. These results were not found significant through the Marascuilo procedure. The difference in the results of these two analyses relate to raw prevalence differences as seen through the Marascuilo procedure compared to arcsin transformed prevalence differences as seen through Cohen's h . The difference in the prevalence of participants who received the Learning and Assessment domain accommodations between the CA and LA conditions may have been found significant through Cohen's h because of the arcsin transformation, which allows for equal detectability. Across the Learning and Assessment Formats domain, the prevalence of participants who received accommodations was .38 during the CA condition and .20 during the LA condition. Across the total level, the prevalence of participants who received accommodations was .46 during the CA condition and .28 during the LA condition. The raw prevalence difference of each of these comparisons was .18. This raw difference of .18, when arcsin transformed, was 0.48 across the Learning and Assessment Formats domain and 0.44 at the total level. This demonstrates that raw proportion differences are not equally detectable under given fixed conditions, and would not be constant. Differences would vary depending upon where along the distribution of proportion values between zero and

one that prevalence difference occurred (Cohen, 1977). This nonlinear transformation of the prevalence provides a solution to accurate effect size calculations.

Alignment of Accommodations between Conditions

To address Research Question 2, the Porter alignment index was used to analyze the degree of alignment (range: .00 to 1.00) of accommodations provided between conditions. Alignment indices should be calculated at the individual level in order to evaluate the consistency, and hence alignment of accommodations provided. One cannot assume because prevalence across conditions is similar the degree of alignment of accommodations provided to each student that constitutes the prevalence is strong. For example, if we evaluate 100 students and 50 (50%) received accommodations during the CL condition and 50 (50%) received accommodations during the CA condition; alignment would appear to be 1.00, or perfect alignment. This may be true (i.e. the same 50 students received accommodations in both conditions). There is also the possibility that the degree of alignment is .00, or perfect *non-alignment*, as in the case that 50 students who received accommodations during the CL condition did not receive accommodations during the CA condition and 50 students who did not receive accommodations during the CL condition received accommodations during the CA condition. The prevalence statistics consider results only at the aggregate level. The alignment statistic first considers each student's individual experience with alignment, and then aggregates results for high-level analysis. Because of this, the degree of alignment must be evaluated.

Alignment at the total level. The highest degree of alignment ($P = .95$) in this sample was found between the CL and CA conditions. The nearly perfect degree of alignments of accommodations provided to participants was achieved between the two conditions that are most similar in setting, scheduling, personnel, and resources. The degree of alignment was similar

between the CA and LA conditions ($P = .78$) and the CL and LA conditions ($P = .75$). This is likely because classroom conditions are inherently different from LA conditions and these differences contribute to the lower degree of alignment.

Alignment at the domain level. In this sample, these total level results were also reflected through the alignment indices at the respective domain levels. Across each of the eight domains, the degree of alignment was the highest between the CL and CA conditions and lowest between the CL and LA conditions. Across the Motivational Adjustments for Learning and Assessment domain, the degree of alignment was .91 between the CL and CA conditions, .66 between the CA and LA conditions, and .60 between the CL and LA conditions. This is likely because the provision of accommodations between the CL and CA conditions are similar, especially in consideration of factors such as setting, scheduling, personnel, and resources being consistent, compared to factors associated with the LA condition.

In this sample, the lowest alignment ($P = .60$) across domains was identified between the CL and LA conditions across the same domain, Motivational Adjustments for Learning and Assessment. These results indicate that between the CL and LA condition, 60% of the 45 participants had consistent or aligned experiences related to the provision of accommodations. This is likely because whether a student received an accommodation such as a prize or treat during the CL condition, it is likely that the same student did not receive that same accommodation during the LA due to regulations related to accommodations permitted during LA. Interpretation and discussion across each of the domains and conditions can follow the rationale provided for the Motivational Adjustments for Learning and Assessment domain.

Comparisons to Davies et al. (2016)

The prevalence of participants who received accommodations was compared between the current study and the previous study (Davies et al., 2016) conducted in Australia. Within all three conditions, a higher prevalence of participants in the current sample received accommodations than did the prevalence of participants in the sample from the Davies et al. (2016) study. The Davies et al. (2016) study was designed to allow educators to respond regarding the provision of accommodations across one of four levels of support including: (a) *support provided within quality differentiated teaching practice*, (b) *supplementary*, (c) *substantial*, or (d) *extensive*. “No” for not applicable was also a response option. The current study requested educators to respond “yes” or “no” to whether an accommodation was provided. It is unclear whether the previous study considered each of the four levels of support equivalent to an accommodation being provided, or rather only accommodations provided at the substantial or extensive levels, for example. If the latter was the case, this would be another explanation for the prevalence being higher than in the Davies et al. (2016) study.

At the total level, three differences of proportions between the current and the Davies et al. (2016) study were observed. The prevalence of participants who received accommodations were higher in the current study across CL (14 percentage points), CA (13 percentage points), and LA (18 percentage points) conditions compared to the Davies et al. (2016) study. One possible reason for the discrepancy between the current results that reflect higher proportions of participants who received accommodations compared to the proportions reported from the Davies et al. (2016) study is the student inclusion criteria. The current study included three main categories of students who were identified as students with special needs (SWSNs) and whose accommodations were documented in either 504 Plans or IEPs. The Davies et al. (2016) study

included “verified” and “non-verified” students. Non-verified students were students who required additional learning needs, but did not meet the Queensland requirements for verification as having a disability. Non-verified students constituted a majority of the 89 students in the previous study. Non-verified students may not have had documented accommodations mandated, and because of this and the nature of the students’ learning needs higher proportions of participants consistently received accommodations during the current study as compared to the Davies et al. (2016) study. Refer to Table 13 for prevalence comparisons between studies.

Table 13
Prevalence Differences of SWSNs who received Accommodations between Studies

Domain	Current Study			Davies et al. (2016)			Current Study – Davies et al. (2016) Study		
	CL	CA	LA	CL	CA	LA	CL	CA	LA
Motivational Adjustments for Learning and Assessment	0.86	0.82	0.49	0.81	0.71	0.23	0.06	0.10	0.26
Scheduling Adjustments for Learning and Assessment	0.81	0.82	0.54	0.49	0.53	0.13	0.33	0.30	0.41
Setting Adjustments for Learning and Assessment	0.41	0.41	0.28	0.26	0.22	0.09	0.15	0.19	0.19
Assistance with Learning and Assessment Directions	0.62	0.56	0.30	0.56	0.53	0.19	0.06	0.03	0.12
Assistance During the Assessment	0.57	0.54	0.31	0.32	0.33	0.08	0.25	0.21	0.23
Assistance Prior to Administering a Test	0.47	0.46	0.31	0.57	0.60	0.38	-0.11	-0.14	-0.07
Equipment or Assistive Technology	0.26	0.24	0.15	0.17	0.14	0.03	0.09	0.10	0.12
Learning and Assessment Formats	0.40	0.38	0.20	0.25	0.21	0.01	0.15	0.17	0.18
Total	0.49	0.46	0.28	0.35	0.33	0.10	0.14	0.13	0.18

Note: CL=Classroom Learning, CA = Classroom Assessment, LA = Large-scale Assessment

Negative values indicate a greater prevalence in the Davies et al. (2016) study compared to the current study

Differences in prevalence are in boldface

Cohen's h effect sizes were calculated in the Davies et al. (2016) study across the total and domain levels and were reported independent of significance testing. The Davies et al. (2016) study included a higher effect size at the total level than the current study between the two classroom conditions and the LA condition. At the total level, the previous study included results for the effect size 20 percentage points and 22 percentage points greater than for the current study effect size between the CL and LA conditions, and CA and LA conditions, respectively. One reason for this may be that the Australian educational system may have stricter guidelines around the provision of accommodations during LA as compared to the educational system in the United States, and hence the larger effect sizes identified through the previous study. Davies et al. (2016) included similar results compared to the current study on effect size between the two classroom conditions. At the total level, the effect size difference between the two classroom conditions across the two studies is nominal (0.01) and highlights that the size of the difference of the provision of accommodations between the two studies is similar. This is likely because across domains, educators provide a similar prevalence of students accommodations between the two classroom conditions, which translates to almost no difference in the effect sizes between studies. Refer to Table 14 for the comparisons in effect sizes between studies.

Table 14
*Effect Size of Prevalence Differences of SWSNs who received Accommodations
 between Studies*

<u>Domain</u>	<u>Current Study</u>			<u>Davies et al. (2016)</u>			<u>Current Study – Davies et al. (2016) Study</u>		
	CL- CA	CL- LA	CA- LA	CL- CA	CL- LA	CA- LA	CL- CA	CL- LA	CA- LA
Motivational Adjustments for Learning and Assessment	0.21	1.04	0.83	0.24	1.32	1.07	-0.03	-0.28	-0.24
Scheduling Adjustments for Learning and Assessment	-0.04	0.64	0.68	-0.08	0.83	0.90	0.04	-0.19	-0.22
Setting Adjustments for Learning and Assessment	0.03	0.32	0.29	0.11	0.54	0.42	-0.08	-0.22	-0.13
Assistance with Learning and Assessment Directions	0.13	0.70	0.57	0.07	0.89	0.82	0.06	-0.19	-0.25
Assistance During the Assessment	0.08	0.59	0.51	-0.04	0.65	0.69	0.12	-0.06	-0.18
Assistance Prior to Administering a Test	0.02	0.32	0.29	-0.05	0.39	0.43	0.07	-0.07	-0.14
Equipment or Assistive Technology	0.05	0.28	0.23	0.07	0.54	0.48	-0.02	-0.26	-0.25
Learning and Assessment Formats	0.04	0.52	0.48	0.07	0.89	0.82	-0.03	-0.37	-0.34
Total	0.07	0.51	0.44	0.06	0.71	0.66	0.01	-0.20	-0.22

Note: CL=Classroom Learning, CA = Classroom Assessment, LA = Large-scale Assessment

Negative values indicate a greater effect size in the Davies et al. (2016) study compared to the current study

Differences in effect size are in boldface

Four of the eight domain effect sizes were found to be in the large range in the Davies et al. (2016) study compared to only one (Motivational Adjustments for Learning and Assessment domain) of the eight domain effect sizes being within the large range in the current study. The previous study noted that there are a number of accommodations not permitted during the large-scale test (NAPLAN) in Australia as evidenced by educators recorded comments including “*Bit strange having the NAPLAN box as it is so restrictive in what adjustments you can actually do for students*” and “*Don’t think the NAPLAN column is useful as there are very strict rules governing this anyway*” (Davies et al., 2016, p.14). This sentiment is likely a result of strict guidelines in Australia that prohibit the provision of some accommodations during large-scale testing. This compares to educator practices in the United States, particularly related to accommodations during the PARCC. Accommodations are permitted as long as they have been documented in students’ PNPs. These country-specific variables contribute to larger effect sizes found between conditions in the Davies et al. (2016) study compared to the current study.

The Davies et al. (2016) study addressed research questions related to alignment of the provision of accommodations by evaluating effect sizes. The previous study reported that “the smaller the effect size or gap, the more consistent the use of adjustments for students across learning, assessment, and testing conditions” (Davies et al., 2016). Although this may be true when considering how frequently a given accommodation is provided across conditions, it does not provide information on the degree of alignment of accommodations provided. As previously explained, the degree of alignment should be evaluated per student to assess individual experiences of alignment of accommodations received. Results evaluated at the individual level can be aggregated to report on the higher-level degree of alignment indices for groups of individuals, using a statistic such as the Porter alignment index.

Implications for Practice

The results of this study indicate that the degree of alignment of accommodations provided between the CA and LA conditions and the CL and LA conditions could increase. Results of this study indicate that although alignment is strong between the two classroom conditions, this alignment is not shared with the LA. These results indicate that students who receive a particular accommodation during the CL and CA conditions do not receive that accommodation during the LA condition. As efforts at the state and federal levels are made to align curriculum with state standards and large-scale testing (Linn et al., 2002), alignment of accommodations should also be evaluated.

Accommodations to classroom instruction and assessment practices are considered essential for effective educational services to be provided to SWSNs (Elliott et al., 2011). Accommodations allow for equal accessibility in the classroom and assessment conditions for all SWSNs. Accommodations allow SWSNs to fully access the learning material and participate in the educational experience. The three main regulations referenced in this study, including IDEIA (2004), Section 504 of the Rehabilitation Act of 1973 (Section 504), and the Every Student Succeeds Act (ESSA) of 2015 protect the educational rights of children with disabilities in the United States. By law, SWSNs must be granted equal accessibility during the classroom and LA conditions. The results of this study indicate that there was a higher prevalence of SWSNs who received accommodations during the classroom conditions compared to the LA conditions. This means that there were likely a number of SWSNs who received accommodations during the classroom condition and not during the assessment conditions. In consideration of these results, equal accessibility was not granted between conditions as mandated by federal law in this sample.

It is important that SWSNs be provided accommodations in order to be included in LA, such as the PARCC. This process is necessary for SWSNs to have the opportunity to demonstrate their knowledge on LA, because results of LA inform curriculum planning. If SWSNs are not included in LA, their needs will likely not be addressed through curriculum planning. This is of particular importance in consideration of recent educational policy research related to the alignment between classroom curriculum and state testing (Linn et al., 2002). This is also highlighted through the ED initiatives focused on the alignment of curriculum with the Common Core State Standards (CCSS, 2010). The sample results from this study do not support that SWSNs were granted equal access during LA. This may indicate that SWSNs needs were not fully captured through the PARCC and were not completely considered during curriculum planning. Provision of accommodations can also reduce accessibility. For example, if a student uses a scribe during penmanship instruction, the student is not granted the opportunity to learn how to write.

Performance on LA may be jeopardized in cases in which a student received a certain accommodation (i.e. use of calculator) during the classroom conditions and not during the LA condition. The student would not have had equal access between conditions because calculator use may have been prohibited during LA. The results of this study could inform decisions around providing accommodations during all three conditions, especially since results indicate that the degree of alignment between the classroom conditions and the LA condition is lower than alignment between classroom conditions. Alignment is important to the educational experience so that students learn and participate in assessments with consistent supports. Thurlow et al. (2002) highlights the importance of avoiding abruptly introducing accommodations during LA without previous experience during the classroom conditions. For

example, Thurlow et al. (2004) discovered that some states require that SWSNs use accommodations in the classroom conditions prior to making the accommodations available during assessment conditions. This reinforces the importance of the consistent provision of accommodations between conditions. Results of the current study indicate such a policy was not enforced in this sample.

Accommodations are provided to increase accessibility to classroom learning and assessment material in order for SWSNs to fully participate in the educational experience. It is important to consider that accommodations increase access when accommodations are appropriate. This means that when an accommodation is provided, it increases access versus potentially limits access to learning and assessment material. For example, by providing a read-aloud accommodation during reading comprehension instruction, SWSNs are not granted the opportunity to learn how to read because the accommodation precludes them from learning to read on their own in the absence of the accommodation. Because of this possibility, one cannot assume that because prevalence of SWSNs who receive accommodations is higher during a certain condition that the level of access to learning and assessment material is greater. Stronger alignment between the two conditions does not indicate greater access, either, though it does indicate more equivalent access.

There a number of publications related to the need for recording the provision of accommodations to support educators' judgments to improve accommodation decisions (Fuchs et al., 2000). Theory suggests that improving the quality of decision-making for accommodations increases outcomes for SWSNs (Hemmer & Baker, 2011). The ED, Office of Special Education Programs (OSEP) highlights the importance of selecting, documenting, and planning appropriate, consistently provided accommodations to SWSNs (Christensen et al., 2009). It is

important that there is a high degree of alignment between accommodations provided during the classroom and assessment conditions (Christensen et al., 2009; Davies et al., 2016). As was seen in this study, alignment was significantly lower between the large-scale and classroom conditions. In the results of this study, the sample included approximately 25% of participants who did not receive aligned accommodations between these two conditions. This highlights the need for increased monitoring of the provision of accommodations to confirm alignment. It is essential that in the educational environment, members of the staff are collaborating across functions on the planning and provision of accommodations to SWSNs. In regards to the roles school psychologists can hold in these discussions, it would be ideal for school psychologists to act as subject matter experts on appropriate accommodations to provide to SWSNs. School psychologists can act as advocates for SWSNs by coordinating services with the educators and administration in the school setting to provide SWSNs the opportunity to achieve their potential.

Limitations

The generalizability of the results of this study is limited due to a variety of factors. All participants attended public school in two counties in New Jersey. This sample limits the applicability of the results of this study beyond New Jersey public schools to the general population of students and educators in the United States who may adhere to different state-specific guidelines related to accommodations, may represent different socioeconomic statuses, and vary in ethnic representations. The number of participants in this study poses another limitation. Although a power analysis was conducted for Cohen's h effect size, no similar power analyses were available for the Marascuilo procedure and the Porter alignment index. For Cohen's h , the power analysis was only sufficient for large effect sizes (Cohen's $h > 0.80$). Additionally, these results should be interpreted with caution due to the multiple comparisons

made. Significant results may have occurred by chance and resulted in a number of false positives and incorrect rejection of the null hypotheses resulting in Type I error (McDonald, 2009).

Future Research

Several recommendations for future research involve adapting the use of the CLAAS. Some educators reported that when responding to each of the accommodations listed on the CLAAS, they would have benefitted from a field that asked whether the specific accommodations were listed on the participants' IEPs or 504 Plans. Full alignment for a student would be calculated in cases in which the student did not receive specific accommodations across all three conditions. Although full alignment is viewed positively, implications would be very different in cases in which a specific accommodation was included in the participant's IEP and was not provided across any of the three conditions. In the future, the CLAAS could be adapted so that educators could leave the item blank versus replying with either "yes" or "no" to indicate that the accommodation was not documented for the student. A study with a revised version of the CLAAS could address this. Collecting information on the documented accommodations (i.e. IEPs, 504 Plans) would be beneficial to future research in this area. Educators may be providing accommodations not documented for SWSNs, which in turn would skew alignment results.

To secure additional information about the provision of accommodations, particularly during LA, future studies should administer the CLAAS during or shortly following the administration of large-scale testing. This study surveyed educators two months prior to the PARCC administration requiring educators to project provision of accommodations. By administering the CLAAS during or shortly following the administration of large-scale testing,

educators can respond promptly after providing accommodations. Doing so would increase the likelihood of accurate replies because the information on the provision of accommodations would be readily available to educators. In addition, adapting the CLAAS to identify the accommodations not permitted during large-scale testing would be beneficial when screening for ineligible data that should be removed from the analysis.

The eight domains of the CLAAS and the associated accommodations could be reevaluated for future administrations of the CLAAS. Of the eight domains, two domains including “Assistance During the Assessment” and “Assistance Prior to Administering a Test” appear unique to the assessment conditions, and not applicable to the CL condition. Despite this, educators were asked to endorse, for example, whether an accommodation under “Assistance During the Assessment” domain was provided during the CL condition. Future administrations of the CLAAS could exclude the CL option under assessment specific domains so that the provision of accommodations can be isolated and evaluated between the two assessment conditions, or could be revised to include more general descriptions of accommodations that could be applied across conditions (e.g. Assistance During the Assessment or Lesson).

Conclusions

In order to provide accommodations that are aligned between the CL, CA, and LA conditions, educators can use tools such as the CLAAS to identify areas in which alignment can be increased. Despite efforts to align curriculum with state standards and large-scale testing, more focus needs to be directed to the alignment of accommodations provided to students across conditions (Linn et al., 2002). In this sample, the evidence to highlight that the highest prevalence of participants received accommodations during the CL condition and the lowest prevalence received accommodations during the LA condition was identified through the

analysis that assumed equal intervals and the analysis that allowed for equally detectable differences of proportions. Results between these two prevalence analyses were similar, which indicate that both in terms of raw proportion differences and arcsin transformed proportion differences, there were significant differences in the prevalence of participants who received accommodations between conditions. These results were supported through alignment analyses, which allowed individual evaluation of participants' experiences being provided accommodations between conditions. The main findings of this study include a higher prevalence of participants received accommodations in the two classroom conditions, compared to the large-scale condition, and that alignment was greater between the two classroom conditions compared to the LA condition.

References

- Bailey, S. K., & Mosher, E. K. (1968). *ESEA: The Office of Education administers a law*. Syracuse University Press.
- Carrizales, D., & Tindal, G. (2009). Test design and validation of inferences for the Oregon alternate assessment. *Assessments in educational reform*, 240-275.
- Christensen, L., S. Lazarus, M. Crone, and M. Thurlow. 2008. *2007 State Policies on Assessment Participation and Accommodations for Students with Disabilities* (Synthesis Report 69). Minneapolis, MN: University of Minnesota, National Center on Educational Outcomes.
- Christensen, L. L., Thurlow, M. L., & Wang, T. (2009). Improving Accommodations Outcomes: Monitoring Instructional and Assessment Accommodations for Students with Disabilities. *National Center on Educational Outcomes, University of Minnesota*.
- Cohen, J. 1977. *Statistical power analysis for the behavioral sciences* (rev. ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Davies, M. (2012). Accessibility to NAPLAN assessments for students with disabilities: a 'fair go'. *Australasian Journal of Special Education*, 36(01), 62-78.
- Davies, M., Elliott, S. N., & Cumming, J. (2016). Documenting support needs and adjustment gaps for SWSNs: teacher practices in Australian classrooms and on national tests. *International Journal of Inclusive Education*, 1-18.
- Destefano, L., Shriner, J. G., & Lloyd, C. A. (2001). Teacher decision making in participation of students with disabilities in LA. *Exceptional Children*, 68(1), 7-22.
- Elliott, S. N., Kettler, R. J., Beddow, P. A., & Kurz, A. (Eds.). (2011). *Handbook of accessible achievement tests for all students: Bridging the gaps between research, practice, and policy*. Springer Science & Business Media.

Elliott, S. N., Kratochwill, T. R., & McKeivitt, B. C. (2001). Experimental analysis of the effects of testing accommodations on the scores of students with and without disabilities.

Journal of School Psychology, 39(1), 3-24.

Every Student Succeeds Act of 2015, PL 114-195, Stat. 1177, 20 U.S.C. §§6301 *et seq.*

Fuchs, L. S., & Fuchs, D. (2001). Helping teachers formulate sound test accommodation decisions for students with learning disabilities. *Learning Disabilities Research & Practice, 16*(3), 174-181.

Fuchs, L. S., Fuchs, D., Eaton, S. B., Hamlett, C., & Karns, K. M. (2000). Supplementing teacher judgments of mathematics test accommodations with objective data sources. *School Psychology Review, 29*(1), 65.

Hemmer, L., & Baker, C. (2011). Federal Accommodation Policy in Practice: Implications for a Substantive Process. *Administrative Issues Journal: Education, Practice, and Research, 1*(2), 83-93.

Henry, S. (1999). Accommodating practices. *School Administrator, 56*(10), 32. Retrieved from <http://search.proquest.com/docview/219264632?accountid=13626>

Individuals With Disabilities Education Act, 20 U.S.C. § 1400 (2004).

Ketterlin-Geller, L. R., & Jamgochian, E. M. (2011). Classroom learning accommodations: Accommodations and that support accessible instruction. In *Handbook of Accessible Achievement Tests for All Students* (pp. 131-146). Springer New York.

Kettler, Ryan J. "Adaptations and Access to Assessment of Common Core Content." *Review of Research in Education 39.1* (2015): 295-330.

Kettler, R. J. (2012). Testing accommodations: Theory and research to inform practice. *International Journal of Disability, Development and Education, 59*(1), 53-66.

Kettler, R. J., & Elliott, S. (2010). Assessment accommodations for children with special needs.

In Elsevier Ltd.

Kettler, R. J., Elliott, S. N., & Beddow, P. A. (2009). Modifying achievement test items: A theory-guided and data-based approach for better measurement of what students with disabilities know. *Peabody Journal of Education*, 84(4), 529-551.

Laprairie, K., Johnson, D. D., Rice, M., Adams, P., & Higgins, B. (2010). The top ten things new high school teachers need to know about servicing students with special needs. *American Secondary Education*, 23-31.

Lazarus, S. S., Thompson, S. J., & Thurlow, M. L. (2006). How Students Access Accommodations in Assessment and Instruction: Results of a Survey of Special Education Teachers. EPRRI Issue Brief Seven. *Educational Policy Reform Research Institute*.

Linn, R. L., Baker, E. L., & Betebenner, D. W. (2002). Accountability systems: Implications of requirements of the no child left behind act of 2001. *Educational Researcher*, 31(6), 3-16.

Marascuilo, L. A., & McSweeney, M. (1967). Nonparametric post hoc comparisons for trend. *Psychological Bulletin*, 67(6), 401.

McDonald, J. H. (2009). *Handbook of biological statistics* (Vol. 2, pp. 173-181). Baltimore, MD: Sparky House Publishing.

McLeskey, J., Landers, E., Hoppey, D., & Williamson, P. (2011). Learning disabilities and the LRE mandate: An examination of national and state trends. *Learning Disabilities Research & Practice*, 26(2), 60-66.

National Governors Association Center for Best Practices & Council of Chief State School

- Officers. (2010). *Common Core State Standards*. Washington, DC: Authors.
- Partnership for the Assessment of College and Career Readiness – First Edition (2013). PARCC Accessibility Features and Accommodations Manual 2013 – 2014. Achieve, Inc. Washington, DC: PARCC Assessment Consortia.
- Phillips, S. E. (2011). US legal issues in educational testing of special populations. In *Handbook of Accessible Achievement Tests for All Students* (pp. 33-67). Springer New York.
- Porter, A. C. (2002). Measuring the content of instruction: Uses in research and practice. *Educational Researcher*, 31, 3-14.
- Race to the Top Act of 2011
- Rivera, C., Stansfield, C. W., Scialdone, L., & Sharkey, M. (2000). An Analysis of State Policies for the Inclusion and Accommodation of English Language Learners in State Assessment Programs during 1998-1999. Final Report.
- Section 504 of the Rehabilitation Act of 1973, 34 C.F.R. Part 104.
- Sireci, S. G. (2004). Validity Issues in Accommodating NAEP Reading Tests. *National Assessment Governing Board*.
- Sireci, S. G., Li, S., & Scarpati, S. (2003). The effects of tests accommodations on test performance: A review of the literature. Commissioned paper by the National Academy of Sciences/National Research Council's Board on Testing and Assessment.
- Smarter Balanced Assessment Consortium. (2012). Smarter balanced assessments.
- Tindal, G., & Fuchs, L. S. (1998). Models for understanding task comparability in accommodated testing.
- Thompson, S. J., Morse, A. B., Sharpe, M., & Hall, S. (2005). Accommodations manual: How to select, administer, and evaluate use of accommodations for instruction and assessment of

students with disabilities. *The Council of Chief State School Officers*.

Thurlow, M. L., Elliott, J. L., & Ysseldyke, J. E. (2002). *Testing students with disabilities:*

Practical strategies for complying with district and state requirements. Corwin Press.

Thurlow, M. L., Lazarus, S. S., Thompson, S. J., & Morse, A. B. (2004). State policies on

assessment participation and accommodations for students with disabilities. *Journal of*

Special Education, 38(4), 232-240.

U.S. Department of Education. Institute of Education Sciences, National Center for Education

Statistics.

U.S. Department of Education. (2016, May 17). Race to the top fund. Retrieved September 01,

2016, from Race to the Top, <http://www2.ed.gov/programs/racetothetop/index.html>

Appendix A

*Checklist of Learning and Assessment Adjustments for Students (CLAAS) **
Michael Davies, Stephen N. Elliott, & Joy Cumming

*adapted version for use in the United States and for the purposes of this dissertation

The CLAAS provides a comprehensive list of accommodations that enables educators to record accommodations provided to Students with Special Needs (SWSNs), in three conditions: classroom learning, classroom assessments, and for large-scale assessments. The checklist provides 67 accommodations grouped into eight categories: (1) motivation; (2) scheduling; (3) setting; (4) assistance with directions; (5) assistance prior to testing; (6) assistance during learning or assessment; (7) equipment or assistive technology; and (8) changes in format. These accommodations have their basis in educational instruction, testing standards, and accessible educational practices.

The CLAAS provides educators an opportunity to review and plan use of accommodations for SWSNs during classroom learning, classroom assessments, and for large-scale assessments (e.g., PARCC). Appropriate use of accommodations allows SWSNs to show what they have learned and improves the accuracy of decisions made about SWSNs' achievement.

INSTRUCTIONS

Step 1: Please consider one student with special needs (SWSN) for whom you are responsible. Please select a SWSN who you have information on the accommodations provided during all three conditions (CL, CA, and LA). A SWSN may include (1) a student who receives services through an IEP, (2) a student who receives services through a 504 Plan, or (3) a student who is EL.

Step 2: Please identify the disability category or additional learning need of the SWSN.

Step 3: Please identify the level of severity of the SWSN's disability or additional learning need: Low, Moderate, or High.

Step 4: Please review each accommodation item on the CLAAS and note the accommodation items you currently provide the SWSN by selecting "Yes" if you provide the accommodation during the specified condition, and "No" if you do not provide the accommodation during the specified condition.

Please select the current grade level of the SWSN:

- 3rd Grade
- 4th Grade
- 5th Grade
- 6th Grade
- 7th Grade
- 8th Grade
- 9th Grade
- 10th Grade
- 11th Grade
- 12th Grade

Please indicate the gender of the SWSN:

- Male
- Female
- Other _____

Please select the ethnicity of the SWSN:

- European American
- African American
- Latino American
- Native American
- Asian American/Pacific Islander
- Other

Please select the disability category or additional learning need of the SWSN below:

- Autism
- Blindness
- Deafness
- Emotional Disturbance
- Hearing Impairment
- Intellectual Disability
- Multiple Disabilities
- Orthopedic Impairment
- Other Health Impaired
- Specific Learning Disability
- Speech or Language Impairment
- Traumatic Brain Injury
- Visual Impairment
- Section 504 Plan
- Student who is learning English
- Other _____

If a category of disability or additional learning need was selected above, please also identify the level of severity of the student's disability or additional learning need: Low, Moderate, or High.

- Low
- Moderate
- High
- Not Applicable

Please review each accommodation item on the CLAAS and note the accommodation items you currently provide the SWSN by selecting "Yes" if you provide the accommodation during the specified condition and "No" if you do not provide the accommodation during the specified condition.

1. Provide treats, snacks, or prizes, as appropriate (Motivational Accommodations for Learning and Assessment)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

2. Provide verbal encouragement of student's efforts (Motivational Accommodations for Learning and Assessment)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

3. Encourage student who may be slow at starting to begin (Motivational Accommodations for Learning and Assessment)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

4. Encourage student who may want to quit to sustain effort longer (Motivational Accommodations for Learning and Assessment)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

5. Encourage student to remain on task (Motivational Accommodations for Learning and Assessment)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

6. Provide extra time (Scheduling Accommodations for Learning and Assessment)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

7. Allow frequent or extended rest breaks (Scheduling Accommodations for Learning and Assessment)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

8. Schedule learning or assessment over extra days (Scheduling Accommodations for Learning and Assessment)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

9. Undertake assessment at a time most beneficial to the student (Scheduling Accommodations for Learning and Assessment)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

10. Provide distraction-free space or an alternative location for the student (e.g., study carrel, front of classroom) (Setting Accommodations for Learning and Assessment)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

11. Place the student in the room or part of the room where he/she is most comfortable (Setting Accommodations for Learning and Assessment)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

12. Undertake assessments or learning in a special education classroom (Setting Accommodations for Learning and Assessment)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

13. Undertake assessments or learning at home / at a hospital location (Setting Accommodations for Learning and Assessment)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

14. Provide for individual assessment or learning (Setting Accommodations for Learning and Assessment)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

15. Provide special lighting (Setting Accommodations for Learning and Assessment)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

16. Provide adaptive or special furniture (Setting Accommodations for Learning and Assessment)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

17. Provide special acoustics (Setting Accommodations for Learning and Assessment)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

18. Play soft, calming music to minimize distractions (Setting Accommodations for Learning and Assessment)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

19. Allow the student freedom to move, stand, or pace during assessment or learning (Setting Accommodations for Learning and Assessment)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

20. Read directions to student (Assistance with Learning and Assessment Directions)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

21. Reread directions for each sub task as needed (Assistance with Learning and Assessment Directions)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

22. Encourage student who may be slow at starting to begin (Assistance with Learning and Assessment Directions)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

23. Clarify student questions regarding what to do by asking the student about what is written in the learning activities or assessment (Assistance with Learning and Assessment Directions)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

24. Underline verbs in learning or assessment instructions (Assistance with Learning and Assessment Directions)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

25. Circle or highlight the task in learning or assessment instructions (Assistance with Learning and Assessment Directions)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

26. Have student reread and restate instructions in his/her own words (Assistance with Learning and Assessment Directions)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

27. Provide additional practice activities before undertaking assessments (Assistance with Learning and Assessment Directions)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

28. Use sign language or oral interpreters for instructions and learning activities or assessment (Assistance with Learning and Assessment Directions)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

29. Color-code instructions to emphasize steps (Assistance with Learning and Assessment Directions)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

30. Arrange for a special education teacher or other qualified person to manage assessment (Assistance During the Assessment)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

31. Read assessment expectations and content to student (Assistance During the Assessment)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

32. Sign assessment expectations and content to student (Assistance During the Assessment)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

33. Restate assessment task with more appropriate vocabulary or define unknown vocabulary in the question (Assistance During the Assessment)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

34. Turn pages for the student (Assistance During the Assessment)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

35. Record student's responses (in writing or by audio recording) (Assistance During the Assessment)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

36. Provide spelling assistance, where appropriate (Assistance During the Assessment)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

37. Have teacher sit near student (Assistance During the Assessment)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

38. Use test form with vertically arranged multiple-choice items that have an answer circle to the left of each choice (Assistance During the Assessment)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

39. Provide cues such as stop signs/arrows on the test form (Assistance During the Assessment)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

40. Allow responses to be marked in the test book rather than on a separate answer document (Assistance During the Assessment)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

41. Assist the student in tracking the test items by pointing or by placing student's finger on the items (Assistance During the Assessment)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

42. Administer practice activities (Assistance Prior to Administering a Test)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

43. Teach test-taking skills (Assistance Prior to Administering a Test)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

44. Text-talk converter (Equipment or Assistive Technology)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

45. Speech synthesizer or electronic reader (Equipment or Assistive Technology)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

46. Visual magnification devices (Equipment or Assistive Technology)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

47. Auditory amplification devices (Equipment or Assistive Technology)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

48. Using masks or markers to help maintain place (Equipment or Assistive Technology)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

49. Use an audio recorder (Equipment or Assistive Technology)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

50. Computer, iPad or word processor for recording responses (Equipment or Assistive Technology)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

51. Braille writer for recording responses (Equipment or Assistive Technology)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

52. Communications device to indicate responses (Equipment or Assistive Technology)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

53. Provide cues such as stop signs or arrows on the test form (Equipment or Assistive Technology)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

54. Calculator (Equipment or Assistive Technology)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

55. Manipulatives (Equipment or Assistive Technology)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

56. Ruler (Equipment or Assistive Technology)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

57. Pencils or other pens adapted in size or grip (Equipment or Assistive Technology)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

58. Device that transforms print into a tactile form (Equipment or Assistive Technology)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

59. Arithmetic tables (Equipment or Assistive Technology)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

60. Written list of necessary formulas (Equipment or Assistive Technology)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

61. Noise buffers (Equipment or Assistive Technology)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

62. Use lined or grid paper for recording student work when only blank space is provided for other students (Learning and Assessment Formats)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

63. Provide Braille or large-print editions of learning materials and assessments (Learning and Assessment Formats)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

64. Provide voice-recorded learning materials and assessments (Learning and Assessment Formats)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

65. Change presentation format of written material (e.g., increase spacing between lines, reduce number of items per page, print one complete sentence per line) (Learning and Assessment Formats)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

66. Provide a separate copy of diagrams/tables needed for learning and assessments so student does not have to flip back and forth in materials (Learning and Assessment Formats)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

67. Use a computer for learning and assessment presentation (Learning and Assessment Formats)

Classroom Learning	<input type="radio"/> Yes	<input type="radio"/> No
Classroom Assessments	<input type="radio"/> Yes	<input type="radio"/> No
Large Scale Assessments (i.e. PARCC)	<input type="radio"/> Yes	<input type="radio"/> No

Additional accommodations offered to the selected SWSN not included in the checklist, you may enter here: _____

EDUCATOR DEMOGRAPHICS

Indicate your gender:

- Male
- Female
- Other _____

EDUCATOR DEMOGRAPHICS

Indicate your current role title:

- General Education Teacher
- Special Education Teacher
- Paraprofessional

EDUCATOR DEMOGRAPHICS

Indicate your ethnicity:

- European American
- African American
- Latino American
- Native American
- Asian American/Pacific Islander
- Other

EDUCATOR DEMOGRAPHICS

Indicate number of years you have been providing accommodations to Students with Special Needs (SWSNs):

EDUCATOR DEMOGRAPHICS

Indicate number of years working with SWSNs:

EDUCATOR DEMOGRAPHICS

Indicate number of years working in current role:

EDUCATOR DEMOGRAPHICS

Indicate highest degree you have earned:

- High School Diploma
- Associates
- Bachelor's Degree
- Master's Degree
- Doctorate