

Technical Report # 09-05

Analysis of Teacher Accommodation Recommendations for a Large-Scale Test

Gina Mariano

Gerald Tindal

University of Oregon

Dianna Carrizales

Brad Lenhardt

Oregon Department of Education



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5262 University of Oregon • Eugene, OR 97403-5262

Phone: 541-346-3535 • Fax: 541-346-5689

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Abstract and Organization of Report

Abstract

The purpose of this study was to examine teachers' accommodation recommendations for students during large-scale tests using two different methods to assist teachers with the decision-making process. Then we present descriptive data on teacher recommended accommodations for two case students who had presenting data to warrant changes in the manner in which they should be tested. The most important variables we addressed in the accommodations teachers recommended as the (a) number of them, (b) their level of detail, and (c) their variety. The outcomes from the data support the need for increased accommodation training and further development of tools to aide teachers in the decision-making process.

Organization of Report

The report is organized into four sections: introduction, methods, results, and discussion. Finally, we include references and appendices so this study can be placed in a tradition of research and replicated in its process. A note about the methods: We use two fictitious cases—Sarah and Daniel— to control for many of the variables confounding research on accommodations (differences among students, settings, and testing programs). Therefore, each teacher had two sets of scores (number, detail, and variety), which in turn were rated by two judges.

A sub-report from the Accommodation Decision-making Support System (ADSS) includes an analysis of a participation decision in which teachers judged large-scale test items from three domains: (a) grade level standards-based items (GL), (b) items for use with the Alternate Assessment judged against Modified Achievement Standards (two percent items [TP]), and (c) items for use with the Alternate Assessment judges against Alternate Achievement Standards (one percent items [OP]). Presently, this component of the ADSS is only a placeholder for potential use later in helping teachers make this decision should Oregon adopt this option. These items were judged (by two qualified teachers with endorsements in special education) in terms of alignment to the standards, comparative difficulty, and issues in bias and sensitivity. The results from both judges are reported; further reviews are needed by content teachers.

Introduction

The importance of teachers' decision-making regarding students' accommodations in large-scale assessments has increasingly become an area of interest and concern. Teachers play a primary role in recommending accommodations for students, both for instruction and assessment, yet identifying appropriate accommodations for students has often proven to be difficult.

Teacher training on accommodations is an area that is being studied by researchers across the country. Decisions regarding accommodations for students in large-scale assessments are often left on the shoulders of the teacher. A study by Ketterlin-Geller, Alonzo, Braun-Monegan & Tindal (2007) found that some teachers make accommodation decisions in isolation, without support or guidance from an IEP team. As a consequence, teachers often have difficulty recommending appropriate accommodations for students. For example, Helwig & Tindal (2003) found teachers were no more successful than chance at predicting which students would benefit from a particular accommodation. The research also indicates that teachers tend to over-recommend accommodations (Fuchs, Fuchs, Eaton, Hamlett, Binkley, & Crouch, 2000; Fuchs, Fuchs, Eaton, Hamlett & Karns, 2000; Helwig & Tidal, 2003). Yet, Shriner & Destefano (2003) found that training may influence (improve) teachers' accommodation decisions; the training also can significantly increase their confidence in making accommodation decisions (DeStefano, Shriner, & Lloyd, 2001).

In light of this information, tools to aide teachers in making decisions about accommodation recommendations are being developed and investigated. Fuchs & Fuchs (2001) introduced the Dynamic Assessment of Test Accommodations (DATA). This tool uses alternate forms of curriculum-based measures in math computations, concepts, application, problem solving, and reading, under varying conditions such as extended time, standard time, calculator, adult reading and student reading. Performance comparisons can then be made by teachers to determine whether there was an increase in students' test scores with accommodations. This information can be used to aide teachers in the accommodation decision-making process. The study found differences between teacher decisions regarding benefit of accommodations and the actual benefit of accommodations, thus supporting the need for tools to aide teachers in making accommodations decisions.

Tindal, Lee, & Ketterlin-Geller (2008) developed the accommodation station, an Internet website, in which teachers respond to online survey questions about their students' skills and abilities, including instructional strategies and accommodations employed with students. In addition, students take a series of reading and math measures. Teachers were asked to rate four areas in making recommendations to accommodate a student with disabilities: (a) ratings of student proficiency in academic areas (1=Not at all proficient – 5=Very highly proficient), (b) judgments about the ease with which students can engage in various test-taking related activities (1=Not easy – 3=Very easy), (c) estimates of benefit from receiving an accommodation in mathematics (1=No benefit – 4=Strong benefit), (d) the provision of various accommodations (1=Never - 5=Always). Students took a series of reading and math measures in order to help teachers determine the degree to which test performance in math is a function of reading access skills or math target skills. This study found teachers' perceptions of student potential benefits of test accommodations to be unreliable. They also found that teachers were inconsistent with providing various accommodations. Both the DATA tool and the Accommodation Station website are examples of methods that increase the information available to teachers to aide in making accommodation recommendations.

If accommodations recommendations for large-scale assessment are to be individualized for each student, a cookie cutter approach based on diagnosis is not the answer. Development of tools to aide teachers and IEP team members in the decision-making process by increasing information available using assessments and other forms of objective data has the potential to help increase reliability and consistency when making accommodation recommendations.

The purpose of this technical report is to compare teachers' accommodation recommendations using two different models to aide in decision-making: the accommodations manual written by the Council of Chief State School officers (CCSSO) and the Assessment Decision Support System (ADSS) website developed under the EAG with Oregon and described in this study. In this report, we describe the two different models, the training process used for each model along with the data collection process and analysis, the results, and finally a discussion of important issues. In this technical report, we primarily focus teachers' accommodation recommendations and the rationale for each accommodation recommendation, addressing three dependent variables: their frequency, level of detail, and variety.

Methods

In this section, we describe the setting and subjects, measurement development, research procedures, and data analyses.

Setting and Participants

The overall goal of this study was to investigate the differences in accommodation recommendations and rationales for these accommodations based on the two models: one group utilized the Assessment Decision-making Support System (ADSS), an online decision-making model that helps IEP teams determine which testing accommodations are appropriate for individual students with disabilities; the other group utilized accommodations manual (CCSSO). Thirty-eight special education teachers working in elementary, middle, and high schools in three states including the Pacific Northwest and Southeastern United States participated in this study.

Four participants came from Alaska, thirty-two from Oregon, and two from West Virginia. Thirty-three participants were female, and five were male. Twenty-three participants identified as special education teachers, including resource room, life skills, and Learning Resource Center teachers. Eight participants identified as learning specialists. Three participants identified as teachers, without further specification. One participant identified as each of the following: special education facilitator, special education teacher leader, evaluator, and diagnostician. Eighteen participants worked primarily in elementary grades, including those who work in Kindergarten through Grade 8. Eleven participants worked primarily in middle and high school grades. Nine participants worked across all grade levels. Thirty-six participants identified as white; one participant identified herself as Lebanese; and one participant did not indicate an ethnicity. Participants represented over a dozen school districts in rural, suburban, and urban areas.

Teachers were randomly assigned to either the comparator Group C (manual) or experimental Group A (ADSS website). Members of both groups participated in a Webinar, which consisted of participating in a phone conference, as well as, accessing a website where the study procedures and materials were explained. The Group C Webinar provided an explanation of the Accommodations Manual and detailed description of the contents of the manual. The Group A Webinar provided access to the ADSS website and a training manual for navigating the

website. Following each Webinar, materials were distributed via email to both groups. Group C received a copy of the Accommodations Manual and instructions for completing the study. Group A received an instruction manual for navigating the ADSS website and instructions for completing the study.

The two training materials varied in the amount of detail. The ADSS training manual was 11 pages in length, provides screen shots of the website and instructions for navigating the website. It also provided brief explanations of each section of the website. In contrast, the Accommodations Manual was 46 pages in length, provided explains of what accommodations are, accommodations categories, provided examples of accommodations during instruction and assessment, as well as a description and examples of each of the four categories of accommodations: presentation, response, setting, and time and scheduling. Participants in Group C were instructed during the webinar to focus on certain areas in manual such as the examples and descriptions of the four categories.

In general, participants of both groups received the same two brief profiles of students: Sarah and Daniel. Group A received an additional page to each profile that contained information that would be available to a teacher utilizing the ADSS website to aide in decision-making; such as IEP members' perceptions of student and student scores on short reading and writing assessment. Teachers in both groups were asked to recommend accommodations for these students during a large-scale mathematics assessment and to provide an explanation for each accommodation recommended. Participants in Group C were provided with the manual as their only tool.

ADSS Website Development

The ADSS website consisted of a home screen welcoming participants to the website and 10 different headers or sections that teachers would select and complete in order to help with decision-making regarding appropriate accommodations for students.

The **materials** section consisted of research reports that teachers could read regarding students and accommodations.

The **students** section consisted of a page where teachers could enter student names and add them to the website roster.

The **participation** section consisted of math items. Teachers select the items they feel are most appropriate for the student.

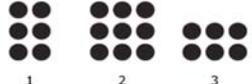
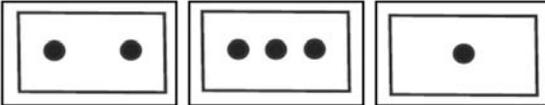
Assessment Decision Support System finalydr Logout
Home 4/4/2009 10:40 am

Home Materials Students **Participation** Perceptions Skills Accommodations Training Reports Account

Test Participation

For each set, select the item that you believe is most appropriate for each student. The most appropriate item is not necessarily one that the student can always answer correctly. It should be the closest match for the student's skills and abilities, including access and prerequisite skills. Each set contains a varying number of items, make your selection from the choices displayed.

Focal Point: Number and Operations and Algebra
Objective: Represent situations using models of multiplication and division (e.g., equal-sized groups, arrays, area models, and equal "jumps" on number lines for multiplication, as well as successive subtraction, partitioning, and sharing for division).

	<p>What is 7 times 472?</p> <p>A. 4304 B. 3304 C. 4720</p>	<p>Which groups are equal?</p>  <p>1 2 3</p> <p>A. 1 and 3 B. 2 and 3 C. 1 and 2</p>	<p>Which box has three circles?</p> 
mari, gina			

Viewing #1 of 15

The **perceptions** section is a 24 item survey where teachers rate their perceptions of the student on a 1-5 scale (1=Not at all proficient – 5=Very proficient) in areas of academic proficiency, task proficiency, and assistance in the classroom.

Assessment Decision Support System finalydr Logout
Home 4/4/2009 10:41 am

Home Materials Students Participation **Perceptions** Skills Accommodations Training Reports Account

Teacher Perceptions

The IEP team is to complete a 24-item survey with each based on a 5-point scale from 1 to 5 point scale. DNK (Do Not Know) is also an option. The survey addresses three broad areas: Student Academic Proficiency, Student Task Proficiency, and Assistance in Classroom Instruction.

The intent is to ascertain a student's needs and typical forms of assistance within the classroom. This information helps to highlight the specific accommodations so that the student will be appropriately accommodated on the standardized assessment. An important dimension is the degree to which individuals on the IEP team agree in their perceptions. In this web site, teachers make individual judgments about students and then compare them with each other, looking at areas in which there is agreement and disagreement.

To begin, click on the survey link next to each student name to enter your judgments. You can copy and paste this same link into an email message to send to other members of the IEP in order to add their judgments. You may also try the 'email format' of this link to automatically create an email (not supported on all systems).

Student Name	Survey Link	Surveys completed
mari, gina	http://testacomm.com/survey.php?sid=49&hash=df8ec1 email format	

The **skills** section included a brief math measure and two brief reading measures to assess student skills in math and reading. Students directly took these assessments on the computer.

8 + 32

44

38

40

Next 

The **accommodations** section lists accommodations grouped by categories that a teacher can select for the student in order to help identify and recommend appropriate accommodations.

Assessment Decision Support System finalydr Logout
Home 4/4/2009 10:45 am

Home Materials Students Participation Perceptions Skills **Accommodations** Training Reports

Student Accommodations > gina mari Account

Using the menus below, select all accommodations that would benefit this student. To reorder selected accommodations, use the arrows to move an accommodation to the top, up one, down one, or to the bottom.

Category: Responses

Type:

- [Add](#) Responses: Tape record answers and then transcribed in response sheet by staff [training](#)
- [Add](#) Responses: Use #2 pencils adapted in size and grip [training](#)
- [Add](#) Responses: Allow student to mark answers on test booklet and then transcribed to answer sheet by staff [training](#)
- [Add](#) Responses: Allow student to dictate multiple-choice answers to scribe [training](#)
- [Add](#) Responses: Use scribe to translate student's oral responses from a language other than English into test booklet or answer document [training](#)
- [Add](#) Responses: Use scribe to write oral responses or fill in bubbles [training](#)
- [Add](#) Responses: Use scribe to write oral responses to constructed response tasks [training](#)
- [Add](#) Responses: Student signs or points to alternate responses [training](#)
- [Add](#) Responses: Allow student to write/underline directions [training](#)

Selected Accommodations:

The **training** section described accommodations by category, listing guiding principles to help with choosing appropriate accommodations, as well as examples of accommodations.

Content Area	Status
■ Participation - Accommodation Station Overview	✓
■ Assistive Devices Introduction	✓
■ Assistive Devices Practical Considerations	✓
■ Presentation Introduction	✓
■ Read Aloud Practical Considerations	✓
■ ELL Practical Considerations	✓
■ Low Incidence Practical Considerations	✓
■ Materials Practical Considerations	✓
■ Interactions Practical Considerations	✓
■ Responses Introduction	✓
■ Responses Practical Considerations	✓
■ Setting Introduction	✓
■ Setting Practical Considerations	✓
■ Time and Schedule Introduction	✓
■ Time and Schedule Practical Considerations	✓

The **reports** section compiled all of the information gathered from the teacher and student information into a brief report.

Student Report for Penny Charleston (Grade 3)
Edison Elementary (Date 10/11/2008, 8:51 am)

IEP Team Members Responding

- Gerald Tindal
- Charles Vander
- Trisha Bell

Test Participation

Number of items judged appropriate for each type of test option:

- 4 Standard Test
- 4 Alternate Assessment - Modified Standards
- 7 Alternate Assessment - Alternate Standards

Areas of Concern

Below each perception item is the following: Value selected : Count of respondents

Student Academic Proficiency
Not at all proficient, Not very proficient, Fairly proficient, Highly proficient, Very proficient, OR Do not know

No Student Academic Proficiency items were scored Not at all proficient, or Not very proficient

Student Task Proficiency
Not at all proficient, Not very proficient, Fairly proficient, Highly proficient, Very proficient, OR Do not know

- Check for errors
Not very proficient : 1 person Fairly proficient : 2 people
- Follow directions
Not at all proficient : 3 people
- Follow sequential steps
Not at all proficient : 3 people
- Participate in whole class activities
Not very proficient : 3 people
- Stay on task
Not at all proficient : 3 people
- Work independently for 45-60 minutes
Not at all proficient : 2 people Not very proficient : 1 person

Assistance in the Classroom Instruction
Never, Occasionally, Frequently, Very often, All the time, OR Do not know

- Administer tasks in multiple short testing sessions
Very often : 2 people All the time : 1 person
- Allow student to work alone in a separate testing location
Very often : 2 people All the time : 1 person
- Extend length of work sessions
Very often : 2 people All the time : 1 person
- Pace the student with verbal prompts
Very often : 3 people
- Read problems and directions aloud
Very often : 2 people All the time : 1 person
- Reformat the test to include fewer numbers of questions per page
All the time : 3 people
- Use masks and screens to block out information
Very often : 2 people All the time : 1 person

Skill Areas	Scores
Maze Vocabulary	18 / 20 words correct
Silent Reading/Comprehension	127 wpm (1 / 3 questions correct)
Math Computation	7 / 10 problems correct

Helpful Accommodations

- Setting: Move child's space within the room
- Presentation - ELL Translation : Use side-by-side tests in Spanish/English; Russian/English of math, science or social studies
- Time and Scheduling: Divide testing over several days
- Assistive Devices: Audiotape the directions
- Assistive Devices: Use masks or markers to maintain place
- Time and Scheduling: Use extended time
- Presentation - ELL Translation : Paraphrase the directions (only)
- Assistive Devices: Use a device to screen out extraneous noises
- Setting: Test in small group in separate but familiar setting
- Presentation - ELL Translation : Provide assessment directions in student's primary language

An **account** section listed teacher demographic information and allowed password changes to be made.

Measurement/Instrument Development

To examine teachers' responses on large-scale test accommodations, we asked teachers to read the two student profiles and to recommend accommodations for each of these students during a large-scale mathematics assessment and to provide a brief explanation why each accommodation was selected. Accommodation recommendation forms were provided to the teachers. The sheets contained nine areas for accommodation recommendations, each page containing three areas for accommodation recommendations were provided to participants. However, participants could recommend more than nine accommodations if they felt the accommodations were appropriate.

Recommendations were scored using a 0-5 rating scale based on the *level of detail provided* in the rationale for the accommodation: More specific details equals a higher score, less specific details equal a lower score. The scoring criterion for the 0-5 detail rating scale was as follows:

- 0 = No Accommodation was listed (no accommodation was recommended for the student).
- 1= Accommodation was listed or No Specific Accommodation was listed (either an accommodation was recommended with no other information/rationale/explanation OR a description was provided that was not an identified/designated accommodation, but the description was similar to an accommodation).
- 2= Accommodation was listed and students' diagnosis was referenced or no behavior/reason was listed and paragraph was not specific to student (either an accommodation was recommended and also included the students diagnosis with no other information OR an accommodation was recommended and the explanation was not specific to the student, just a general statement).
- 3= Accommodation is listed and specific behavior from student profile was referenced or no behavior listed, only reason for the accommodation (either an accommodation was recommended and a specific behavior was included in the rationale OR an accommodation was recommended and reason for the accommodation was included, but no specific behavior was referenced).
- 4= Accommodation is listed and specific behavior from student profile was referenced and a reason why the behavior is influential (an accommodation was recommended and a

specific behavior was referenced and a reason why this behavior is relevant is included in the rationale).

5= A rationale is provided that includes and rises above all four previous components to include student and test specific contexts.

In addition to rating detail, accommodations were classified into one of seven categories:

Presentation accommodations (P)

Response accommodations (R)

Setting accommodations (S)

Time & Scheduling accommodations (TS)

Assistive Devices (AD)

Not an Accommodation (NA): This category was used when teachers recommended an accommodation that was not a recognized accommodation.

Not a Specific Accommodation (NSA): This category was used when teachers provided a description that was not an identified/designated accommodation, but the description was similar to an accommodation

In addition, accommodations were identified by specific type (ex. Human Reader [HR]).

Two trained scorers were used to score the accommodation recommendation forms.

Design and Operational Procedures

The following materials for the Assessment Decision-making Support System (ADSS) study were drafted and sent to partner states: sample state department of education recruitment letter, sample teacher information form, informed consent letter, Webinar agenda, accommodations manual or ADSS training manual, and blank accommodation recommendation forms. Data was collected between October 2008 and December 2008 via fax and/or email.

Data Preparation and Analysis

Descriptive statistics were analyzed for each category of recommended accommodations and scored as denoted by the 0-5 detail rating scale. We compared scores for the teachers who

had been assigned to each of the groups to identify significant differences. Additionally, we compared the variance in accommodation categories recommended by each group.

Results

Descriptive statistics are reported for teachers' accommodation recommendations across the seven accommodations categories based on the profiles of two students. The total number of accommodations recommended and total score is also reported in Tables 7, 8, 11, and 12.

When the **average score of accommodations** was analyzed (rather than the sum of accommodations which is biased toward those teachers who recommended more accommodations), no significant differences appeared between the two groups. For Judge G, the AS treatment group summed across the average of both cases was 6.3 (SD=.97) overall while the Manual group averaged 6.5 (SD=1.07) with a test of differences not significant, ($F=.097$ [37df], $p=.76$). For Judge K, the differences in this average was almost significant for one case Sarah ($F=2.76$ [37 df], $p=.11$).

When the **type** of accommodations was compared between the treatment group (Web-based Accommodation Station) and the control group (Paper Manual), there was a significant difference in the number of Presentation recommendations (*Mann-Whitney U*=40.5 $p=.007$). These results are based on only 1 rater (G) though the results replicate with the other rater (K). These results also appear when using another test of differences (Kolmogorov-Smirnov $Z = 1.35$, $p=.052$ with Judge K).

Accommodation Recommendations for Sarah

Group A recommended 21 Presentation accommodations; 5 Response accommodations; 21 setting accommodations; 21 Time & Scheduling accommodations; 3 Not specific accommodations; and 3 Not accommodations. Total number of accommodations recommended was 79. Group C recommended 15 Presentation accommodations; 11 Response accommodations; 11 setting accommodations; 15 Time & Scheduling accommodations; 3 Not specific accommodations; and 1 Not accommodations. Total number of accommodation recommended was 56.

	Group A	Group C
Presentation	21	15
Response	5	11
Setting	21	11
Time & Scheduling	21	15
Not specific	3	3
<u>Not accommodations</u>	<u>3</u>	<u>1</u>
Totals	79	56

Accommodation Recommendations for Daniel

Group A recommended 19 Presentation accommodations; 6 Response accommodations; 20 setting accommodations; 20 Time & Scheduling accommodations; 5 Not specific accommodations; and 3 Not accommodations. Total number of accommodations recommended was 82. Group C recommended 11 Presentation accommodations; 11 Response accommodations; 15 setting accommodations; 14 Time & Scheduling accommodations; 1 Not specific accommodations; and 3 Not accommodations. Total number of accommodations recommended was 55.

	Group A	Group C
Presentation	19	11
Response	6	11
Setting	20	15
Time & Scheduling	20	14
Not specific	5	1
<u>Not accommodations</u>	<u>3</u>	<u>3</u>
Total	82	55

Total Accommodations Recommended

A paired-samples t-test was conducted and found there were no significant differences between the number of accommodations recommended for the Daniel or Sarah profiles, $t(-.913) = 37, p > .367$. Therefore, both student profiles were calculated together in order to analyze the total number of accommodations recommended. An independent samples t-test was conducted and found there were no significant differences between the number of accommodations recommended for Group A and Group C, $t(779) = 36, p > .441$. Group A overall recommended more total accommodations than Group C: 161 vs 111. Group A recommended 79 accommodations for Sarah vs Group C recommended 56. Group A recommended 82 accommodations for Daniel vs Group C recommended 55.

Interpretations from the ADSS Analysis

The average number of accommodations was very close for both the A group (ADSS) and the C group (manual). Both groups recommended about 10 accommodations. These similarities may be due to similarities in presentation of the manual and ADSS website. Material presentation on the ADSS website was visually similar to the manual, meaning the website read similar to an online manual. Future development of online training may want to change the format to help differentiate it from a traditional manual. See Table 1.

A formal analysis of variance (ANOVA) was conducted on the total number of accommodations: The differences were not significant ($F=.607, 1,36 (df), p=.441$). The effect of the treatment accounted for only .17 of the variance. These similarities may again be due to similarities in the way material was presented to both groups. In order to see an increase in variance, there may need to be an increase in variance between the presented materials in order for variance to appear in findings. See Table 2.

The average total score was 40 for the A group and 35 the C group. This score was out of a possible 45. This score was calculated by multiplying the total number of accommodations recommended (9) by the maximum total score for each accommodation recommended based on the 0-5 detail rating score: $9 (\text{accommodations}) \times 5 (\text{detail rating score}) = 45$. See Table 3. A formal analysis of variance (ANOVA) was conducted on the total score: The differences were

not significant ($F=2.18$, 1,36 (df), $p=.149$). The effect of the treatment accounted for .57 of the variance. See Table 4.

The average amount of time in minutes spent completing each student profile was 90 minutes for the A group and 104 minutes for the C group. See Table 5. A formal analysis of variance (ANOVA) was conducted on the average amount of time spent completing each student profile: The differences were not significant ($F=.509$, 1,28 (df), $p=.481$). See Table 6.

The average number of accommodations recommended for the Sarah student profile for both the A group and the C group are broken down into seven categories as follows: 36 Presentation accommodations (SD=1.3); 16 Response accommodations (SD=.96); 32 Setting accommodations (SD=.47); 36 Time & Scheduling accommodations (SD=.50); 5 Assistive Devices (SD=.44); 6 Not a Specific Accommodation (SD=.82); 4 Not an Accommodation (SD=.82). See Table 7.

Total Accommodations for Sarah both Group A & Group C

Presentation	36
Response	16
Setting	32
Time & Scheduling	36
Assistive Devices	5
Not specific	6
<u>Not accommodations</u>	<u>4</u>
Total	135

The average number of accommodations recommended for the Daniel student profile for both the A group and the C group are broken down into seven categories as follows: 30 Presentation accommodations (SD=1.1); 17 Response accommodations (SD=.79); 35 Setting accommodations (SD=.80); 34 Time & Scheduling accommodations (SD=.88); 9 Assistive Devices (SD=.66); 6 Not a Specific Accommodation (SD=1.0); 6 Not an Accommodation (SD=1.2). See Table 8.

Total Accommodations for Daniel both Group A & Group C

Presentation	30
Response	17
Setting	35
Time & Scheduling	34
Assistive Devices	9
Not specific	6
<u>Not accommodations</u>	<u>6</u>
Total	137

Accommodation Recommendations and Analysis

The average number of accommodations recommended for the Sarah student profile for both the A group and the C group are broken down into seven categories. Group A chose more Presentation, Setting, and Time & Scheduling accommodations for Sarah than Group C. However, Group C chose more Response accommodations than Group A. These are important differences to note because both groups recommended accommodations for the same student—Sarah. These variances in the categories of accommodations recommended may be due to the difference in training materials provided: access to the ADSS website with additional information regarding the students’ academic performance vs. not having access to this additional information. It is also important to note that even though this additional information was provided, both groups made the same amount of NSA accommodations (Not Specific Accommodations). This is important because these are not identified accommodations, even though both groups were given training information, via accommodations manual or ADSS website, both with specific accommodations listed and examples, teachers still recommended accommodations for Sarah that were not labeled as accommodations, they merely described strategies that they would implement, but did not actually identify an accommodation by name. Also, Group A recommended more NA accommodations (Not an Accommodation) than Group C. This difference is interesting because Group A was provided more specific information about Sarah and access to the ADSS website, yet recommended more accommodations that were not accommodations at all. See Table 9.

The average number of accommodations recommended for the Daniel student profile for both the A group and the C group are broken down into seven categories. Group A chose more Presentation, Setting, and Time & Scheduling accommodations for Daniel than Group C. However, Group C chose more Response accommodations than Group A. This is a similar trend to what we saw for the Sarah profile. Again, the variances in the categories of accommodations recommended may be due to the differences in training materials provided. The similarity between the categories chosen for Sarah and Daniel by both groups may also be due to similarities in the training materials provided. Group A recommended more NSA accommodations (Not Specific Accommodations). Both groups recommended the same amount of NA accommodations (Not an Accommodation). This is again an interesting finding because teachers are recommending accommodations for large-scale testing that are not actual accommodations. See Table 10.

The average score for accommodations for the Sarah student profile for both the A group and the C group are broken down into nine separate scores, one score for each accommodation recommended. The highest scores for both groups were seen in scores 1 through 6 because most teachers recommended approximately six accommodations for Sarah and Daniel. Fewer teachers recommended more than six accommodations. Nine was the highest number of accommodations recommended by participants in either group. See Table 11. The average score for accommodations recommended for the Daniel student profile for both the A group and the C group are also broken down into nine separate scores, with the highest scores for both groups seen in scores 1 through 6. See Table 12.

There were 22 participants in A group. The total number of participants who recommended three accommodations for Sarah was 22. The number of teachers who recommended four or more accommodations for Sarah decreased as the number of accommodations increased. This could be due to teachers feeling that more than four accommodations were not necessary for Sarah during a large-scale test. There were 16 participants in the C group. The total number of participants who recommended three accommodations for Sarah was 16. Similarly to the A group, the number of teachers who recommended 4 or more accommodations for Sarah decreased as the number of accommodations increased. See Table 13.

There were 22 participants in the A group. The total number of participants who recommended three accommodations for Daniel was 22. Similar to the accommodation recommendations for Sarah, the number of teachers who recommended four or more accommodations for Daniel decreased as the number of accommodations increased. This gain could be due to teachers feeling that more than four accommodations were not necessary during a large-scale test. There were 16 participants in the C group. The total number of participants who recommended three accommodations for Daniel was 16. Similarly to the A group, the number of teachers who recommended four or more accommodations for Daniel decreased as the number of accommodations increased. See Table 14.

Sarah Student Profile by Type of Accommodation

The specific accommodations are specific types of accommodations within the seven large categories of accommodations. The seven categories of accommodations are: Presentation, Response, Setting, Time & Scheduling, NA (Not an Accommodation), NSA (Not a Specific Accommodation), and Assistive Devices. Examples of specific accommodations include testing a student in a separate location (a specific type of Setting accommodation) and extended time (a specific type of Time & Scheduling accommodation). See Appendix K.

The specific accommodations section one are the specific types of accommodations recommended first for the Sarah student profile for both the A group and the C group. The A group recommended twice as many Presentation accommodations as the C group. Both groups recommended Presentation, Setting and Time & Scheduling accommodations. See Table 15.

The specific accommodations section two are the specific accommodations recommended second for the Sarah student profile for both the A group and the C group. Similarly to the previous listing, Presentation, Setting and Time & Scheduling accommodations were recommended by both groups. The A group recommended more accommodations (12 vs. 8) than the C group. See Table 16.

The specific accommodations section three are the specific accommodations recommended third for the Sarah student profile for both the A group and the C group. The categories were represented similarly in both groups, even though A group recommended more

accommodations. This could be due to more teachers choosing the same types of accommodations. See Table 17.

The specific accommodations section four are the specific accommodations recommended fourth for the Sarah student profile for both the A group and the C group. The A group recommended twice the number of accommodations as the C group. The A group recommended more Presentation and Time & Scheduling accommodations. See Table 18.

The specific accommodations section five are the specific accommodations recommended fifth for the Sarah student profile for both the A group and the C group. The C group did not recommend any Setting accommodations, this differed from the A group. More Time & scheduling and Presentation accommodations were recommended by A group. See Table 19.

The specific accommodations section six are the specific accommodations recommended sixth for the Sarah student profile for both the A group and the C group. A group did not recommend any Response accommodations; this differed from the C group. More Time & Scheduling accommodations were recommended by A group. See Table 20.

The specific accommodations section seven are the specific accommodations recommended seventh for the Sarah student profile for both the A group and the C group. The A group recommended more than twice the number of accommodations as C group. The C group did not recommend any Presentation accommodations, this differed from A group. See Table 21.

The specific accommodations section eight are the specific accommodations recommended eighth for the Sarah student profile for both the A group and the C group. The C group did not recommend any Presentation accommodations, this differed from the A group. See Table 22.

The specific accommodations section nine are the specific accommodations recommended ninth for the Sarah student profile for both the A group and the C group. The A group recommended Presentation, Response and Setting accommodations, which differed from the C group, which recommended a Time & Scheduling. See Table 23.

Daniel Student Profile by Type of Accommodations

The specific accommodations section one are the specific accommodations first recommended for the Daniel student profile for both the A group and the C group. The A group recommended 14 accommodations compared to 10 accommodation recommendations by the C group. Both groups recommended the same number of Presentation accommodations. See Table 24.

The specific accommodations section two are the specific accommodations recommended second for the Daniel student profile for both the A group and the C group. The A group recommended almost twice as many accommodations at the C group. The A group recommended three times as many Presentation accommodations as the C group. As seen previously with the Sarah profile, C group recommended Response accommodations where as A group did not. See Table 25.

The specific accommodations section three are the specific accommodations recommended third for the Daniel student profile for both the A group and the C group. Again, the A group recommended three times as many Presentation accommodations as the C group. Both groups recommended the same number of Setting accommodations. The C group recommended more Response accommodations than the A group. See Table 26.

The specific accommodations section four are the specific accommodations recommended fourth for the Daniel student profile for both the A group and the C group. The A group recommended twice as many accommodations as the C group. The A group recommended more Presentation and Time & Scheduling accommodations as the C group. See Table 27.

The specific accommodations section five are the specific accommodations recommended fifth for the Daniel student profile for both the A group and the C group. The A group recommended twice as many accommodations as the C group. The A group recommended three times as many Presentation accommodations as the C group. See Table 28.

The specific accommodations section six are the specific accommodations recommended sixth for the Daniel student profile for both the A group and the C group. The A group

recommended twice as many accommodations as the C group. Both groups recommended accommodations from the same categories: Presentation, Setting, and Time & Scheduling. See Table 29.

The specific accommodations section seven are the specific accommodations recommended seventh for the Daniel student profile for both the A group and the C group. The A group recommended almost twice as many accommodations as the C group. Both groups recommended that same number of Presentation and Time & Scheduling accommodations. The C group did not recommend any Setting accommodations, which differs from the A group. See Table 30.

The specific accommodations section eight are the specific accommodations recommended eighth for the Daniel student profile for both the A group and the C group. The A group recommended three times as many accommodations as the C group. The A group recommended Presentation, Response and Time & Scheduling accommodations, which differed from the C group which recommended a Setting accommodation. See Table 31.

The specific accommodations section nine are the specific accommodations recommended ninth for the Daniel student profile for both the A group and the C group. The A group recommended five accommodations, where as the C group recommended one accommodation. The one accommodation that was recommended by the C group was in the NA category. See Table 32.

Conclusions

The results from this study support the need for increased accommodation training for teachers and further development of tools to help teachers in the decision-making process. Teachers from both groups recommended accommodations that were not actual accommodations for large-scale testing. Teachers also used incorrect terminology when recommending accommodations, that is, they would describe a situation similar to an accommodation, but not actually label it an accommodation. Both of these examples support the need to increase accommodations training for teachers in order to improve teachers' understanding of what

accommodations are, what accommodations are permitted for large-scale testing, and how accommodations are implemented during large-scale testing.

Both groups recommended approximately the same number of accommodations for both student profiles, however differences were seen in the categories and specific types of accommodations recommended. Group C chose more Response accommodations for both Sarah and Daniel. This variation in accommodation categories recommended could be due to differences in training between the groups. Group A received more student information in the areas of examples and when to use categories of accommodation. Guiding principles specific to each accommodation category were identified and used to help teachers identify if a category of accommodations would be appropriate for a student. This additional information may have contributed to the difference in the categories of accommodations recommended. Additional information on which accommodations are appropriate during large-scale testing and examples and guideline to help teachers make those decisions could impact teachers during the accommodation decision-making process.

Variation was also seen in the areas of specific types of accommodations recommended. Each specific type of accommodation recommended for both student profiles was listed and differences between the groups in terms of the specific types of accommodations recommended were found. Group A not only recommended more Presentation accommodations repeatedly for both student profiles, but recommended a greater variety of Presentation accommodations. This variation in specific types of accommodations recommended could be due to differences in training between the groups. Group A had specific accommodations listed and described in a manner which was easier to access due to the online nature of the material. Because the accommodation categories were easy to locate and identify, the lists of specific accommodations were also easily identified. Feedback from group C revealed that teachers found the manual cumbersome and difficult to navigate. This information leads us to believe that some members of group C may have been reluctant to take full advantage of all the information within the manual.

This study identified the need to begin to take a closer look at what specific accommodations are being recommended for students. Instead of focusing mainly on categories of accommodations, there may be a need to look more carefully at the specific types of accommodations within the categories that are being recommended. Some specific types of

accommodations have the potential to change the context of the material. Looking closely at what specific accommodations are recommended, why teachers are recommending them, as well as how teachers made these accommodation decisions will be important to help ensure that students are receiving appropriate accommodations during large-scale testing.

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Total Number of Accommodations Recommended

Table 1.

Grp	Mean	Std. Deviation	N
A	10.9091	2.90990	22
C	10.1250	3.26343	16
Total	10.5789	3.04588	38

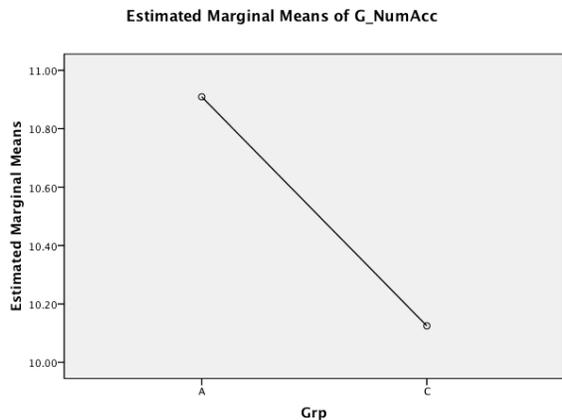
Dependent Variable: G_NumAcc

Table 2.

Tests of Between-Subjects Effects.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power ^b
Corrected Model	5.695 ^a	1	5.695	.607	.441	.017	.607	.118
Intercept	4098.327	1	4098.327	437.067	.000	.924	437.067	1.000
Grp	5.695	1	5.695	.607	.441	.017	.607	.118
Error	337.568	36	9.377					
Total	4596.000	38						
Corrected Total	343.263	37						

Dependent Variable: G_NumAcc, a. R Squared = .017 (Adjusted R Squared = -.011), b. Computed using alpha = .05



Total Score on Accommodations Recommended

Table 3.

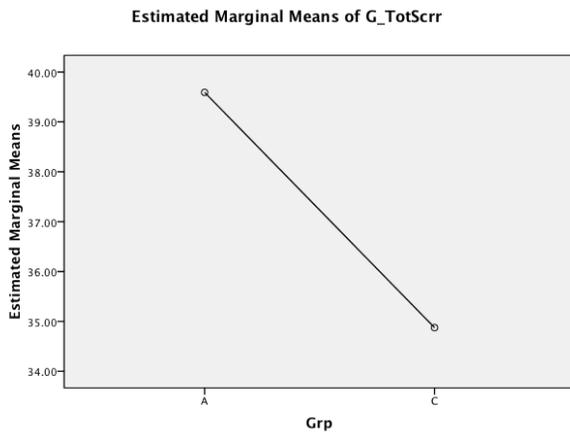
Grp	Mean	Std. Deviation	N
A	39.5909	9.35877	22
C	34.8750	10.22334	16
Total	37.6053	9.88184	38

Dependent Variable: G_TotScrr

Table 4.
Tests of Between-Subjects Effects.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power ^b
Corrected Model	206.011 ^a	1	206.011	2.177	.149	.057	2.177	.301
Intercept	51365.800	1	51365.800	542.745	.000	.938	542.745	1.000
Grp	206.011	1	206.011	2.177	.149	.057	2.177	.301
Error	3407.068	36	94.641					
Total	57351.000	38						
Corrected Total	3613.079	37						

Dependent Variable: G_TotScrr, a. R Squared = .057 (Adjusted R Squared = .031), b. Computed using alpha = .05



Total Time Spent in Recommending Accommodations

Table 5.

Grp	Mean	Std. Deviation	N
A	89.6111	32.71290	18
C	104.1667	77.27852	12
Total	95.4333	54.26924	30

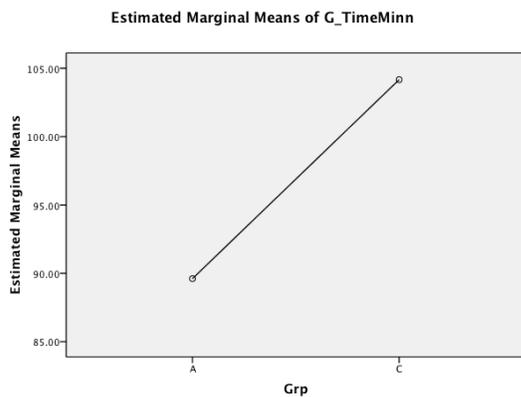
Dependent Variable: G_TimeMinn

Table 6.

Tests of Between-Subjects Effects.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power ^b
Corrected Model	1525.422 ^a	1	1525.422	.509	.481	.018	.509	.106
Intercept	270358.756	1	270358.756	90.244	.000	.763	90.244	1.000
Grp	1525.422	1	1525.422	.509	.481	.018	.509	.106
Error	83883.944	28	2995.855					
Total	358635.000	30						
Corrected Total	85409.367	29						

Dependent Variable: G_TimeMinn, a. R Squared = .018 (Adjusted R Squared = -.017), b. Computed using alpha = .05



Total Number of Accommodations by Type: Sarah

Table 7.

	N	Range	Minimum	Maximum	Mean	Std. Error	Std. Deviation
GS_Pn	36	5.00	1.00	6.00	2.2500	.21593	1.29560
GS_Rn	16	3.00	1.00	4.00	1.5625	.24098	.96393
GS_Sn	32	2.00	1.00	3.00	1.1875	.08325	.47093
GS_TSn	36	1.00	1.00	2.00	1.4167	.08333	.50000
GS_ADn	5	1.00	1.00	2.00	1.2000	.20000	.44721
GS_NSAn	6	2.00	1.00	3.00	1.3333	.33333	.81650
GS_Nan	4	2.00	1.00	3.00	2.0000	.40825	.81650
Valid N (listwise)	0						

Total Number of Accommodations by Type: Daniel

Table 8.

	N	Range	Minimum	Maximum	Mean	Std. Error	Std. Deviation
GD_Pn	30	4.00	1.00	5.00	1.9333	.19730	1.08066
GD_Rn	17	3.00	1.00	4.00	1.3529	.19061	.78591
GD_Sn	35	4.00	1.00	5.00	1.3143	.13455	.79600
GD_Tn	34	3.00	1.00	4.00	2.3529	.15154	.88360
GD_ADn	9	2.00	1.00	3.00	1.2222	.22222	.66667
GD_NSAn	6	2.00	1.00	3.00	1.6667	.42164	1.03280
GD_NAn	6	3.00	1.00	4.00	1.6667	.49441	1.21106
Valid N (listwise)	1						

Breakdown by Treatment for Total Number of Accommodations by Type: Sarah

Table 9.

	N	Range	Minimum	Maximum	Mean	Std. Error	Std. Deviation
A							
GS_Pn	21	5.00	1.00	6.00	2.7143	.30971	1.41926
GS_Rn	5	.00	1.00	1.00	1.0000	.00000	.00000
GS_Sn	21	2.00	1.00	3.00	1.2381	.11761	.53896
GS_TSn	21	1.00	1.00	2.00	1.5238	.11168	.51177
GS_ADn	5	1.00	1.00	2.00	1.2000	.20000	.44721
GS_NSAn	3	.00	1.00	1.00	1.0000	.00000	.00000
GS_NAn	3	1.00	1.00	2.00	1.6667	.33333	.57735
Valid N (listwise)	0						
C							
GS_Pn	15	2.00	1.00	3.00	1.6000	.19024	.73679
GS_Rn	11	3.00	1.00	4.00	1.8182	.32525	1.07872
GS_Sn	11	1.00	1.00	2.00	1.0909	.09091	.30151
GS_TSn	15	1.00	1.00	2.00	1.2667	.11819	.45774
GS_ADn	0						
GS_NSAn	3	2.00	1.00	3.00	1.6667	.66667	1.15470
GS_NAn	1	.00	3.00	3.00	3.0000	.	.
Valid N (listwise)	0						

Breakdown by Treatment for Total Number of Accommodations by Type: Daniel

Table 10.

	N	Range	Minimum	Maximum	Mean	Std. Error	Std. Deviation
A							
GD_Pn	19	4.00	1.00	5.00	2.2105	.27122	1.18223
GD_Rn	6	1.00	1.00	2.00	1.1667	.16667	.40825
GD_Sn	20	2.00	1.00	3.00	1.3000	.12773	.57124
GD_Tn	20	2.00	1.00	3.00	2.2500	.17584	.78640
GD_ADn	9	2.00	1.00	3.00	1.2222	.22222	.66667
GD_NSAn	5	2.00	1.00	3.00	1.8000	.48990	1.09545
GD_NAn	3	1.00	1.00	2.00	1.3333	.33333	.57735
Valid N (listwise)	1						
C							
GD_Pn	11	2.00	1.00	3.00	1.4545	.20730	.68755
GD_Rn	11	3.00	1.00	4.00	1.4545	.28167	.93420
GD_Sn	15	4.00	1.00	5.00	1.3333	.27021	1.04654
GD_Tn	14	3.00	1.00	4.00	2.5000	.27235	1.01905
GD_ADn	0						
GD_NSAn	1	.00	1.00	1.00	1.0000	.	.
GD_NAn	3	3.00	1.00	4.00	2.0000	1.00000	1.73205
Valid N (listwise)	0						

Total Score for Accommodations: Sarah

Table 11.

	N	Range	Minimum	Maximum	Mean	Std. Error	Std. Deviation
GS_Scr1n	38	3.00	1.00	4.00	3.6316	.10945	.67468
GS_Scr2n	38	4.00	.00	4.00	3.2632	.15860	.97770
GS_Scr3n	38	5.00	.00	5.00	3.2368	.16627	1.02494
GS_Scr4n	33	4.00	.00	4.00	3.2727	.17008	.97701
GS_Scr5n	25	4.00	.00	4.00	3.1600	.19732	.98658
GS_Scr6n	20	5.00	.00	5.00	2.7000	.30865	1.38031
GS_Scr7n	11	4.00	.00	4.00	3.0909	.36815	1.22103
GS_Scr8n	10	2.00	2.00	4.00	3.0000	.21082	.66667
GS_Scr9n	5	4.00	.00	4.00	2.2000	.73485	1.64317
Valid N (listwise)	5						

Total Score for Accommodations: Daniel

Table 12.

	N	Range	Minimum	Maximum	Mean	Std. Error	Std. Deviation
GD_Scr1n	38	5.00	.00	5.00	3.2105	.16508	1.01763
GD_Scr2n	38	4.00	.00	4.00	3.2105	.16933	1.04385
GD_Scr3n	38	3.00	1.00	4.00	3.3421	.11487	.70811
GD_Scr4n	34	5.00	.00	5.00	3.1765	.14909	.86936
GD_Scr5n	31	4.00	.00	4.00	3.0968	.16300	.90755
GD_Scr6n	25	3.00	1.00	4.00	3.2000	.18257	.91287
GD_Scr7n	15	4.00	.00	4.00	2.4667	.29059	1.12546
GD_Scr8n	9	4.00	.00	4.00	2.7778	.46481	1.39443
GD_Scr9n	6	4.00	.00	4.00	2.1667	.70317	1.72240
Valid N (listwise)	6						

Breakdown by Treatment for Total Score: Sarah

Table 13.

	N	Range	Minimum	Maximum	Mean	Std. Error	Std. Deviation
A							
GS_Scr1n	22	1.00	3.00	4.00	3.6818	.10164	.47673
GS_Scr2n	22	4.00	.00	4.00	3.2273	.22727	1.06600
GS_Scr3n	22	4.00	.00	4.00	3.2273	.19664	.92231
GS_Scr4n	21	4.00	.00	4.00	3.1429	.24187	1.10841
GS_Scr5n	18	2.00	2.00	4.00	3.5000	.14575	.61835
GS_Scr6n	13	5.00	.00	5.00	2.7692	.37815	1.36344
GS_Scr7n	7	4.00	.00	4.00	2.5714	.48093	1.27242
GS_Scr8n	6	2.00	2.00	4.00	3.1667	.30732	.75277
GS_Scr9n	3	1.00	3.00	4.00	3.3333	.33333	.57735
Valid N (listwise)	3						
C							
GS_Scr1n	16	3.00	1.00	4.00	3.5625	.22302	.89209
GS_Scr2n	16	3.00	1.00	4.00	3.3125	.21830	.87321
GS_Scr3n	16	4.00	1.00	5.00	3.2500	.29580	1.18322
GS_Scr4n	12	2.00	2.00	4.00	3.5000	.19462	.67420
GS_Scr5n	7	3.00	.00	3.00	2.2857	.47380	1.25357
GS_Scr6n	7	4.00	.00	4.00	2.5714	.57143	1.51186
GS_Scr7n	4	.00	4.00	4.00	4.0000	.00000	.00000
GS_Scr8n	4	1.00	2.00	3.00	2.7500	.25000	.50000
GS_Scr9n	2	1.00	.00	1.00	.5000	.50000	.70711
Valid N (listwise)	2						

Breakdown by Treatment for Total Score: Daniel

Table 14.

	N	Range	Minimum	Maximum	Mean	Std. Error	Std. Deviation
A							
GD_Scr1n	22	4.00	1.00	5.00	3.4091	.20449	.95912
GD_Scr2n	22	3.00	1.00	4.00	3.1818	.20424	.95799
GD_Scr3n	22	3.00	1.00	4.00	3.2727	.16359	.76730
GD_Scr4n	20	5.00	.00	5.00	2.9500	.22331	.99868
GD_Scr5n	19	3.00	1.00	4.00	3.0526	.17891	.77986
GD_Scr6n	17	3.00	1.00	4.00	3.0000	.24254	1.00000
GD_Scr7n	10	3.00	.00	3.00	2.2000	.32660	1.03280
GD_Scr8n	6	3.00	1.00	4.00	3.0000	.44721	1.09545
GD_Scr9n	5	4.00	.00	4.00	2.6000	.67823	1.51658
Valid N (listwise)	5						
C							
GD_Scr1n	16	5.00	.00	5.00	2.9375	.26566	1.06262
GD_Scr2n	16	4.00	.00	4.00	3.2500	.29580	1.18322
GD_Scr3n	16	2.00	2.00	4.00	3.4375	.15729	.62915
GD_Scr4n	14	1.00	3.00	4.00	3.5000	.13868	.51887
GD_Scr5n	12	4.00	.00	4.00	3.1667	.32177	1.11464
GD_Scr6n	8	1.00	3.00	4.00	3.6250	.18298	.51755
GD_Scr7n	5	3.00	1.00	4.00	3.0000	.54772	1.22474
GD_Scr8n	3	4.00	.00	4.00	2.3333	1.20185	2.08167
GD_Scr9n	1	.00	.00	.00	.0000	.	.
Valid N (listwise)	1						

Specific Accommodations Recommended for Sarah

Table 15.
GS_Spcfcl.

	Grp	Frequency	Percent	Valid Percent	Cumulative Percent
A Valid	AST	1	4.5	4.5	4.5
	Cal	2	9.1	9.1	13.6
	CLD	4	18.2	18.2	31.8
	Ext	1	4.5	4.5	36.4
	HLW	1	4.5	4.5	40.9
	HR	1	4.5	4.5	45.5
	RMS	9	40.9	40.9	86.4
	RP	1	4.5	4.5	90.9
	TIG	2	9.1	9.1	100.0
	Total	22	100.0	100.0	
C Valid	Cal	1	6.2	6.2	6.2
	Ext	2	12.5	12.5	18.8
	HR	7	43.8	43.8	62.5
	organization	1	6.2	6.2	68.8
	RDOS	1	6.2	6.2	75.0
	RDS	3	18.8	18.8	93.8
	RecB	1	6.2	6.2	100.0
	Total	16	100.0	100.0	

Table 16.
GS_Spcfc2.

	Grp	Frequency	Percent	Valid Percent	Cumulative Percent
A Valid	clarify/manipulate directions	1	4.5	4.5	4.5
	CLD	1	4.5	4.5	9.1
	Ext	2	9.1	9.1	18.2
	IBN	1	4.5	4.5	22.7
	materials, directions and distractions	1	4.5	4.5	27.3
	RDS	1	4.5	4.5	31.8
	RMS	3	13.6	13.6	45.5
	RP	1	4.5	4.5	50.0
	RR	4	18.2	18.2	68.2
	RSMS	3	13.6	13.6	81.8
	RSV	1	4.5	4.5	86.4
	TIG	2	9.1	9.1	95.5
	WHV	1	4.5	4.5	100.0
	Total	22	100.0	100.0	
C Valid	Cal	2	12.5	12.5	12.5
	Ext	2	12.5	12.5	25.0
	HR	4	25.0	25.0	50.0
	NOI	2	12.5	12.5	62.5
	Presentation-Visual	1	6.2	6.2	68.8
	RDOS	1	6.2	6.2	75.0
	RDS	1	6.2	6.2	81.2
	VO	3	18.8	18.8	100.0
		Total	16	100.0	100.0

Table 17.
GS_Spcfc3.

	Grp	Frequency	Percent	Valid Percent	Cumulative Percent
A Valid	AST	1	4.5	4.5	4.5
	Cal	1	4.5	4.5	9.1
	Ext	3	13.6	13.6	22.7
	fifteen	1	4.5	4.5	27.3
	math resource book	1	4.5	4.5	31.8
	MMP	1	4.5	4.5	36.4
	RMS	2	9.1	9.1	45.5
	RP	2	9.1	9.1	54.5
	RR	2	9.1	9.1	63.6
	RSV	1	4.5	4.5	68.2
	RTB	1	4.5	4.5	72.7
	TIG	1	4.5	4.5	77.3
	TSF	2	9.1	9.1	86.4
	TSL	3	13.6	13.6	100.0
	Total	22	100.0	100.0	
C Valid	Cal	1	6.2	6.2	6.2
	Ext	4	25.0	25.0	31.2
	GO	1	6.2	6.2	37.5
	HR	2	12.5	12.5	50.0
	NOI	1	6.2	6.2	56.2
	Presentation-Order of Problems	1	6.2	6.2	62.5
	RDS	2	12.5	12.5	75.0
	SG	1	6.2	6.2	81.2
	simplify language	1	6.2	6.2	87.5
	SR	1	6.2	6.2	93.8
	VDV	1	6.2	6.2	100.0
	Total	16	100.0	100.0	

Table 18.
GS_Spcfc4.

	Grp	Frequency	Percent	Valid Percent	Cumulative Percent
A Valid	.	1	4.5	4.5	4.5
	Cal	1	4.5	4.5	9.1
	CLD	1	4.5	4.5	13.6
	establish ground rules	1	4.5	4.5	18.2
	Ext	4	18.2	18.2	36.4
	IBN	3	13.6	13.6	50.0
	math reference sheet	1	4.5	4.5	54.5
	MD	1	4.5	4.5	59.1
	RMS	2	9.1	9.1	68.2
	RR	1	4.5	4.5	72.7
	TAT	1	4.5	4.5	77.3
	TIG	1	4.5	4.5	81.8
	TSD	1	4.5	4.5	86.4
	TSF	1	4.5	4.5	90.9
TSL	2	9.1	9.1	100.0	
	Total	22	100.0	100.0	
C Valid	.	4	25.0	25.0	25.0
	Cue	1	6.2	6.2	31.2
	Ext	3	18.8	18.8	50.0
	HR	2	12.5	12.5	62.5
	RDS	2	12.5	12.5	75.0
	RTB	1	6.2	6.2	81.2
	Trec	1	6.2	6.2	87.5
	VO	2	12.5	12.5	100.0
		Total	16	100.0	100.0

Table 19.
GS_Spcfc5.

	Grp	Frequency	Percent	Valid Percent	Cumulative Percent
A Valid	.	4	18.2	18.2	18.2
	CLD	1	4.5	4.5	22.7
	EWH	2	9.1	9.1	31.8
	Ext	4	18.2	18.2	50.0
	IBN	3	13.6	13.6	63.6
	RSMS	2	9.1	9.1	72.7
	SWC	1	4.5	4.5	77.3
	TIG	1	4.5	4.5	81.8
	TSD	1	4.5	4.5	86.4
	TSL	3	13.6	13.6	100.0
	Total	22	100.0	100.0	
C Valid	.	9	56.2	56.2	56.2
	Cal	2	12.5	12.5	68.8
	Ext	1	6.2	6.2	75.0
	HR	1	6.2	6.2	81.2
	Order of Subtest	1	6.2	6.2	87.5
	pre-teach/re-teach	1	6.2	6.2	93.8
	SG	1	6.2	6.2	100.0
		Total	16	100.0	100.0

Table 20.
GS_Spcfc6.

	Grp	Frequency	Percent	Valid Percent	Cumulative Percent
A Valid	.	9	40.9	40.9	40.9
	Ext	3	13.6	13.6	54.5
	familiar manipulatives and other	1	4.5	4.5	59.1
	IBN	1	4.5	4.5	63.6
	MD	1	4.5	4.5	68.2
	RPQ	1	4.5	4.5	72.7
	RSMS	2	9.1	9.1	81.8
	simplify vocabulary	1	4.5	4.5	86.4
	TSD	2	9.1	9.1	95.5
	TSL	1	4.5	4.5	100.0
	Total	22	100.0	100.0	
C Valid	.	9	56.2	56.2	56.2
	differential instruction	1	6.2	6.2	62.5
	GO	1	6.2	6.2	68.8
	MFB	1	6.2	6.2	75.0
	RDOS	1	6.2	6.2	81.2
	Response Options	1	6.2	6.2	87.5
	Scribe	1	6.2	6.2	93.8
	VO	1	6.2	6.2	100.0
	Total	16	100.0	100.0	

Table 21.
GS_Spcfc7.

	Grp	Frequency	Percent	Valid Percent	Cumulative Percent
A Valid	.	15	68.2	68.2	68.2
	Cal	1	4.5	4.5	72.7
	Ext	1	4.5	4.5	77.3
	HLW	1	4.5	4.5	81.8
	RTB	1	4.5	4.5	86.4
	synonyms/restating questions	1	4.5	4.5	90.9
	TSD	1	4.5	4.5	95.5
	TSF	1	4.5	4.5	100.0
	Total	22	100.0	100.0	
C Valid	.	12	75.0	75.0	75.0
	Ext	1	6.2	6.2	81.2
	RDS	2	12.5	12.5	93.8
	SG	1	6.2	6.2	100.0
	Total	16	100.0	100.0	

Table 22.
GS_Spcfc8.

	Grp	Frequency	Percent	Valid Percent	Cumulative Percent
A Valid	.	16	72.7	72.7	72.7
	HLW	1	4.5	4.5	77.3
	IBN	1	4.5	4.5	81.8
	MCS	2	9.1	9.1	90.9
	TVT	1	4.5	4.5	95.5
	WHV	1	4.5	4.5	100.0
	Total	22	100.0	100.0	
C Valid	.	12	75.0	75.0	75.0
	Ext	2	12.5	12.5	87.5
	MFB	1	6.2	6.2	93.8
	RDS	1	6.2	6.2	100.0
	Total	16	100.0	100.0	

Table 23.
GS_Spcfc9.

	Grp	Frequency	Percent	Valid Percent	Cumulative Percent
A Valid	.	19	86.4	86.4	86.4
	HLW	1	4.5	4.5	90.9
	RTB	1	4.5	4.5	95.5
	TSL	1	4.5	4.5	100.0
	Total	22	100.0	100.0	
C Valid	.	14	87.5	87.5	87.5
	CS	1	6.2	6.2	93.8
	personalized goal tracking device	1	6.2	6.2	100.0
	Total	16	100.0	100.0	

Specific Accommodations Recommended for Daniel

Table 24.
GD_Spcfcl.

	Grp	Frequency	Percent	Valid Percent	Cumulative Percent
A Valid	AST	1	4.5	4.5	4.5
	ATB	5	22.7	22.7	27.3
	balance white space and position of content	1	4.5	4.5	31.8
	Cal	3	13.6	13.6	45.5
	CDA	1	4.5	4.5	50.0
	CLD	2	9.1	9.1	59.1
	HR	1	4.5	4.5	63.6
	MD	1	4.5	4.5	68.2
	MMP	1	4.5	4.5	72.7
	reading prompts	1	4.5	4.5	77.3
	RSMS	1	4.5	4.5	81.8
	TIG	2	9.1	9.1	90.9
	TSD	1	4.5	4.5	95.5
	TSL	1	4.5	4.5	100.0
	Total	22	100.0	100.0	
C Valid	Cal	1	6.2	6.2	6.2
	CD	1	6.2	6.2	12.5
	CS	2	12.5	12.5	25.0
	Ext	1	6.2	6.2	31.2
	HR	2	12.5	12.5	43.8
	MFB	2	12.5	12.5	56.2
	RDS	4	25.0	25.0	81.2
	RecB	1	6.2	6.2	87.5
	shorten assignments	1	6.2	6.2	93.8
	Tac	1	6.2	6.2	100.0
Total	16	100.0	100.0		

Table 25.
GD_Spcfc2.

	Grp	Frequency	Percent	Valid Percent	Cum Percent
A Valid	AST	1	4.5	4.5	4.5
	ATB	2	9.1	9.1	13.6
	Cal	1	4.5	4.5	18.2
	CLD	3	13.6	13.6	31.8
	EWH	1	4.5	4.5	36.4
	Ext	1	4.5	4.5	40.9
	fifteen	1	4.5	4.5	45.5
	HLW	1	4.5	4.5	50.0
	IBN	1	4.5	4.5	54.5
	RDOS	1	4.5	4.5	59.1
	responses practical applications	1	4.5	4.5	63.6
	RMS	1	4.5	4.5	68.2
	special seating	1	4.5	4.5	72.7
	TIG	2	9.1	9.1	81.8
	TSD	1	4.5	4.5	86.4
	TSF	2	9.1	9.1	95.5
TSL	1	4.5	4.5	100.0	
	Total	22	100.0	100.0	
C Valid	CD	1	6.2	6.2	6.2
	computer auditory	1	6.2	6.2	12.5
	CS	4	25.0	25.0	37.5
	Ext	2	12.5	12.5	50.0
	HR	2	12.5	12.5	62.5
	MFB	1	6.2	6.2	68.8
	RDS	2	12.5	12.5	81.2
	RTB	1	6.2	6.2	87.5
	Scribe	1	6.2	6.2	93.8
	specialized instruction in alternate setting	1	6.2	6.2	100.0
	Total	16	100.0	100.0	

Table 26.
GD_Spcfc3.

	Grp	Frequency	Percent	Valid Percent	Cumulative Percent
A Valid	ATB	3	13.6	13.6	13.6
	AWU	1	4.5	4.5	18.2
	CSS	1	4.5	4.5	22.7
	EWH	2	9.1	9.1	31.8
	Ext	1	4.5	4.5	36.4
	fifteen	1	4.5	4.5	40.9
	mark each test	1	4.5	4.5	45.5
	section	1	4.5	4.5	45.5
	MCS	1	4.5	4.5	50.0
	MMP	1	4.5	4.5	54.5
	RAD	1	4.5	4.5	59.1
	RMS	2	9.1	9.1	68.2
	TIG	3	13.6	13.6	81.8
	TSD	2	9.1	9.1	90.9
	TSF	1	4.5	4.5	95.5
WHV	1	4.5	4.5	100.0	
	Total	22	100.0	100.0	
C Valid	CS	1	6.2	6.2	6.2
	Ext	1	6.2	6.2	12.5
	HR	2	12.5	12.5	25.0
	MFB	3	18.8	18.8	43.8
	MTR	1	6.2	6.2	50.0
	NOI	1	6.2	6.2	56.2
	RDOS	1	6.2	6.2	62.5
	RDS	3	18.8	18.8	81.2
	RTB	1	6.2	6.2	87.5
	SG	1	6.2	6.2	93.8
	VO	1	6.2	6.2	100.0

Table 27.
GD_Spcfc4.

	Grp	Frequency	Percent	Valid Percent	Cumulative Percent
A Valid	.	2	9.1	9.1	9.1
	CLD	1	4.5	4.5	13.6
	establish ground rules	1	4.5	4.5	18.2
	Ext	2	9.1	9.1	27.3
	fifteen	1	4.5	4.5	31.8
	HLW	2	9.1	9.1	40.9
	IBN	2	9.1	9.1	50.0
	M	1	4.5	4.5	54.5
	MD	2	9.1	9.1	63.6
	MFB	1	4.5	4.5	68.2
	RTB	1	4.5	4.5	72.7
	TSD	2	9.1	9.1	81.8
	TSF	1	4.5	4.5	86.4
	TSL	2	9.1	9.1	95.5
	TVT	1	4.5	4.5	100.0
	Total	22	100.0	100.0	
C Valid	.	2	12.5	12.5	12.5
	Cue	1	6.2	6.2	18.8
	Ext	2	12.5	12.5	31.2
	MFB	2	12.5	12.5	43.8
	NOI	1	6.2	6.2	50.0
	RDS	4	25.0	25.0	75.0
	RTB	1	6.2	6.2	81.2
	VO	3	18.8	18.8	100.0
	Total	16	100.0	100.0	

Table 28.
GD_Spcfc5.

	Grp	Frequency	Percent	Valid Percent	Cumulative Percent
A Valid	.	3	13.6	13.6	13.6
	AST	1	4.5	4.5	18.2
	ATB	3	13.6	13.6	31.8
	Cal	2	9.1	9.1	40.9
	CDA	1	4.5	4.5	45.5
	CLD	1	4.5	4.5	50.0
	Ext	2	9.1	9.1	59.1
	HLW	1	4.5	4.5	63.6
	HS	1	4.5	4.5	68.2
	IBN	1	4.5	4.5	72.7
	reduce number of items	1	4.5	4.5	77.3
	RMS	2	9.1	9.1	86.4
	RSMS	1	4.5	4.5	90.9
	TSD	1	4.5	4.5	95.5
	TSL	1	4.5	4.5	100.0
Total	22	100.0	100.0		
C Valid	.	4	25.0	25.0	25.0
	CS	2	12.5	12.5	37.5
	Ext	3	18.8	18.8	56.2
	GO	2	12.5	12.5	68.8
	HLW	1	6.2	6.2	75.0
	MFB	1	6.2	6.2	81.2
	reduce task length	1	6.2	6.2	87.5
	VO	2	12.5	12.5	100.0
	Total	16	100.0	100.0	

Table 29.
GD_Spcfc6.

	Grp	Frequency	Percent	Valid Percent	Cumulative Percent
Valid A	.	5	22.7	22.7	22.7
	ATB	2	9.1	9.1	31.8
	CDA	1	4.5	4.5	36.4
	CS	1	4.5	4.5	40.9
	Ext	1	4.5	4.5	45.5
	IBN	2	9.1	9.1	54.5
	materials not specified	1	4.5	4.5	59.1
	prompter rephrases directions	1	4.5	4.5	63.6
	RAD	1	4.5	4.5	68.2
	RMS	1	4.5	4.5	72.7
	RR	2	9.1	9.1	81.8
	TIG	3	13.6	13.6	95.5
	TSD	1	4.5	4.5	100.0
	Total	22	100.0	100.0	
Valid C	.	8	50.0	50.0	50.0
	CS	2	12.5	12.5	62.5
	Ext	1	6.2	6.2	68.8
	HLW	1	6.2	6.2	75.0
	HR	1	6.2	6.2	81.2
	MFB	1	6.2	6.2	87.5
	RDS	2	12.5	12.5	100.0
	Total	16	100.0	100.0	

Table 30.
GD_Spcfc7.

	Grp	Frequency	Percent	Valid Percent	Cumulative Percent
A Valid	.	12	54.5	54.5	54.5
	ATB	1	4.5	4.5	59.1
	Cal	1	4.5	4.5	63.6
	IBN	1	4.5	4.5	68.2
	MD	1	4.5	4.5	72.7
	read aloud with pacing	1	4.5	4.5	77.3
	RSMS	1	4.5	4.5	81.8
	special proctor	1	4.5	4.5	86.4
	TSL	1	4.5	4.5	90.9
	WHV	2	9.1	9.1	100.0
	Total	22	100.0	100.0	
C Valid	.	11	68.8	68.8	68.8
	CS	1	6.2	6.2	75.0
	LP	1	6.2	6.2	81.2
	MFB	1	6.2	6.2	87.5
	RD	1	6.2	6.2	93.8
	short segment test booklets	1	6.2	6.2	100.0
		Total	16	100.0	100.0

Table 31.
GD_Spcfc81.

	Grp	Frequency	Percent	Valid Percent	Cumulative Percent
A Valid	.	16	72.7	72.7	72.7
	assistive tech for responses	1	4.5	4.5	77.3
	AWU	1	4.5	4.5	81.8
	CDA	1	4.5	4.5	86.4
	Ext	1	4.5	4.5	90.9
	fifteen	1	4.5	4.5	95.5
	RTB	1	4.5	4.5	100.0
	Total	22	100.0	100.0	
C Valid	.	13	81.2	81.2	81.2
	Cue	2	12.5	12.5	93.8
	modify grading	1	6.2	6.2	100.0
	Total	16	100.0	100.0	

Table 32.
GD_Spcfc9.

	Grp	Frequency	Percent	Valid Percent	Cumulative Percent
A Valid	.	17	77.3	77.3	77.3
	HLW	1	4.5	4.5	81.8
	math resource book	1	4.5	4.5	86.4
	NB	1	4.5	4.5	90.9
	RTB	1	4.5	4.5	95.5
	SWB	1	4.5	4.5	100.0
	Total	22	100.0	100.0	
C Valid	.	1	6.2	6.2	6.2
	.	14	87.5	87.5	93.8
	behavioral component	1	6.2	6.2	100.0
	Total	16	100.0	100.0	

Results from Participation Item Review: Elementary Grade Band

The review of items used to help teachers make participation decisions were evaluated for their linkage to the standard and then the degree to which they were ordered in terms of difficulty: the grade level (gl) item should be more difficult than the two percent (tp) and this two percent should be more difficult in turn from the one percent (op). Finally, the items were reviewed for bias and sensitivity (yes or no and if yes, what was the issue). We present the findings in this order for two judges: The agreement between judge 1 and judge 2 was very high.

In Tables 1-3, the alignment data are presented for Judge 1, reflecting very good alignment. For the grade level (gl) items, 98% of the items were rated as very aligned (3); for the two percent (tp), 100% of the items were rated as very aligned (3); finally for the one percent (op) items, 97% of the items (all but 2) were rated as very aligned (3).

In Table 4 and Figure 1, the results are presented for Judge 1 from the comparison of item difficulty for grade level (gl) items versus two percent (tp) items. Virtually all (but 2) of the gl items were considered more difficult than the tp items.

In Table 5 and Figure 2, the results are presented for Judge 1 from the comparison of item difficulty for two percent (tp) versus one percent (op). Virtually all (but 4) of the tp items were considered more difficult than the one percent (op) items.

Bias and sensitivity for Judge 1 is reported in Table 6 and Figure 3. Only one item was judged as having a problem with the remaining items (98%) judged as suitable.

In Tables 7-9, Judge 2 rated 97% of the grade level (gl) items as very aligned with grade level standards and 95% of the two percent (tp) items as very aligned to the grade level standards (with 1 rated as vaguely aligned and 2 items rated as somewhat aligned). For the one percent (op) items, however, only 67% were rated as very aligned with 17 items judged as somewhat aligned and 2 items as vaguely aligned.

In Table 10 and Figure 4 are the judgments on comparative difficulty for judge 2. Almost all of the grade level (gl) items (95% were deemed more difficult than the two percent (tp) items.

In Table 11 and Figure 5, the difficulty of two percent (tp) items was greater than the One percent (op) items; for this group of items, however, the percentage was only 87%) with 8 items NOT ordered in this manner.

Table 12 and Figure 6 reflect that, for this judge, all items were found without bias but sensitive to the needs of the population.

Alignment: Grade Level, Two Percent, and One Percent with Grade level Standards – Judge 1

Table 1.
Grade Level.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 2	1	1.7	1.7	1.7
Valid 3	59	98.3	98.3	100.0
Total	60	100.0	100.0	

Table 2.
Two Percent.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 3	60	100.0	100.0	100.0

Table 3.
One Percent.

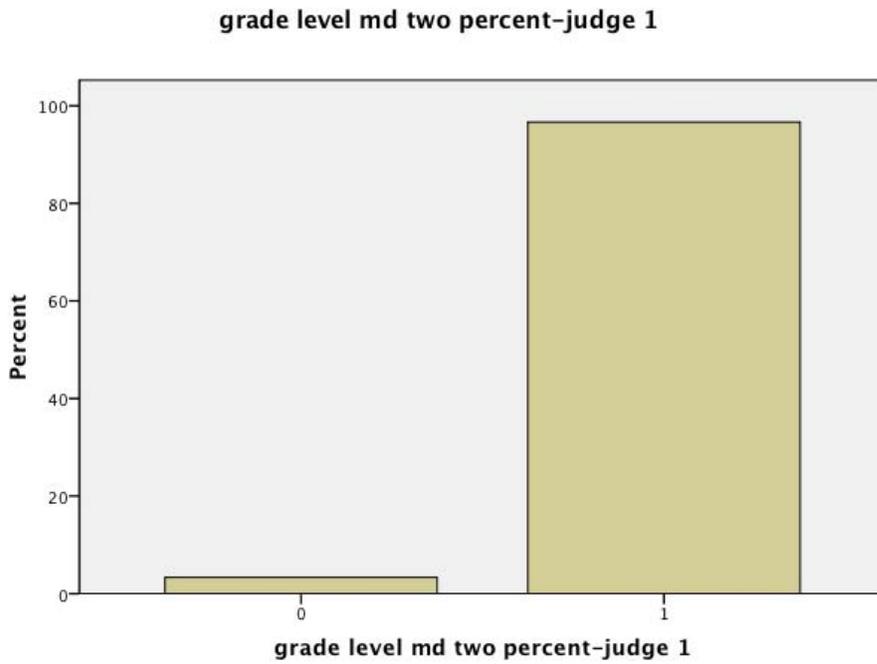
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 2	2	3.3	3.3	3.3
Valid 3	58	96.7	96.7	100.0
Total	60	100.0	100.0	

Grade level more difficult than two percent – Judge 1

Table 4.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	2	3.3	3.3	3.3
Valid 1	58	96.7	96.7	100.0
Total	60	100.0	100.0	

Figure 1.

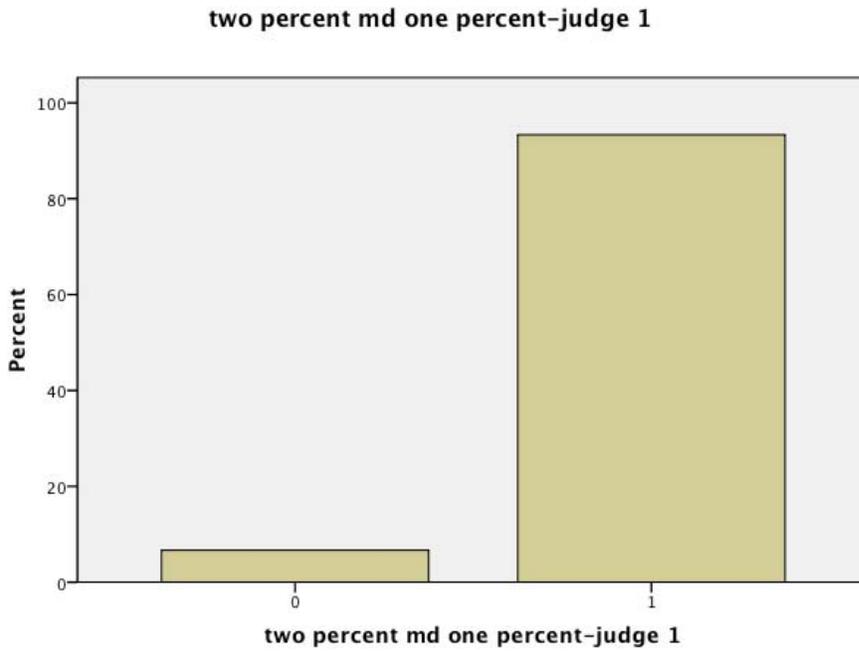


Two percent more difficult than one percent – Judge 1

Table 5.

	Frequency	Percent	Valid Percent	Cumulative Percent
More Valid 0	4	6.7	6.7	6.7
More Valid 1	56	93.3	93.3	100.0
Total	60	100.0	100.0	

Figure 2.

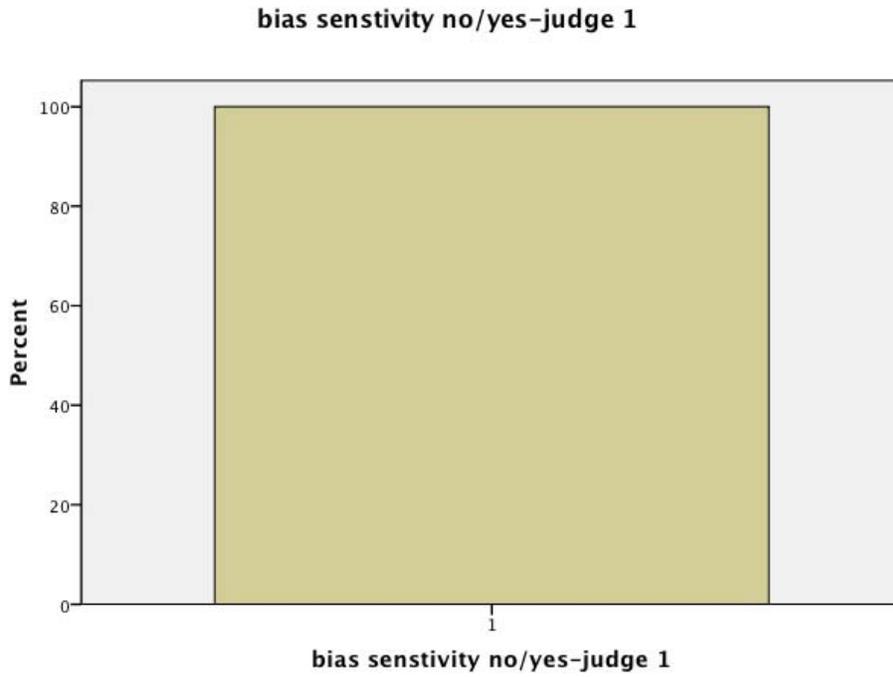


Bias sensitivity no/yes - Judge 1

Table 6.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	59	98.3	100.0	100.0
Missing System	1	1.7		
Total	60	100.0		

Figure 3.



Alignment: Grade Level, Two Percent, and One Percent with Grade level Standards – Judge 2

Table 7.
Grade Level.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 2	2	3.3	3.3	3.3
Valid 3	58	96.7	96.7	100.0
Total	60	100.0	100.0	

Table 8.
Two Percent.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	1	1.7	1.7	1.7
Valid 2	2	3.3	3.3	5.0
Valid 3	57	95.0	95.0	100.0
Total	60	100.0	100.0	

Table 9.
One Percent.

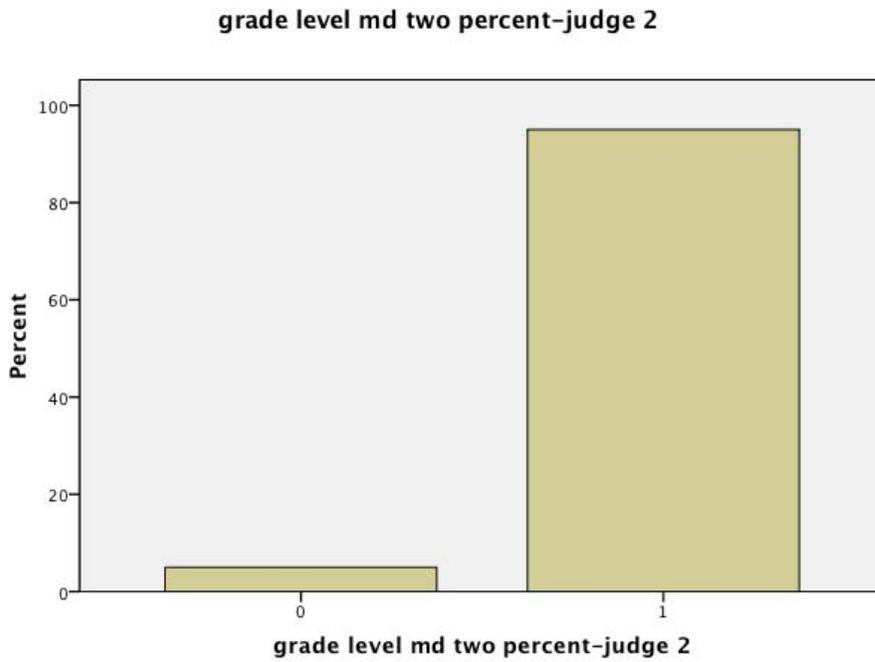
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	3	5.0	5.0	5.0
Valid 2	17	28.3	28.3	33.3
Valid 3	40	66.7	66.7	100.0
Total	60	100.0	100.0	

Grade level more difficult than two percent –Judge 2

Table 10.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	3	5.0	5.0	5.0
Valid 1	57	95.0	95.0	100.0
Total	60	100.0	100.0	

Figure 4.

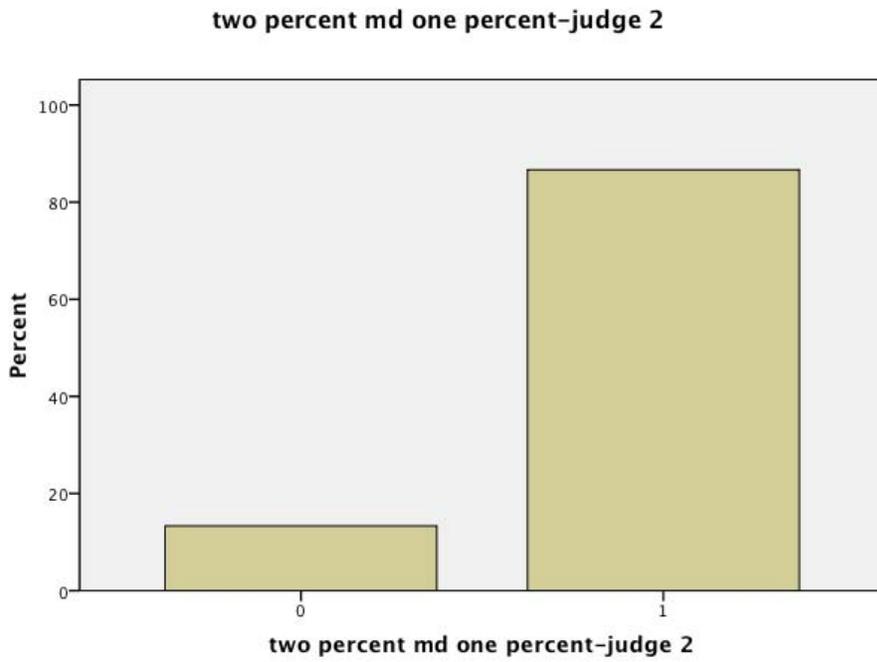


Two percent more difficult than one percent – Judge 2

Table 11.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0	8	13.3	13.3	13.3
Valid 1	52	86.7	86.7	100.0
Total	60	100.0	100.0	

Figure 5.



Bias sensitivity no/yes – Judge 2

Table 12.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	60	100.0	100.0	100.0

Figure 6.

