RUNNING HEAD: Effects of Accommodations

EFFECTS OF ACCOMMODATIONS WITH STUDENTS WHILE TEST-TAKING

by

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ABSTRACT

Following is a study that was done to research the effectiveness of accommodations for students that require them during testing periods. It will address the issue “Is there a difference on a standardized assessment measure between elementary students with disabilities and elementary students without disabilities?” and will include research findings that answer this question. The research that was conducted for this study used data from 2011 MAP scaled scores in Mathematics and Comm. Arts of a Title I Midwestern suburban elementary school. This data was retrieved from the Department of Elementary and Secondary Education site. Analysis was conducted using a t-Test and A Statistical Program (ASP) software. Findings from this specific research show that there is a significant difference between students who require accommodations during testing periods and students who do not require accommodations during testing periods. This research showed that the students test scores were significantly higher without the need of accommodations than those students who required the use of accommodations. Further research may need to be developed that analyzes how the term ‘accommodations’ is defined nation-wide.
INTRODUCTION

Background, Issues and Concerns.

There are an increasing number of students in our schools today who are requiring some kind of accommodation or modification in order to find more success within their classroom academic time. In this study, the focus will be on accommodations within a Midwestern suburban elementary school. This Title I school will be looked at in order to compare scores on a state mathematic measure of proficiency (MAP) of their 3rd-5th grade students. Within this school, the percentages of students with IEPs are gradually increasing annually. When a student has an IEP, there are certain accommodations for testing procedures included within it. The No Child Left Behind Act of 2001 (NCLB) requires students with disabilities to receive these accommodations. In the National Council on Measurement in Education it states that “excluding these students from assessment reporting would leave them outside the accountability systems that are intended to identify places and ways that education needs to be improved.” Scores will be examined to see if having accommodations help level the playing field for all students, whether with disabilities or without disabilities.

Practice under Investigation.

The practice under investigation is how effective accommodations are during testing times by reviewing 2011 MAP assessment scores of students with disabilities and those students without disabilities.
School Policy to be Informed by Study.

In an educational school setting, standardized tests are quite common. To make sure testing periods are administered fairly to all students within the school, conditions may be altered or adjusted in accordance to a student’s needs. This is done so as to improve the measurement of a student with disabilities knowledge or skill. The school policy to be informed by this study will be to address the school district’s comprehensive testing program.

Conceptual Underpinning.

With the passing of No Child Left Behind Act in 2001, schools are required to report scores on performance of students, including those with disabilities and holding schools accountable for AYP of these subgroups of students. This requirement of all states to be legally obligated to report scores is having an influence in future decisions of a school. In many states, test scores now influence decisions regarding student graduation and grade promotion, teacher salaries, and allocation of school resources (Practical Assessment). With test scores holding so much weight in decision-making processes, schools are wise to continually assess proper accommodations for these subgroups of students as the purpose behind accommodations is to increase performance of a student. Cawthon et al (2009) outlines in an illustrated model how the interactions of students with disabilities using accommodations during an assessment results in the effects of a test scores. With accommodations specifically correlating to the student’s characteristics and disabilities, there is a better outcome of this subgroup of students scoring higher scores on assessments.
Statement of the Problem.

There is a lack of knowledge on how students with disabilities and those without disabilities compare on assessment measures.

Purpose of the Study.

The purpose of this study is to see how MAP test scores compare between elementary students with disabilities vs. those without disabilities. This information will help show the effectiveness of the accommodations outlined within IEPs for testing purposes.

Research Question(s).

“Is there a difference on a standardized assessment measure between elementary students with disabilities and elementary students without disabilities?”

Null Hypothesis(es).

“There is no difference on a standardized assessment measure between elementary students with disabilities and elementary students without disabilities?”

Anticipated Benefits of the Study.

The result of this study will inform school officials if having accommodations through an IEP plan reflect any difference in scores on assessment measures for elementary students who require accommodations vs. those students who do not require accommodations.
Definition of Terms.

AYP (Adequate Yearly Progress) – This is a statewide accountability system mandated by the No Child Left Behind Act of 2001 which requires each state to ensure all schools and districts are making Adequate Yearly Progress. By calculating this progress on an annual basis, states determine if the students’ performance, within their school, is improving based on the established annual target, which is set up by each state individually and submitted for approval.

FAPE (Free Appropriate Public Education) – In accordance with Section 504 of the Rehabilitation Act of 1973, all school districts are required to providing a free appropriate public education to all students with disabilities, no matter what kind of disability or how severe the disability. Educational services are provided specifically designed to meet the needs of each school-age student with disabilities as adequately as a student who is non-disabled.

IDEA (Individuals with Disabilities Education Act) – This is a federal law of the United States which determines how states and public agencies are to provide services to children with disabilities. These services can be early intervention, special education, and other related services to these children. It specifically addresses the educational needs of children with disabilities, birth to age 18 or 21. IDEA was introduced into legislation in 1989 and signed into law in October, 1990. The major amendment to IDEA came in 2004, with the passing of the Individuals with Disabilities Education Improvement Act.
IEP (Individual Education Program) – In accordance with the Individuals with Disabilities Act, each child within a public school sector who is receiving services in special education must have an IEP. This is designed specifically to make sure the student’s individual needs are being looked at and met while in school through the cooperative efforts of teachers, parents, school administrators and other related services personnel. An IEP is a crucial component for ensuring a quality education for each child, regardless of their disability.

NCLB (No Child Left Behind) – With the passing of NCLB, it allows for more money to be given to school districts, it gives more control and flexibility to schools in using these resources, allowing them to use the resources where needed most, and holds school districts more accountable for results in a student’s learning.

Summary.

Within this elementary school, students with and without disabilities are included in general education classrooms. Having an IEP, students with disabilities have certain accommodations granted to them that are legal and binding services. These services may be in a variety of designs. Each accommodation is specifically designed for the student for the purpose of helping them better gain access to a public education that is in the least restrictive environment. During testing procedures on assessment measures, these students are also included, as required by law. This study will investigate the comparison of scores between these students with disabilities using accommodations versus those students without disabilities and not requiring the use of accommodations.
History of the classroom has evolved drastically over the centuries. In earlier days, a classroom could be exclusive to what students would be allowed to come through the doors. Students with special needs or disabilities could not only be kept out of schools by parents, they could be excluded from the school itself. Over the years, the school’s classroom has become legally bound to include any student, regardless of their ability or disability, to a free appropriate public education (FAPE). Not only is a student given the right to an education, legally they are to be included on testing assessments. Two very important components to seeing this happen are: Individuals with Disabilities Education Act (IDEA) and No Child Left Behind (NCLB).

With the passing of IDEA, which was reauthorized in 1997, it helped assure students would be given services to help meet their special needs in achieving the highest level of success within a classroom. IDEA is a law that requires students with disabilities to be included for participation within a general education classroom, which includes assessments. Turner, Baldwin, Kleinert, & Kearns reported that “recent shifts in federal policy address the need to measure the learning of all students. The reauthorized IDEA requires participation of all students, including those with disabilities, in state and district-wide assessments” (2000, p.69). The Department of Elementary and Secondary Education goes on further to say that “The participation of students with disabilities in assessments is required by the following federal and state laws: No Child Left Behind (NCLB) and Individuals with Disabilities Education Improvement Act of 2004 (IDEA) and Missouri policies” (DESE, Slide 5). Students with disabilities not only are to be included on assessments, they are to be given the necessary
accommodations that will be needed for them during assessments. According to Turner, Baldwin, Kleinert, & Kearns the “IDEA 1997 stipulates that a student’s Individualized Education Program (IEP) include a description of any accommodations that may be necessary for the student to participate fully in assessments” (2000, p.69). Because of what is written in IDEA, students no longer have limited access to a public school education but are guaranteed an education with no costs to their parents. Exclusion by any student is not an option by a school district.

The other important component is NCLB. This public law of 2001 was put into effect to make schools be more accountable in how they are educating all of their students and annually seeing what improvements, if any, are needed. Hall, Howerton, & Jones stated that “The NCLB act and the accountability movement in public education caused many states to develop criterion-referenced academic achievement tests” (2008, p.64). Assessments test scores are a method to use in assessing how a school is progressing on a yearly basis. AYP is the annual yearly progress that is reflected in either a positive trend or negative trend in how the specific school is meeting academic goals set by the state. Hall et al continues with “the impact of these tests has also increased as scores are being used to make high stakes decisions such as mandated intervention, retention, and graduation that impact students” (2008, p.64). With NCLB 2001, more scrutiny is placed on how assessments are given specifically in regards to students with disabilities. Students with disabilities, in the past, were excluded from taking assessment tests. Today, these students are required to be included as subgroups in assessments. NCLB even “requires the school district to report scores on the performance of these subgroups, including students with disabilities and holds schools accountable for the AYP of these subgroups of
students” (Cook, Eignor, Sawaki, Steinberg, & Cline, 2010, p.188). Without these subgroups of students included in the test scores, it leads to a distortion of scores and possibly overlooks areas of improvement needed within a specific school.

Because students with disabilities may not be able to perform within a classroom at the level of a general education student, they have an Individual Education Program (IEP) which is designed personally for them to receive services or accommodations that will better equip them to work closer to the level of expectations of a general education student. Sireci, in his Journal, says that “in many testing situations, accommodations to standard testing conditions are given to students with disabilities (SWD) to improve measurement of their knowledge, skills and abilities” (2008, p.81). Including accommodations within a student’s IEP for testing purposes possibly better allows a more valid interpretation of the assessment score. An IEP can also include an alternate assessment be put into place for a student with special needs, if it is something that will better assist the student with measuring skills being tested. Elliott, Compton & Roach refers to their importance with “alternate assessments are an important component of each state’s assessment system and, as such, are required to meet the federal regulations outlined” (2007, p.30). Accountability, though, continues to be a key factor in seeing that assessments given to students, regardless of accommodation, is done in a way that reflects scores of authenticity related to the student’s abilities and knowledge of material being tested.

Those students that participate in assessment tests and qualify for accommodations use these accommodations in a variety of ways. “Administration can include changes to the administration of the tests, such as extended time, changes to the test items, such as read aloud,
or changes to the student’s response, such as the use of a scribe” (Cawthon, Ho, Patel, Potvin & Trundt, 2009, p.1). It also goes on to talk about accommodations may “involve changes to the test presentation, setting, or response format” (p.1). Accommodations for students with disabilities are included so as to allow them more means of success on an assessment, without jeopardizing what is being measured. Researchers Finch, Barton, and Meyer elaborate on the role of an accommodation by looking into “if accommodations are found to negatively impact item-specific performance, this may suggest the accommodation was inappropriate” (2009, p.39). Regardless of what kind of accommodation is needed for a student, though, Kettler, Elliott, & Beddow state that “Implementation of testing accommodations for students with disabilities is a universally endorsed policy in all states” (2009, p.530). Students on all levels are to be included in assessments with or without accommodations.

Studies are now researching the validity of these assessments being used with both general education students and students with disabilities. Steinberg et al refers to testing accommodations being one of the ways used to ensure compliance with federal laws when they mention “Accommodations change the conditions under which the test is administered to minimize any difficulty by examinee…in order to accurately measure their performance” (2009, p.4). When accommodations are provided for students with disabilities, though, it brings up questions of whether the test is measured correctly, and if what is being measured is the same for students with vs. students without disabilities. If a student cannot complete an assessment without the administering of an accommodation, this limits their display of knowledge and skills and is a barrier to the validity of the assessment. But, by removal of this barrier and allowing the accommodation to be administered, according to Sireci (2008) leads to increasing test validity.
With all of the policies and laws in place today, the data shows that students, no matter their abilities or disabilities, are being included on assessment testing. Kato, Moen, & Thurlow states that “participation of students with disabilities in state assessments has increased greatly in the past 2 decades” (2009, p.28). Their inclusion helps with identifying needs, supports and values of what is being offered and provided to students. As a nation, schools need to continue to be proactive about this. Assessments can be a great way to indicate if what is being offered through the system of accommodations is actually ‘leveling the playing field’ for all students or is it not working. It also sets up analysis and research for what testing may look like in the future for our students.

Today, to ensure accountability of schools for the purposes of seeing that all students are included and that schools maintain specific criteria during testing using alternative assessment, a National Study on Alternate Assessments (NSAA) has been mandated specifically for this research. Cameto, Knokey, & Nagle (2009) reports on a law that calls for a study on ensuring accountability for students who are held to alternative achievement standards. Within this law of IDEA 2004, Cameto et al (2009) goes on to talk about how states determine eligibility criteria including which students are given alternative assessments, validity and reliability of assessments, how alternative assessment align with the State content standards, and their effectiveness in appropriately measuring student progress. Through this study, states are being looked at in how to ensure that alternative assessment testing for students nationally is being continually developed in a manner to assess students no matter what their level of cognitive disability. With continual data collection, reporting of data findings and analysis, the outlook of students alternative assessment testing will continue to be a positive progress.
RESEARCH METHODS

Research Design.

Student scores were researched on the MAP state standardized assessment measures from the 2010-2011 school year. The independent variable was the status of the students, either students with disabilities using accommodations or students without disabilities who do not use accommodations, during assessments. The dependent variable was the MAP scores of students. The two subject areas of Comm. Arts and Mathematics were researched.

Study Group Description.

A Midwestern suburban elementary school of approximately 500+ students, with the study group being specifically students in the 4th-5th grade level during the 2011 school year.

Data Collection and Instrumentation.

Data were collected through scores from the previous school year and was reviewed. Results were pulled from the DESE website of MAP scaled scores from those students with IEPs and students without IEPs.

Statistical Analysis Methods.

A comparative method of a t-Test result was used to show if there were any differences between these groups of students with disabilities using accommodations and students without disabilities.
**FINDINGS**

*Table 1*

t-Test Analysis Results: 2011 MAP Mathematics Scores

<table>
<thead>
<tr>
<th>Source</th>
<th>Mean</th>
<th>$S^2$</th>
<th>Mean D</th>
<th>$t$-Test</th>
<th>df</th>
<th>$p$-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Scores without Accommodations (n=116)</td>
<td>644.16</td>
<td>1415.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student Scores with Accommodations (n=19)</td>
<td>614.83</td>
<td>727.2</td>
<td>29.3</td>
<td>3.18</td>
<td>132</td>
<td>0.002</td>
</tr>
</tbody>
</table>

Note: Significant when $p$ <= 0.25

In the above table, a Title I elementary school was looked at to see if there were any differences on MAP scores of students who needed accommodations while testing versus students who did not use accommodations. Specifically looked at were the 4th-5th grade classes in this elementary school from the 2011 school year. Out of the approximately 135 students from this elementary school, the students were placed into 2 groups. Group 1 consisted of the 4th-5th grade elementary students who did not require use of accommodations while taking the MAP Math tests. Group 2 consisted of the 4th-5th grade elementary students who did require use of accommodations while taking the MAP Math tests. The numbers were analyzed through a $t$-Test with the following results. There were 116 students (86%) in Group 1 representing those who did not require use of testing accommodations. Their scores had a Mean of 644.16. There were 19 students (14%) in Group 2 representing those who did require use of testing accommodations. Their scores had a Mean of 614.83. When looking at the difference of these 2 groups, we get the Mean D of 29.3. The $t$-test resulted in 3.18 and the $df$ was 132.
Level for this t-test was 0.25. Using the Alpha Level, we see that the p-value is less than 0.25, as the p-value is 0.002. With these factors, we know that the Null Hypothesis is rejected. There is a significant difference in scores of those students who require the use of accommodations when taking tests versus those students who do not require the use of accommodations when taking tests. Students who do not require testing accommodations recorded a significantly higher Mean score than those students who do require testing accommodations.
In the Table 2, a Title I elementary school was looked at to see if there were any differences on MAP scores of students who needed accommodations while testing in Comm. Arts versus students who did not use accommodations while taking the same test. Specifically the classes looked at were the 4th-5th graders in this elementary school from the 2011 school year. Out of the approximately 135 students from this elementary school, the students were placed into 2 groups. Group 1 consisted of the 4th-5th grade elementary students who did not require use of accommodations while taking the MAP Comm. Art tests. Group 2 consisted of the 4th-5th grade elementary students who did require use of accommodations while taking the MAP Comm. Art tests. The numbers were analyzed through a t-Test with the following results. There were 116 students (86%) in Group 1 representing those who did not require use of testing accommodations. Their scores had a Mean of 657.93. There were 18 students (14%) in Group 2 representing those who did require use of testing accommodations. Their scores had a Mean of 617.5. When looking at the difference of these 2 groups, we get the Mean D of 40.4. The t-test
resulted in 4.81 and the \( df \) was 132. The Alpha Level for this t-test was 0.25. Using the Alpha Level, we see that the p-value is less than 0.25, as the p-value is 0.00004. With these factors, we know that the Null Hypothesis is rejected. There is a significant difference in scores of those students who require the use of accommodations when taking tests versus those students who do not require the use of accommodations when taking tests. Students who do not require testing accommodations recorded a significantly higher Mean score on their MAP Comm. Arts tests than those students who do require testing accommodations. These findings from these 2 Tables would seem to suggest that more research needs to be developed in relation to whether those students who do require accommodations are being provided with adequate ones based on test scores.
CONCLUSIONS AND RECOMMENDATIONS

Based on the findings of this study, the research answers the question posed “Is there a difference on a standardized assessment measure between elementary students with disabilities and elementary students without disabilities?” The findings reflected a significant difference in the test scores of these two groups of students. The scores of the students with disabilities were significantly lower than the scores of students without disabilities. Results were taken from 2011 MAP scores in both Math and Comm. Arts of 4th-5th graders. The scaled scores were then analyzed using a t-Test with data reflecting this difference. In the MAP scores of those taking the Math assessment test, the scores showed a significant difference. Also, the MAP scores of those taking the Comm. Arts assessment test, the scores showed a significant difference. By law, accommodations are allowed for students with disabilities who qualify for such services. These accommodations during testing periods can vary greatly, but they are to be specifically designed for ensuring that they have a greater opportunity of being just as successful in their learning as those without disabilities.

This study showed that 19% of students within this Title I elementary required the use of accommodations during their testing. Accommodations can be in the form of read-aloud, extra time or may have even been in the form of an alternative assessment test; yet, whatever the accommodation was for these students, the findings showed that they scored significantly lower. With the ability of having access to accommodations during assessment times, there still seems to reflect data numbers differing greatly in these MAP scores.

These findings would show that continual research needs to be done showcasing accommodations and their effects during testing periods with students. If the laws are set to
make sure that students are getting all their accommodations necessary to enable their success, this study would show that more needs to be done. Laws have been set up specifically to include students with disabilities in being part of the head-count when testing procedures are done. With these laws, their grades are to be reported and included along with those students taking the same testing material.

Overall, with the inception and passing of IDEA and NCLB, there have been great leaps in seeing that all students are part of the educational and assessment process alongside of their peers. The history of this research shows this. Students no longer are kept away from an education based on their disabilities. Research needs to continue, though, in regards to holding schools and school districts accountable in seeing that students receive their accommodations and services guaranteed to them. From this study, it would also seem that more research needs to be conducted to validate the testing accommodations and ensuring they match appropriately to a student’s needs, the validity of these tests being given to students with disabilities, and the effectiveness of these alternate assessments measuring progress of the individual test-taker.
REFERENCES


