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The Reliability of Teacher Decision-Making in Recommending Accommodations for Large-Scale Tests

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Abstract

In this paper we review different methods for teachers to recommend accommodations in large-scale tests. Then we present data on the stability of their judgments on variables relevant to this decision-making process. The outcomes from the judgments support the need for a more explicit model. Four general categories are presented: student proficiency, ease of completing various (test relevant) activities, benefit from the use of various accommodations, and provision of accommodations in the classroom. Both mean level of ratings and stability of ratings argue against continued use of informal systems.

Introduction

Our focus on accommodations began with the Tindal and Fuchs (1999) compilation of an extensive body of research that included 106 studies conducted over two decades. Until that review, most of the research was conducted with little emphasis on decision making in a standards-based educational environment or from any particular theoretical perspective. In an update on accommodations, Tindal, Helwig, and Hollenbeck (1999) further reported on an emerging body of research using Messick's (1989) facets of validity: "The mark of distinction [for an accommodation] is the emphasis on construct validity. Improving performance is not the sole criterion for justifying an accommodation. Rather, the very construct of what is being measured is under scrutiny: (a) the task demands, (b) the scaling of behavior, and (c) the student being tested" (p. 13).

In recent years we have conducted a number of studies on the degree to which performance on mathematics tests is influenced by access skills (like reading a multiple-choice test) rather than the target skills. As these studies have unfolded, it has become clear that (a) accommodations are typically bundled (more than one change is instituted) and (b) technology is becoming increasingly important in their delivery, even for those not directly relying on it. For example, in a line of studies that began with a "read aloud" of math tests by the teacher compared to students silently reading the math test themselves, Tindal, Heath, Hollenbeck, Almond, and Harniss (1998) reported significant effects in favor of the teacher read aloud: When the mathematics test was read to them, students with disabilities and an IEP in reading performed as well as students ranked low in reading proficiency by their teachers. In the self-reading condition, these groups were significantly different (in favor of low ranked non-disabled readers).

This line of research quickly has moved to a technology-based delivery, when the

logistics and standardization are considered as part of a realistic large-scale assessment program. For example, Tindal (2002) conducted a study using a videotaped read aloud. This study was completed in 10 different states, and therefore required greater attention to standardization of the treatment. Furthermore, assuming that students with IEPs in reading need to have a math test read to them, it would be nearly impossible for a special education teacher with a case of 15-25 students to provide this accommodation for everyone who needed it. In this study, the interaction was significant between the treatment (read aloud versus student read) and student classification (disabled with an IEP in reading versus low reading proficiency). In further extending the technology applications to computers, Hollenbeck, Rozek-Tedesco, Tindal, and Glasgow (2000) studied the effects of a read aloud accommodation when it was delivered using a videotape with a group administration versus a computer-delivered individual administration. This study was framed in terms of pacing from the teacher or student. The findings reflected superior performance when students with disabilities controlled the delivery of problems with an effect size of .34; importantly, the impact was greater for more skilled students.

The research on accommodations has not only moved directly to a technology-based delivery system but has also required more technology infrastructure in the development of treatments and analysis of populations. For example, in a study with sixth grade students, Helwig, Rozek-Tedesco, Tindal, Heath, and Almond (1999) focused on subgroups of problems and students. Using a relatively sophisticated analysis of the treatment and its effect, they reported that the treatment of a read aloud was effective only for certain math problems (those with many words, multiple verbs, and unfamiliar words) and for students who had otherwise intact math proficiency. In another example where technology was instrumental in understanding the construct, Helwig, Rozek-Tedesco, and Tindal (2002) described a follow-up study in which a particular population of students was tested with specifically-analyzed problem types in both a

videotaped read aloud and a standard self-read administration. For elementary students with learning disabilities, performance was higher on difficult reading items when they were presented a videotaped read aloud than when students were required to read them; this finding did not hold for students in general education. In contrast, no such differences in performance were found for middle school-age students with and without learning disabilities.

In the current technical report, one more example of technology advancements in accommodations is studied: Use of an accommodation station that is an internet web site in which teachers respond to questions about students to assist in recommendations of an accommodation. The full version of the accommodation station also includes three other components. First, students are asked similar questions as teachers to determine the consistency with teachers' responses. Second, they take a series of reading and math measures. This combination of performance assessments allows teachers to analyze the degree to which test performance in math is a function of reading access skills or math target skills. Third, students take a number of large-scale test items under both a read aloud and standard condition to ascertain the potential effects from using an accommodation. In this technical report, we analyze teachers' perceptions of students proficiencies, needs, and experiences.

Methods

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

Setting and Subjects

The overall goal of the AS pilot study currently underway is to investigate the reliability and utility of the Accommodation Station (AS), an online decision-making model that helps IEP teams determine which testing accommodations are appropriate for individual students with

disabilities. The Accommodation Station pilot study took place in four states in the winter and spring; testing in one state began in March.

Teachers took the AS surveys twice within a two-week window between administrations. The test-retest design of this pilot study allowed us to determine if the AS was a reliable tool. A total of 140 teachers (90 from general education and 48 from special education) from four states rated 600 3rd, 5th, and 8th grade students regarding students' proficiency, easiness with test-related activities, and potential benefits of test accommodations, and the degree of current test accommodations that these students are receiving.

In general, two teachers (a general education and a special education teacher) per student responded to a set of online survey questions about their students' skills and abilities, as well as the instructional strategies and accommodations they employed with individual students. However, the actual number of teachers was fewer than that of students rated because in many cases one teacher rated more than one student (such as more than 15 students).

Measurement/Instrument Development

To examine teachers' response on large-scale test accommodations, we asked teachers to rate four major components in making a recommendation to accommodate a student with disabilities: (a) ratings of student proficiency in academic areas (5 items scaled: *1=Not at all proficient, 2=Not very proficient, 3=Fairly proficient, 4=Highly proficient, 5=Very highly proficient*), (b) judgments about ease with which students can engage in various test-taking related activities (6 items scaled: *1=Not easy, 2=Somewhat Easy, 3=Very Easy*), (c) estimates of benefit from receiving an accommodation in mathematics (13 items scaled: *1=No benefit, 2=Minimal benefit, 3=Some benefit, 4=Strong benefit*), and (d) the provision various accommodation (13 items scaled: *1=Never, 2=Sometimes, 3=Often, 4=Always*). (See the items below Tables 2-5.)

Design and Operational Procedures

The following materials for the Accommodation Station pilot studies were drafted and sent to partner states: sample district superintendent letter, sample parent notification letter, AS parent survey, a list of teacher roles and responsibilities, and talking points on the AS for recruiting schools. Partner state contracts also were drafted and sent to partner states for review. Data was collected between October 2005 and May 2006 using the software from the Internet Accommodation Station.

Data Preparation and Analysis

Descriptive statistics and test-test stability were analyzed for each of these dimensions. For calculating mean ratings, all the students' scores within the same teacher aggregated for each item. To examine teachers' consistency in ratings of the four components, we presented two types of data, including exact match proportions and rating differences between two sessions. The former indicates consistency of teachers' responses and the latter shows directions of rating changes. The higher numbers of the proportion mean the higher degree of match (more consistent) between two times. The rating differences were calculated by subtracting the mean ratings of time 1 from those of time 2. Negative numbers indicate that ratings at time 2 decreased and the positive numbers indicate an increase. Additionally, we compared general and special education teachers' ratings and their consistency. Finally, we examined any possible single effects of grades and interactive effects of grades and teachers' locations by using univariate analysis of variance.

Results

Descriptive statistics are reported for students' proficiency on five academic areas in Table 2. Students generally were rated as not very proficient in five different academic areas. On

a scale of 1-5, they were rated just above a 2; only in one state were the ratings above 3. See Table 2.

Perceptions on Students' Proficiency on Test-taking Related Activities

Teachers also judged that many (test related) activities would be 'not easy' for students; again, in one state the ratings were higher. The one activity that consistently appeared the most difficult was 'take a lengthy test.' See Table 3.

Ratings on Potential Benefit of Accommodations

When asked about the potential benefit of various accommodations in mathematics testing, teachers rated many of them quite highly or very highly (near or above 3 on a 4 point scale): reading problems and directions aloud, simplifying language, extending the length of testing sessions, administering the test in multiple sessions, using selection type response [items 24], and using manipulatives. In contrast, teachers did not see much benefit from translating the test (from English to another language), allowing student to respond to questions in an open-ended formats alternatively, or magnifying the test of problems and directions. See Table 4.

Reporting of the Provision of Accommodations

When teachers were asked to reflect on the use of various accommodations, their responses were lower than in their ratings of potential benefit. Teachers from one state were noticeably lower in their ratings. See Table 5.

Consistency of Teachers' Rating

Teachers' ratings were analyzed for their stability by having them resubmit their ratings within a 3-week period. When rating students' proficiencies, about 70-75% of the teachers rated exactly the same at both sessions, and no significant difference of ratings between two sessions was found. See Table 6 and Table 10.

When making judgments about easiness of students' engagement in various activities, teachers from most states were more consistent from time one to time two, averaging about 75%-85%. The difference in ratings was ignorable. See Table 7 and Table 11.

Teachers' judgments about the benefit from using various accommodations were inconsistent from time 1 to time 2, showing consistency around 50%. In general, teachers' ratings went down at time 2. However, teachers showed very high consistency on presenting problems with other than English (Q 18). See Table 8 and Table 12.

When asked about providing various accommodations most teachers were very inconsistent, with the exception of teachers from one state and of the item (Q31) on language accommodation. Except one state, teachers' ratings went down at time 2. See Table 9 and Table 13.

Teachers' Position and Grade Interaction

In general, teachers from higher grades rated students' proficiency more positively than other teachers. No position effects were found, except on using a computer mouse. See Table 14. In terms of easiness with test-related activities, teachers rated aged students higher than younger students. See Table 15. Regarding the benefits of test accommodations, special education teachers or 5th grade teachers perceived them more positively. See Table 16. Teachers did not show much difference according to their positions or grade with regard to the provisions of test accommodations. See Table 17.

Discussion

The preliminary findings from this study indicate that decision-making for accommodations is very difficult to reliably complete (using student results) and reveals mixed results: The reliability of teacher perceptions may be poor. Even though teachers' ratings on students' proficiency and easiness with test-related activities were relatively consistent, their

views on potential benefits of test accommodations were not reliable from time 1 to time 2. In fact, teachers' ratings from two states slightly went down at time 2. In addition, most teachers were very inconsistent with providing various accommodations, with the exception of teachers from one state.

Teacher unreliability about perceptions is difficult to explain, particularly their experience with having previously used various accommodations in the classroom. Perhaps their lack of consistency in noting their accommodation is a function of the 'noticeability' of the accommodations: Teachers use them in such a manner that it becomes part of the fabric of instruction and students don't even notice it when asked to reflect on it. It also may be due to the manner in which we labeled the accommodations on the survey: Though students receive a particular accommodation, their teacher never labels it as such. Finally, their lack of consistency may indeed reflect the lack of consistency in receiving it and their responses function from their most recent experience.

Differences between general and special education teachers on students' proficiency, potential benefits of test accommodations, and provisions of test accommodations in some states were noticeable. Whenever the differences were statistically significant, it favored special education teachers; that is, they rated more positively students' proficiency and potential benefits of test accommodations, and provided more test accommodations. The reason for the differences is not clear, but somehow it may be related to the current test accommodation practices in their schools. For example, if teachers experienced positive aspects of test accommodations or were looking for various test accommodation services, they might have rated highly the potential benefits of test accommodations.

Whatever the reason for the marginal reliability (stability) of perceptions that are relevant for making recommendations for accommodations, much more clear and explicit training is

needed. This training may focus on any of the four systems that were reviewed in the introduction. Using Fuchs and Fuchs (2001) system, teachers would be trained on the administration of curriculum-based measures and then its use in making decisions. DeStephano, Shriner, and Lloyd (2001) already have a clear training system that appears to be effective in linking classroom use with use in large-scale testing; it does not, however, help in making the initial recommendation for use in the classroom and does not relate to actual student performance. Elliott's system (Schulte, Elliott, & Kratochwill 2001) for teachers to follow a checklist is standard practice but, like the IEP analysis model, fails to relate to students' actual access skills; furthermore, the reliability (stability) of the checklist needs to be verified much the same as noted in this study. Finally, the Accommodation Station itself (Ketterlin-Geller, Yovanoff, & Tindal, in press) may need further study in the manner in which it is packaged and used.

Reliability of Teacher Decision-Making in Recommending Accommodations for Large-Scale Tests

Accommodations in large-scale testing are often used in large-scale tests, though it is somewhat uncertain how and why they appear to be effective with which students. The empirical support for them is inconsistent within and across subject areas and even though they sometimes appear to be effective, they also appear to be either inert (not work for anyone) or overly effective (work for everyone). It is not yet possible, therefore, to simply move research to practice in adopting wide scale adoption of specific accommodations that have passed the test of replicable empirical support. Yet, large-scale testing requires their application. To bridge this gap, the research on accommodations has begun to focus on how teachers make the decision to recommend specific changes in testing.

Teacher Decision-Making on Accommodations

For the last decade, the need has exited to understand practice in teacher decision-making for no other reason than that we know so little about it. Indeed, the early findings reported by Hollenbeck, Tindal, and Almond (1998) indicates that only 55% of the general and special education teachers are correct in determining whether or not an accommodation is allowable. Even more problematic is the finding that special and general education teachers are not different from each other according to these authors.

Though not directly focused on accommodations, Crawford, Almond, Tindal & Hollenbeck (2002) studied teachers' perceptions of the participation of students with disabilities in large-scale testing by organizing their comments into three categories: (a) teacher knowledge, (b) teacher attitude (in which the comments were not as abundant but were quite emotional), and (c) teacher decision-making (which contained the majority of comments). In this last category, they reported similar findings to those reported by Jayanthi, Polloway, and Bursuck (1996): Many decisions about participation in large-scale tests are made by individual teachers not by Individualized Educational Program (IEP) teams. Individual student characteristics (and basic skills) were the primary reference in making these decisions. As they conclude: "Teachers should be trained to use student performance data to validate these [inclusion] decisions…special service providers should develop a firm understanding of test accommodations available to students with disabilities" (p. 114). As two teachers so eloquently stated the problem in the Crawford, Almond, Tindal & Hollenbeck (2002) study: "I think we need to be trained and more information should be disbursed for us" and "We have some accommodations and some modifications but it looks like it's not clear how far we can push the envelope" (p. 107).

Using a similar focus group methodology, Ysseldyke, Thurlow, Bielinski, House, Moody, & Haigh, (2001) investigated the alignment of test accommodations with those used in

instruction (specifically IEPs): “If a student had an IEP goal, it was very likely that the student received an accommodation for instruction in that area” (p. 216). Indeed, 82% of the students in their sample received some form of accommodation though no differences were found by disability prevalence or type. Importantly, 84% had instructional accommodations that matched their testing accommodations. Though they distinguished between accommodations and modifications, it appeared that this distinction was based solely on the orientation to the standards, as reading the reading test was viewed as an accommodation.

Given that teachers may or may not even be knowledgeable about allowable accommodations and with the pressure to ensure that accommodations in their classrooms are consistent with those used in the testing situation, it is important to support teachers decision-making practices at the same time as basic research on accommodations is proceeding. This kind of support must come from supplemental information that is collected in addition to the purely descriptive information on state test results for two reasons. First, such outcome data usually represent post hoc results and teachers need information to make the initial decision. Second, descriptive information on state test results from accommodated and non-accommodated conditions is confounded by student characteristics (non-accommodated students are likely to be a different population of students than those who have been recommended to receive an accommodation).

Four systems have emerged for understanding teacher decision-making on accommodations, differing primarily on the source of data that they use. For Fuchs and colleagues, the focus has been on using curriculum-based measurement (CBM) as companion data for making decisions about accommodations and their effects. Basically, teachers administer a basic skills measure in reading or mathematics to make a prediction about the need for an accommodation; in their research designs, this prediction is compared to those made by teachers

using informal information. For Elliott and colleagues, the source of information is a checklist on accommodations that help structure teachers' rationale for recommending accommodations. DeStephano and colleagues focus on students' Individualized Educational Programs (IEPs) to ascertain the need for accommodations (and consistency with instructional use). Finally, Tindal, Ketterlin-Geller and colleagues use CBM as part of a diagnostic prediction that can be confirmed by documenting the effects of accommodations. Following are some specific findings from these four systems for recommending accommodations.

Fuchs and Colleagues

"One major obstacle to valid participation is the lack of standard methods for determining which testing accommodations preserve the meaningfulness of scores (Fuchs & Fuchs, 2001, p. 174). Because the research base is thin, the population of students with disabilities is heterogeneous, and teachers have difficulty making recommendations when using informal judgments, they propos making data based decisions. Their system – Dynamic Assessment of Test Accommodations – is designed to assist teachers in making recommendations for test accommodations that include extended time, reading problems aloud (in math), use of calculators, an adult writing non-mathematical responses, and large print. Accommodations are recommended by comparing a student's boost to that which can be expected (based on normative information from a population of students with learning disabilities).

In comparing accommodations recommended in this system with those recommended by teachers (or assigned at random), they reported significant differences: "Students to whom DATA had awarded accommodations earned larger boosts as a function of having those accommodations, compared to the subset to whom DATA had denied accommodations. The effect size was 0.34 standard deviations" (p. 179). Teachers both awarded and denied accommodations in a manner that reflected false positives and false negatives.

Elliott and Colleagues

Schulte, Elliott, and Kratochwill (2001) used case vignettes to study the selection of assessment accommodations using a research design that allowed them to study the nature of the disability and the type of the assessment task. Using the Assessment Accommodations Checklist (a checklist with 74 accommodations divided among eight categories and rated on use, potential helpfulness, and fairness, they described their purpose as examining "educators' perceptions of the MC as a tool for generating accommodation ideas and then documenting and evaluating assessment accommodations used with students" (p. 47). They reported five findings:

1. No differences existed in the selection of accommodations for students with significant disabilities versus learning disabilities.

2. Accommodations were judged as equally helpful for both these student populations.

3. More accommodations were selected for production (performance) assessments than selection-response assessments (e.g., multiple-choice test).

4. Some recommended accommodations were rated as more helpful and fair for performance assessments than others.

5. The checklist was deemed to be a relevant and useful tool.

DeStephano, Shriner and Colleagues

DeStephano, Shriner, and Lloyd (2001) developed a model for training teachers on decision-making for participation in large-scale assessments that was based on present levels of performance in their IEPs. Working from the perspective that assessment accommodations should be parallel with those used in instruction (using the IEP as a proxy for instruction) and assuming that accommodations should be implemented to "mediate the effects of 'access' deficits but not invalidate the assessment of 'target' skills" (p. 9), they created six scenarios for participation and trained teachers how to make decisions about accommodations. In their

training, they included information about IDEA requirements, IEP modifications, familiarity with content standards, and a flow chart illustrating how IEPs could be used for accommodation and participation decisions. Finally, they considered both the participation of the student in the general curriculum, the use of accommodations, and the roles of both general and special education teachers. They reported significant changes in the participation rates and accommodation patterns as a result of their training and in relation to accessing the general curriculum with appropriate accommodations. "After training, teachers' decisions about assessment participation and accommodation did show a stronger link to students' access to the general curriculum and needed instructional accommodations than decisions prior to training. Accommodations for target skills are markedly reduced" (p. 18).

Tindal, Ketterlin-Geller and Colleagues

This group of researchers has approached the process for recommending accommodations with a computer-based accommodation station (AS) in which a series of basic skills assessments are administered and perceptions are documented with a report generated for IEP teams to use in making a recommendation. A series of statements are presented that address student skills, interests, and benefit from various changes to the testing situation. Teachers and students responded on a scale of agreement, representativeness, or likelihood. These items reflect the field-testing work conducted by Alonzo, Ketterlin-Geller, and Tindal (2004).

In addition to these perception measures, a series of curriculum-based measures are also available for students to take. Three of these measures ascertain their skill in reading (silent reading, literal comprehension, and sentence vocabulary) and one of them documents their computational skill. The current study does not document any results from these measures as the focus is on teacher perception alone.

Summary of Teacher-decision Making on Accommodations

The four models for making accommodations recommendations vary primarily in the data sources that are used and may vary in their technical adequacy. At this point, the CBMs from the Fuchs look very promising, the accommodations checklists from Elliott appear very popular, the focus on IEPs by DeStefano highly relevant, and the Accommodation Station potentially useful for IEP teams. Yet, further research is needed on all of them.

As Bolt and Thurlow (2004) recommend, the following practices should be followed:

1. Make the skills explicit prior to making accommodations decisions.
2. Use the least intrusive accommodations.
3. Align assessment with instruction.
4. Train test administrators in implementation of the accommodation.
5. Anticipate difficulties and be prepared to address challenges.
6. Monitor accommodations outcomes for individual students.

It is quite likely that the experimental research on accommodations needs to move to a field-based platform that both allows teachers to make decisions and systematically investigates the effects using randomized designs. In this process, more careful analysis of the achievement construct is needed at the item level and more rich descriptions are needed of the populations being tested.

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Table1.
Numbers of teachers and students rated.

State	No. of Teachers	No. of Students	Mode of Rated Students	No of Teachers within Mode
ST1	67	197	3	32
ST2	32	124	3	8
ST3	32	64	1	20
Total	140	600		

Table 2.
Teachers' ratings of student proficiency (based on ratings at time 1).

		State 1			State 2			State 3		
Gr	Q	N	M	SD	N	M	SD	N	M	SD
3rd	1	11	1.62	.67	10	1.91	.529	14	2.17	.674
	2	11	1.51	.50	10	1.76	.448	14	2.00	.569
	3	11	2.08	.83	10	2.73	.580	14	2.49	.830
	4	11	1.51	.59	10	2.15	.645	14	2.15	.556
	5	11	2.99	.62	10	3.10	.522	14	3.29	.469
Mean		11	1.94	.64	10	2.33	.545	14	2.42	.620
5th	1	16	1.54	.56	7	2.25	.924	13	2.04	.714
	2	16	1.78	.64	7	1.93	.675	13	1.80	.448
	3	16	2.20	1.04	7	2.57	.766	13	2.81	.488
	4	16	1.88	.94	7	1.92	.902	13	2.46	.619
	5	16	3.26	1.12	7	4.11	.405	13	3.87	.602
Mean		**16**	**2.13**	**.86**	**7**	**2.56**	**.734**	**13**	**2.60**	**.574**
8th	1	38	2.49	.69	7	3.01	.473	4	2.75	.957
	2	38	2.37	.65	7	2.72	.544	4	2.75	.500
	3	33	2.40	.65	7	2.97	.119	4	3.00	.000
	4	34	2.46	.78	7	2.84	.210	4	2.75	.500
	5	34	3.08	.85	7	3.84	.687	4	4.50	.577
Mean		35.4	2.56	.72	7	3.08	.407	4	3.15	.507

1-How proficient is the student in reading grade level material?
2-How proficient is the student in writing?
3-How proficient is the student in math computation?
4-How proficient is the student in math problem solving?
5-How proficient is the student in using a computer mouse?
1=Not at all proficient, 2=Not very proficient, 3=Fairly proficient, 4=Highly proficient, 5=Very highly proficient

Table 3.
Teachers' ratings of how easy it is for the student to engage in various activities.

		State 1			State 2			State 3		
Gr	Q	N	M	SD	N	M	SD	N	M	SD
3rd	10	11	1.20	.29	9	1.51	.588	14	1.29	.404
	11	10	1.70	.45	9	1.98	.452	14	1.65	.594
	12	11	1.27	.32	9	1.35	.424	14	1.49	.486
	13	11	1.57	.48	9	1.76	.464	14	1.79	.433
	14	11	1.05	.13	9	1.14	.210	14	1.14	.320
	15	11	1.86	.69	10	1.65	.474	13	1.73	.439
Mean		10.83	1.44	.39	9.17	1.57	.435	13.83	1.52	.446
5th	10	16	1.34	.41	7	1.73	.685	13	1.40	.514
	11	16	1.91	.53	7	2.20	.480	13	2.08	.686
	12	15	1.40	.42	7	1.51	.726	13	1.43	.440
	13	16	1.73	.47	7	1.91	.599	13	1.87	.600
	14	16	1.12	.26	7	1.26	.394	13	1.37	.463
	15	14	1.95	.34	6	2.33	.516	13	1.86	.468
Mean		15.5	1.58	.405	6.83	1.82	.567	13	1.67	.529
8th	10	38	1.70	.65	7	1.86	.417	4	1.75	.500
	11	38	1.83	.60	7	2.32	.368	4	2.50	.577
	12	38	1.87	.58	7	1.89	.330	4	2.00	.816
	13	38	2.11	.49	7	2.44	.464	4	2.50	.577
	14	38	1.51	.54	7	1.62	.422	4	2.00	.000
	15	30	2.10	.60	6	2.64	.501	4	2.25	.500
Mean		36.67	1.85	.58	6.83	2.13	.417	4	2.17	.495

10-Work independently for 45-60 minutes.
11-Work in whole class activities.
12-Read and understand directions.
13-Take short quizzes.
14-Take lengthy tests.
15-Take a test on the computer.
1=Not easy, 2=Somewhat Easy, 3=Very Easy

Table 4.
Teachers' ratings of the benefit from taking a math test under various accommodations.

		State 1			State 2			State 3		
Gr	Q	N	M	SD	N	M	SD	N	M	SD
3rd	16	11	3.62	.51	9	3.59	.703	14	3.79	.365
	17	11	3.69	.48	9	3.66	.442	14	3.46	.605
	18	11	1.00	.00	0	0	0	14	1.00	.000
	19	11	2.89	.86	9	3.10	.742	14	3.65	.519
	20	11	3.24	.65	9	3.06	1.130	13	3.41	.606
	21	11	2.84	.89	7	1.81	.836	13	2.98	.866
	22	10	2.48	.88	8	1.79	.907	13	2.97	1.251
	23	11	2.28	.85	9	1.67	.866	14	1.49	.933
	24	11	1.59	.40	9	1.89	.601	14	2.28	1.057
	25	11	3.46	.52	9	2.67	.866	12	3.24	.584
	26	11	3.54	.50	9	2.78	.972	13	3.52	.681
	27	11	2.98	.35	7	3.49	.672	13	2.86	1.041
	28	11	3.07	.43	9	3.07	1.241	13	3.23	.655
Mean		10.92	2.82	.56	7.92	2.72	.832	13.38	2.91	.705
5th	16	16	3.59	.50	6	3.68	.402	12	3.90	.288
	17	16	3.74	.44	6	3.55	.464	12	3.71	.620
	18	16	1.06	.25	0	0	0	13	1.00	.000
	19	16	3.19	.65	5	3.27	.514	12	3.71	.448
	20	16	2.92	.51	6	3.10	.787	12	3.39	.638
	21	15	2.78	1.00	5	3.01	.895	12	2.89	1.015
	22	16	2.16	1.06	5	2.42	1.064	12	3.27	.938
	23	16	2.32	.84	6	1.46	.813	13	1.60	.822
	24	16	1.71	.74	6	1.67	1.211	12	2.57	.768
	25	16	3.32	.48	6	3.13	.712	12	3.58	.470
	26	16	3.27	.65	7	3.46	.509	12	3.60	.545
	27	16	2.99	.78	7	3.54	.509	12	3.52	.456
	28	15	2.92	.96	5	3.03	.854	12	3.45	.713
Mean		15.85	2.77	.68	5.38	2.94	.728	12.15	3.09	.594
8th	16	36	3.43	.69	6	3.61	.486	4	3.25	.500
	17	36	3.50	.61	6	3.83	.258	4	2.25	.500
	18	36	1.04	.25	0	0	0	4	1.50	1.000
	19	36	2.71	.71	6	3.31	.514	4	3.75	.500
	20	36	2.68	.83	5	3.80	.447	3	3.33	.577
	21	35	2.31	.80	6	2.41	1.041	4	2.75	.957
	22	35	2.43	.91	5	2.43	1.485	4	2.25	1.500
	23	35	1.84	.83	6	2.33	1.211	4	2.00	1.155
	24	36	1.78	.58	6	2.31	.927	4	2.00	1.155
	25	36	3.23	.63	6	2.97	.933	4	3.00	.816
	26	36	3.36	.69	6	2.83	.753	4	3.50	.577
	27	35	3.06	.59	6	3.83	.408	4	3.50	.577
	28	35	2.98	.69	6	2.95	.876	4	3.00	.000
Mean		35.62	2.64	.68	5.38	3.05	.778	3.92	2.78	.755

16-Read problems and directions aloud.
17-Simplify language in problems and directions.
18-Present problems written in a language other than English.
19-Extend length of testing sessions.
20-Administer test in multiple short testing sessions.
21-Allow student to work alone in a separate testing location.
22-Allow student to respond to questions in alternate formats as typing, pointing, or with the use of a scribe.
23-Magnify text of problems and directions.
24-Allow student to respond to questions in an open-ended format where he/she provides the answer in writing.
25-Allow student to respond to questions in a multiple choice response format where he/she selects the best answer from a list of choices.
26-Use a variety of manipulatives.
27-Use a calculator.
28-Reformat the test to include fewer numbers of questions per page.
1=No benefit, 2=Minimal benefit, 3=Some benefit, 4=Strong benefit

Table 5.
Teachers' ratings of the provision of various accommodations.

		State 1			State 2			State 3		
Gr	Q	N	M	SD	N	M	SD	N	M	SD
3rd	29	11	3.33	.47	9	3.53	.510	14	3.79	.426
	30	11	3.07	.71	9	2.96	.410	14	3.34	.918
	31	11	1.00	.00	9	1.00	.000	14	1.00	.000
	32	11	2.35	.50	9	2.37	.484	14	3.24	.809
	33	11	2.17	.37	9	1.85	.530	14	2.50	.760
	34	11	1.91	.46	9	1.42	.504	13	2.08	.791
	35	11	1.84	.82	9	1.44	.527	14	2.35	.718
	36	11	1.63	.60	9	1.00	.000	14	1.23	.421
	37	11	2.17	.28	9	1.78	.667	13	2.44	.980
	38	11	2.89	.16	9	2.67	.707	14	2.67	.762
	39	11	2.97	.51	9	2.48	.503	13	3.43	.559
	40	11	1.98	.48	9	1.50	.483	12	2.37	1.069
	41	11	2.00	.84	9	2.00	.707	13	2.46	.967
Mean		11	2.25	.48	9	2.00	.464	13.54	2.53	.706
5th	29	16	3.52	.40	6	2.93	1.108	13	3.72	.433
	30	16	3.20	.66	7	2.71	1.254	13	3.40	.472
	31	16	1.00	.00	7	1.00	.000	13	1.00	.000
	32	16	2.80	.85	6	2.88	.801	13	3.42	.703
	33	16	2.28	.45	6	1.96	1.054	12	2.41	.468
	34	16	1.81	.62	6	2.12	1.116	13	2.15	1.052
	35	16	1.76	.71	7	1.39	.497	13	2.61	.589
	36	16	1.61	.57	7	1.36	.748	13	1.58	.641
	37	16	2.49	.43	6	1.96	1.100	13	1.97	.683
	38	16	2.84	.22	6	2.31	.560	13	2.65	.474
	39	16	2.81	.52	6	2.47	.838	13	3.02	.791
	40	16	1.95	.62	4	1.94	.125	13	2.60	1.017
	41	16	1.90	.52	6	1.92	1.021	13	2.83	.864
Mean		16	2.31	.51	6.15	2.07	.786	12.92	2.57	.630
8th	29	37	3.38	.63	6	3.78	.404	4	2.25	.500
	30	37	3.14	.70	7	3.43	.787	4	3.00	.816
	31	37	1.00	.00	7	1.00	.000	4	1.00	.000
	32	37	2.41	.54	7	2.81	1.127	4	3.50	1.000
	33	36	2.17	.45	6	2.19	.846	4	2.25	.957
	34	36	1.98	.59	7	1.63	.753	4	2.50	1.000
	35	37	1.71	.69	7	1.50	.764	4	1.50	.577
	36	37	1.45	.44	7	1.64	1.107	4	1.25	.500
	37	37	2.33	.44	7	2.05	.951	4	2.50	.577
	38	37	2.86	.35	7	2.79	.699	4	2.25	.500
	39	37	2.64	.57	7	2.57	1.134	4	2.25	.500
	40	37	1.96	.70	7	2.43	.976	4	2.25	.957
	41	37	2.08	.71	7	2.57	1.134	4	2.25	.500
Mean		36.85	2.24	.52	6.85	2.34	.822	4	2.21	.645

29-Read problems and directions aloud.
30-Simplify language in problems and directions.
31-Present problems written in a language other than English.
32-Extend length of testing sessions.
33-Administer test in multiple short testing sessions.
34-Allow student to work alone in a separate testing location.
35-Allow student to respond to questions in alternate formats as typing, pointing, or with the use of a scribe.
36-Magnify text of problems and directions.
37-Allow student to respond to questions in an open-ended format where he/she provides the answer in writing.
38-Allow student to respond to questions in a multiple choice response format where he/she selects the best answer from a list of choices.
39-Use a variety of manipulatives.
40-Use a calculator.
41-Reformat the test to include fewer numbers of questions per page.
1=Never, 2=Sometimes, 3=Often, 4=Always

Table 6.
Exact match proportions of teachers' ratings of student proficiency between two times.

		State 1			State 2			State 3		
Gr	Q	N	M	SD	N	M	SD	N	M	SD
3rd	1	11	.716	.342	8	.804	.280	11	.836	.367
	2	11	.758	.347	7	.514	.501	11	.803	.356
	3	11	.739	.427	7	.681	.367	11	.736	.390
	4	11	.830	.287	7	.633	.390	11	.479	.437
	5	11	.693	.423	8	.208	.396	11	.568	.501
Mean		11	.747	.365	7.4	.568	.387	11	.684	.410
5th	1	15	.882	.270	6	1.000	.000	12	.556	.398
	2	15	.820	.256	6	.900	.167	12	.743	.321
	3	14	.881	.201	6	.794	.231	12	.743	.354
	4	13	.813	.312	6	.514	.356	12	.806	.324
	5	13	.718	.448	6	.417	.492	12	.653	.484
Mean		14	.823	.297	6	.725	.249	12	.700	.376
8th	1	37	.740	.360	7	.722	.311	4	.250	.500
	2	37	.761	.364	7	.690	.476	4	.500	.577
	3	33	.784	.363	6	.749	.181	4	.750	.500
	4	33	.772	.361	6	.696	.247	4	.250	.500
	5	29	.668	.418	6	.754	.392	4	.500	.577
Mean		33.8	.745	.373	6.4	.722	.321	4	.450	.531

1-How proficient is the student in reading grade level material?
2-How proficient is the student in writing?
3-How proficient is the student in math computation?
4-How proficient is the student in math problem solving?
5-How proficient is the student in using a computer mouse?
1=Not at all proficient, 2=Not very proficient, 3=Fairly proficient, 4=Highly proficient, 5=Very highly proficient

Table 7.
Exact match proportions of teachers' ratings on how easy it is for the student to engage in various activities.

		State 1			State 2			State 3		
Gr	Q	N	M	SD	N	M	SD	N	M	SD
3rd	10	11	.947	.119	7	.581	.455	11	.886	.303
	11	10	.850	.319	7	.419	.455	11	.514	.482
	12	11	.939	.106	7	.714	.488	11	.659	.478
	13	11	.656	.437	7	.571	.535	11	.573	.478
	14	11	.958	.104	7	.424	.424	11	.955	.151
	15	10	.704	.398	8	.192	.350	10	.650	.474
Mean		10.67	.842	.247	7.17	.484	.451	10.83	.706	.394
5th	10	15	.800	.303	6	.717	.402	12	.779	.322
	11	15	.785	.318	6	.642	.375	12	.458	.498
	12	14	.921	.192	6	.633	.446	12	.875	.311
	13	15	.822	.271	6	.622	.417	12	.639	.431
	14	15	.978	.086	6	.783	.271	12	.611	.473
	15	14	.898	.241	5	.267	.435	12	.722	.391
Mean		14.67	.867	.235	5.83	.611	.391	12	.681	.404
8th	10	38	.645	.380	7	.839	.203	4	.750	.500
	11	38	.662	.419	7	.680	.359	4	.750	.500
	12	38	.753	.342	7	.678	.301	4	.500	.577
	13	38	.833	.306	7	.777	.231	4	.750	.500
	14	38	.824	.298	7	.826	.132	4	1.000	.000
	15	28	.831	.287	5	.229	.436	4	1.000	.000
Mean		36.33	.758	.339	6.67	.672	.277	4	.792	.346

10-Work independently for 45-60 minutes.
11-Work in whole class activities.
12-Read and understand directions.
13-Take short quizzes.
14-Take lengthy tests.
15-Take a test on the computer.
1=Not easy, 2=Somewhat Easy, 3=Very Easy

Table 8.
Exact match proportions of teachers' perceptions on the benefit from taking a math test under various accommodations.

		State 1			State 2			State 3		
Gr	Q	N	M	SD	N	M	SD	N	M	SD
3rd	16	11	.476	.362	7	.714	.488	11	.373	.456
	17	11	.568	.327	7	.629	.482	11	.536	.474
	18	11	1.000	.000	7	1.000	.000	11	1.000	.000
	19	11	.295	.386	10	.000	.000	11	.674	.448
	20	11	.433	.420	7	.529	.472	10	.490	.472
	21	11	.485	.450	5	.400	.548	10	.225	.416
	22	10	.200	.350	6	.500	.548	10	.425	.501
	23	11	.235	.335	7	.571	.535	10	.680	.473
	24	10	.298	.278	7	.571	.535	11	.477	.506
	25	10	.350	.412	7	.286	.488	9	.407	.494
	26	11	.273	.396	7	.657	.472	10	.500	.527
	27	9	.174	.212	5	.520	.502	10	.833	.324
	28	10	.317	.434	7	.657	.472	10	.767	.417
Mean		10.54	.393	.336	6.85	.541	.426	10.31	.568	.424
5th	16	16	.465	.411	5	.620	.415	11	.803	.400
	17	16	.615	.362	5	.420	.427	11	.682	.462
	18	16	.979	.083	6	1.000	.000	12	.972	.096
	19	15	.132	.283	5	.000	.000	11	.773	.410
	20	15	.267	.407	5	.200	.447	11	.682	.405
	21	13	.269	.357	4	.700	.476	11	.470	.458
	22	14	.369	.404	4	.650	.473	11	.500	.387
	23	15	.233	.301	5	1.000	.000	12	.528	.486
	24	15	.278	.387	5	.600	.548	11	.515	.486
	25	15	.354	.428	5	.240	.434	11	.621	.402
	26	16	.294	.386	5	.400	.548	11	.606	.436
	27	15	.386	.377	5	.600	.548	11	.462	.455
	28	13	.244	.389	4	.425	.435	11	.667	.453
Mean		14.92	.376	.352	4.85	.527	.365	11.15	.637	.410
8th	16	31	.434	.411	6	.784	.252	4	.500	.577
	17	31	.502	.417	6	.712	.373	4	.250	.500
	18	31	.962	.119	5	.933	.149	4	1.000	.000
	19	31	.344	.403	1	.000	.000	4	.500	.577
	20	29	.217	.336	5	.767	.435	3	.667	.577
	21	29	.278	.383	5	.290	.280	4	.250	.500
	22	29	.306	.393	3	.056	.096	4	.000	.000
	23	29	.341	.398	5	.667	.471	4	.500	.577
	24	31	.415	.441	5	.439	.464	4	.750	.500
	25	30	.325	.399	5	.600	.548	4	.750	.500
	26	31	.273	.360	5	.433	.522	4	.750	.500
	27	30	.323	.383	6	.667	.516	4	.500	.577
	28	30	.418	.455	5	.406	.434	4	1.000	.000
Mean		30.15	.395	.377	4.77	.520	.378	3.92	.571	.414

16-Read problems and directions aloud.
17-Simplify language in problems and directions.
18-Present problems written in a language other than English.
19-Extend length of testing sessions.
20-Administer test in multiple short testing sessions.
21-Allow student to work alone in a separate testing location.
22-Allow student to respond to questions in alternate formats as typing, pointing, or with the use of a scribe.
23-Magnify text of problems and directions.
24-Allow student to respond to questions in an open-ended format where he/she provides the answer in writing.
25-Allow student to respond to questions in a multiple choice response format where he/she selects the best answer from a list of choices.
26-Use a variety of manipulatives.
27-Use a calculator.
28-Reformat the test to include fewer numbers of questions per page.
1=No benefit, 2=Minimal benefit, 3=Some benefit, 4=Strong benefit

Table 9.
Exact match proportions of the provision of various accommodations.

		State 1			State 2			State 3		
Gr	Q	N	M	SD	N	M	SD	N	M	SD
3rd	29	11	.343	.283	7	.629	.482	11	.636	.505
	30	11	.200	.206	7	.171	.373	11	.705	.459
	31	11	1.000	.000	6	1.000	.000	11	1.000	.000
	32	11	.385	.252	7	.714	.488	11	.795	.400
	33	10	.270	.314	7	.800	.383	11	.636	.505
	34	10	.488	.281	7	.400	.503	10	.700	.483
	35	10	.377	.277	7	.857	.378	11	.694	.413
	36	10	.442	.369	7	.857	.378	10	.900	.316
	37	10	.429	.308	7	.714	.488	10	.525	.506
	38	10	.350	.319	7	1.000	.000	11	.788	.402
	39	11	.276	.380	7	.400	.503	10	.425	.501
	40	10	.353	.297	7	.543	.513	9	.519	.503
	41	10	.254	.202	7	.857	.378	10	.400	.516
Mean		10.38	.397	.268	6.92	.688	.374	10.46	.671	.424
5th	29	16	.191	.209	4	.700	.476	12	.604	.494
	30	16	.224	.249	4	.950	.100	12	.840	.307
	31	16	1.000	.000	5	1.000	.000	12	1.000	.000
	32	16	.270	.370	4	.475	.411	12	.583	.469
	33	16	.192	.205	5	.400	.548	11	.682	.405
	34	16	.189	.242	4	.600	.490	12	.472	.454
	35	16	.413	.341	4	.625	.479	12	.625	.433
	36	16	.474	.285	5	1.000	.000	12	.875	.311
	37	16	.321	.312	4	.750	.500	12	.479	.482
	38	16	.302	.361	4	.200	.400	12	.729	.419
	39	16	.257	.345	4	.857	.286	12	.368	.440
	40	16	.286	.307	4	.375	.479	12	.500	.477
	41	16	.295	.293	4	.500	.577	12	.431	.474
Mean		16	.340	.271	423	.649	.365	11.92	.630	.397
8th	29	36	.326	.358	6	.528	.452	4	.750	.500
	30	36	.229	.284	7	.643	.476	4	.750	.500
	31	36	1.000	.000	5	1.000	.000	4	1.000	.000
	32	36	.378	.409	7	.578	.449	4	.250	.500
	33	35	.279	.352	6	.778	.404	3	.333	.577
	34	35	.439	.393	7	.631	.451	3	1.000	.000
	35	36	.491	.400	7	.429	.535	4	.000	.000
	36	36	.490	.414	7	.429	.535	4	.500	.577
	37	36	.359	.409	7	.238	.418	4	.750	.500
	38	34	.398	.406	7	.500	.500	4	1.000	.000
	39	36	.280	.356	7	.429	.535	4	.750	.500
	40	35	.204	.323	6	.833	.408	4	.500	.577
	41	36	.313	.370	7	.714	.488	4	1.000	.000
Mean		35.62	.399	.344	6.62	.595	.435	3.85	.660	.325

29-Read problems and directions aloud.
30-Simplify language in problems and directions.
31-Present problems written in a language other than English.
32-Extend length of testing sessions.
33-Administer test in multiple short testing sessions.
34-Allow student to work alone in a separate testing location.
35-Allow student to respond to questions in alternate formats as typing, pointing, or with the use of a scribe.
36-Magnify text of problems and directions.
37-Allow student to respond to questions in an open-ended format where he/she provides the answer in writing.
38-Allow student to respond to questions in a multiple choice response format where he/she selects the best answer from a list of choices.
39-Use a variety of manipulatives.
40-Use a calculator.
41-Reformat the test to include fewer numbers of questions per page.
1=Never, 2=Sometimes, 3=Often, 4=Always

Table 10.
Mean rating differences of student proficiency between two sessions.

		State 1			State 2			State 3		
Gr	Q	M	SD	t	M	SD	t	M	SD	t
3rd	1	-.05	.451	NA	.10	.334	NA	-.02	.40	NA
	2	.06	.425	NA	.63	.752	NA	-.15	.35	NA
	3	.06	.504	NA	.22	.442	NA	-.17	.44	NA
	4	.03	.336	NA	.51	.711	NA	-.25	.85	NA
	5	.22	.481	NA	.54	.733	NA	.45	.52	NA
Mean		.06	.440	NA	.40	.594	NA	-.03	.51	NA
5th	1	.04	.332	NA	.00	.000	NA	-.08	.60	NA
	2	.08	.301	NA	.03	.197	NA	-.15	.38	NA
	3	.06	.331	NA	-.09	.306	NA	-.08	.36	NA
	4	-.04	.365	NA	.28	.470	NA	-.08	.36	NA
	5	-.18	.502	NA	.25	.758	NA	-.07	.52	NA
Mean		-.01	.366	NA	.09	.346	NA	-.09	.44	NA
8th	1	.02	.410	NA	-.21	.336	NA	.25	.96	NA
	2	.04	.387	NA	-.31	.597	NA	.00	.82	NA
	3	.08	.319	NA	-.03	.284	NA	.25	.50	NA
	4	.02	.357	NA	.03	.323	NA	.25	.96	NA
	5	.13	.460	NA	.14	.424	NA	-.50	.58	NA
Mean		.06	.387	NA	-.08	.393	NA	.05	.764	NA

1-How proficient is the student in reading grade level material?
2-How proficient is the student in writing?
3-How proficient is the student in math computation?
4-How proficient is the student in math problem solving?
5-How proficient is the student in using a computer mouse?
1=Not at all proficient, 2=Not very proficient, 3=Fairly proficient, 4=Highly proficient, 5=Very highly proficient

Table 11.
Mean rating differences of how easy it is for the student to engage in various activities between two sessions.

		State 1			State 2			State 3		
Gr	Q	M	SD	t	M	SD	t	M	SD	t
3rd	10	.00	.132	NA	.15	.620	NA	-.11	.30	NA
	11	-.05	.352	NA	.18	.750	NA	-.17	.84	NA
	12	-.02	.123	NA	.29	.488	NA	-.20	.56	NA
	13	.25	.504	NA	.43	.535	NA	-.21	.62	NA
	14	.02	.111	NA	.42	.598	NA	-.05	.15	NA
	15	-.25	.434	NA	.57	.779	NA	.15	.58	NA
Mean		-.01	.276	NA	.34	.628	NA	-.10	.508	NA
5th	10	.11	.349	NA	-.22	.449	NA	-.15	.39	NA
	11	-.10	.436	NA	-.21	.459	NA	-.23	.89	NA
	12	-.03	.206	NA	.03	.599	NA	-.13	.31	NA
	13	-.07	.320	NA	.38	.417	NA	-.04	.33	NA
	14	-.02	.086	NA	-.02	.256	NA	-.14	.61	NA
	15	-.10	.241	NA	-.73	.435	NA	-.01	.59	NA
Mean		-.04	.273	NA	-.13	.436	NA	-.17	.52	NA
8th	10	.06	.481	NA	-.09	.171	NA	.25	.50	NA
	11	.11	.420	NA	-.03	.416	NA	-.25	.50	NA
	12	-.01	.410	NA	-.21	.277	NA	.00	.82	NA
	13	.03	.322	NA	-.22	.231	NA	-.25	.50	NA
	14	.01	.330	NA	-.05	.210	NA	.00	.00	NA
	15	.01	.355	NA	-.87	.545	NA	.00	.00	NA
Mean		.04	.386	NA	-.25	.308	NA	-.04	.387	NA

10-Work independently for 45-60 minutes.
11-Work in whole class activities.
12-Read and understand directions.
13-Take short quizzes.
14-Take lengthy tests.
15-Take a test on the computer.
1=Not easy, 2=Somewhat Easy, 3=Very Easy

Table 12.
Mean rating differences of the benefit from taking a math test under various accommodations between two sessions.

		State 1			State 2			State 3		
Gr	Q	M	SD	t	M	SD	t	M	SD	t
3rd	16	-.40	.601	NA	.00	.577	NA	-.14	.78	NA
	17	-.23	.470	NA	-.09	.620	NA	.46	.47	NA
	18	.00	.000	NA	.00	.000	NA	.00	.00	NA
	19	.00	1.247	NA	-.17	1.067	NA	-.26	.51	NA
	20	-.39	.831	NA	-.19	.664	NA	-.13	.93	NA
	21	.36	1.263	NA	.80	1.643	NA	.45	1.29	NA
	22	-.44	1.420	NA	.83	.983	NA	.32	.97	NA
	23	-1.14	1.116	NA	-.29	.951	NA	.08	.58	NA
	24	.38	1.069	NA	.43	.535	NA	-.05	1.01	NA
	25	-.38	.786	NA	.57	.976	NA	.30	.73	NA
	26	-.59	.539	NA	.37	.836	NA	.13	.79	NA
	27	-.11	1.121	NA	.52	.502	NA	.20	.36	NA
	28	-.38	.809	NA	.14	.900	NA	.27	.44	NA
Mean		-.26	.867	NA	.22	.789	NA	.13	.68	NA
5th	16	-.35	.916	NA	-.42	.939	NA	-.08	.70	NA
	17	-.20	.855	NA	-.18	.750	NA	.14	.55	NA
	18	-.06	.250	NA	.00	.000	NA	.04	.14	NA
	19	-.80	1.142	NA	-.02	.369	NA	.23	.41	NA
	20	-.56	1.034	NA	-.36	1.203	NA	-.02	.56	NA
	21	-.45	1.400	NA	-.32	.789	NA	-.17	.85	NA
	22	-.63	1.356	NA	-.27	.320	NA	.03	1.12	NA
	23	-.96	1.350	NA	.00	.000	NA	.36	1.08	NA
	24	.27	1.174	NA	-.20	1.095	NA	-.15	.73	NA
	25	-.77	.867	NA	.14	1.095	NA	-.38	.40	NA
	26	-.58	1.437	NA	-.60	.548	NA	.02	.70	NA
	27	.07	1.494	NA	-.40	.548	NA	.17	.63	NA
	28	-.68	1.334	NA	-.22	1.001	NA	.38	.77	NA
Mean		-.44	1.124	NA	-.22	.666	NA	.04	.66	NA
8th	16	-.07	.964	NA	.05	.231	NA	-.50	.58	NA
	17	-.12	.893	NA	-.05	.523	NA	1.00	.82	NA
	18	-.02	.305	NA	.13	.298	NA	.00	.00	NA
	19	-.02	1.101	NA	.11	.293	NA	-.50	.58	NA
	20	.06	1.124	NA	-.17	.471	NA	-.33	.58	NA
	21	.22	1.017	NA	.01	.809	NA	.25	.96	NA
	22	-.61	1.115	NA	-.83	.289	NA	.50	1.00	NA
	23	-.22	1.309	NA	-.27	1.011	NA	-.25	1.26	NA
	24	.19	.875	NA	-.52	1.150	NA	.25	.50	NA
	25	-.25	.999	NA	.10	.894	NA	-.25	.50	NA
	26	-.76	1.203	NA	-.27	.723	NA	-.25	.50	NA
	27	-.05	1.135	NA	-.36	1.335	NA	-.50	.58	NA
	28	-.49	.877	NA	.29	1.094	NA	.00	.00	NA
Mean		-.16	.994	NA	-.14	.702	NA	-04	.60	NA

16-Read problems and directions aloud.
17-Simplify language in problems and directions.
18-Present problems written in a language other than English.
19-Extend length of testing sessions.
20-Administer test in multiple short testing sessions.
21-Allow student to work alone in a separate testing location.
22-Allow student to respond to questions in alternate formats as typing, pointing, or with the use of a scribe.
23-Magnify text of problems and directions.
24-Allow student to respond to questions in an open-ended format where he/she provides the answer in writing.
25-Allow student to respond to questions in a multiple choice response format where he/she selects the best answer from a list of choices.
26-Use a variety of manipulatives.
27-Use a calculator.
28-Reformat the test to include fewer numbers of questions per page.
1=No benefit, 2=Minimal benefit, 3=Some benefit, 4=Strong benefit

Table 13.
Mean rating differences of the provision of various accommodations between two sessions.

		State 1			State 2			State 3		
Gr	Q	M	SD	t	M	SD	t	M	SD	t
3rd	29	-.26	.711	NA	.20	.589	NA	-.27	.79	NA
	30	.09	1.059	NA	.29	.951	NA	-.07	.55	NA
	31	.00	.000	NA	0	0	NA	.00	.00	NA
	32	.11	.694	NA	.00	.577	NA	.23	.41	NA
	33	-.46	.573	NA	.20	.383	NA	-.45	.69	NA
	34	.16	.681	NA	.31	.747	NA	-.05	.69	NA
	35	-.62	.946	NA	.14	.378	NA	.34	.55	NA
	36	-.37	.781	NA	.14	.378	NA	.10	.32	NA
	37	.30	.499	NA	-.14	.900	NA	-.28	1.10	NA
	38	.03	.489	NA	.00	.000	NA	-.12	.70	NA
	39	-.59	.784	NA	.11	1.076	NA	-.60	.97	NA
	40	-.10	.734	NA	.60	.766	NA	-.19	.69	NA
	41	-.15	.834	NA	.14	.378	NA	.20	.79	NA
Mean		-.14	.676	NA	.17	.594	NA	-.09	.635	NA
5th	29	-.58	.901	NA	.30	.476	NA	-.31	.76	NA
	30	-.22	.996	NA	-.05	.100	NA	.03	.35	NA
	31	.00	.000	NA	0	0	NA	.00	.00	NA
	32	-.36	1.023	NA	.18	.624	NA	.33	.69	NA
	33	-.49	.765	NA	1.00	1.000	NA	.00	.45	NA
	34	.25	.960	NA	.42	.723	NA	.00	.88	NA
	35	-.50	.827	NA	.38	.479	NA	-.15	.54	NA
	36	-.42	.634	NA	.00	.000	NA	.04	.33	NA
	37	-.27	.734	NA	-.50	1.000	NA	.10	.72	NA
	38	-.27	.926	NA	.70	.600	NA	-.02	.57	NA
	39	-.61	.824	NA	.14	.286	NA	-.11	1.02	NA
	40	.28	1.253	NA	.88	.854	NA	.01	1.17	NA
	41	-.47	.705	NA	.50	.577	NA	.26	.88	NA
Mean		-.28	.811	NA	.33	.560	NA	.01	.64	NA
8th	29	-.36	.990	NA	-.03	.687	NA	.25	.50	NA
	30	-.22	1.154	NA	.21	.567	NA	-.25	.50	NA
	31	.00	.000	NA	0	0	NA	.00	.00	NA
	32	-.08	.777	NA	.58	.828	NA	-.25	.96	NA
	33	-.34	.757	NA	.31	.499	NA	.00	1.00	NA
	34	.05	.579	NA	.49	1.191	NA	.00	.00	NA
	35	-.45	.717	NA	.50	1.118	NA	1.00	.00	NA
	36	-.04	.946	NA	.07	.932	NA	.25	1.26	NA
	37	-.04	.909	NA	.24	1.134	NA	-.25	.50	NA
	38	.07	.777	NA	.21	.699	NA	.00	.00	NA
	39	-.28	.882	NA	-.43	.976	NA	.25	.50	NA
	40	.21	1.180	NA	-.17	.408	NA	.25	1.26	NA
	41	-.40	.950	NA	-.14	.900	NA	.00	.00	NA
Mean		-.14	.817	NA	.15	.828	NA	.10	.50	NA

29-Read problems and directions aloud.
30-Simplify language in problems and directions.
31-Present problems written in a language other than English.
32-Extend length of testing sessions.
33-Administer test in multiple short testing sessions.
34-Allow student to work alone in a separate testing location.
35-Allow student to respond to questions in alternate formats as typing, pointing, or with the use of a scribe.
36-Magnify text of problems and directions.
37-Allow student to respond to questions in an open-ended format where he/she provides the answer in writing.
38-Allow student to respond to questions in a multiple choice response format where he/she selects the best answer from a list of choices.
39-Use a variety of manipulatives.
40-Use a calculator.
41-Reformat the test to include fewer numbers of questions per page.
1=Never, 2=Sometimes, 3=Often, 4=Always

Table 14.
General and special education teachers' ratings on students' proficiency.

		Ged			Sped			All		
Gr	Q	N	M	SD	N	M	SD	N	M	SD
3rd	1	22	2.04	0.75	13	1.85	0.65	35	2.00	0.71
	2	22	1.95	0.65	13	1.67	0.63	35	1.85	0.65
	3	22	2.56	0.81	13	2.35	0.85	35	2.51	0.81
	4	22	2.09	0.76	13	1.89	0.69	35	2.02	0.73
	5	22	3.22	0.62	13	3.17	0.53	35	3.20	0.58
Mean		22	2.37	0.72	13	2.19	0.67	35	2.32	0.70
5th	1	24	1.84	0.79	12	2.20	0.89	36	1.96	0.83
	2	24	1.74	0.59	12	2.15	0.61	36	1.87	0.62
	3	24	2.31	0.90	12	2.90	0.70	36	2.50	0.87
	4	24	1.99	0.92	12	2.27	0.86	36	2.09	0.90
	5	24	3.46	0.93	12	4.09	0.78	36	3.67	0.92
Mean		24	2.27	0.83	12	2.72	0.77	36	2.42	0.83
8th	1	37	2.52	0.75	15	2.90	0.57	52	2.63	0.72
	2	37	2.48	0.76	15	2.62	0.60	52	2.52	0.71
	3	32	2.45	0.70	14	2.90	0.34	46	2.59	0.65
	4	33	2.54	0.83	14	2.78	0.36	47	2.61	0.73
	5	33	3.24	1.06	15	3.84	0.64	48	3.43	0.98
Mean		34	2.65	0.82	15	3.01	0.50	49	2.76	0.76

Table 15.
The effects if teacher's position and grade on their ratings of how easy it is for the student to engage in various activities.

		Ged			Sped			All		
Gr	Q	N	M	SD	N	M	SD	N	M	SD
3rd	10	21	1.26	0.44	13	1.36	0.60	34	1.30	0.50
	11	21	1.86	0.49	12	1.74	0.59	33	1.82	0.52
	12	21	1.50	0.49	13	1.35	0.43	34	1.44	0.47
	13	21	1.85	0.48	13	1.58	0.49	34	1.74	0.49
	14	21	1.19	0.40	13	1.04	0.12	34	1.13	0.33
	15	22	1.81	0.59	12	1.81	0.56	36	1.82	0.55
Mean		21.17	1.58	0.48	12.67	1.48	0.47	34.17	1.54	0.48
5th	10	24	1.47	0.55	12	1.60	0.66	36	1.51	0.58
	11	24	2.03	0.60	12	2.06	0.68	36	2.04	0.62
	12	23	1.36	0.44	12	1.82	0.57	35	1.51	0.53
	13	24	1.79	0.52	12	1.91	0.68	36	1.83	0.57
	14	24	1.24	0.41	12	1.35	0.48	36	1.27	0.43
	15	22	1.97	0.41	11	2.08	0.70	33	2.01	0.52
Mean		23.50	1.64	0.49	11.83	1.80	0.63	35.33	1.70	0.54
8th	10	37	1.71	0.67	15	1.96	0.51	52	1.78	0.63
	11	37	1.87	0.60	15	2.23	0.60	52	1.98	0.62
	12	37	1.99	0.62	15	1.90	0.54	52	1.96	0.59
	13	37	2.17	0.49	15	2.32	0.60	52	2.21	0.52
	14	37	1.61	0.60	15	1.73	0.55	52	1.64	0.58
	15	29	2.22	0.62	14	2.33	0.62	43	2.26	0.61
Mean		35.67	1.93	0.60	14.83	2.08	0.57	50.50	1.97	0.59

Table 16.
The effects if teacher's position and grade on their ratings of the benefit from taking a math test under various accommodations.

		Ged			Sped			All		
Gr	Q	N	M	SD	N	M	SD	N	M	SD
3rd	16	21	3.72	0.57	13	3.66	0.62	34	3.70	0.58
	17	21	3.48	0.69	13	3.72	0.44	34	3.58	0.61
	18	21	1.00	0.00	13	1.00	0.00	34	1.00	0.00
	19	21	3.28	0.64	13	3.14	0.93	34	3.23	0.76
	20	21	3.10	0.88	12	3.47	0.57	33	3.23	0.79
	21	18	2.41	1.01	13	2.91	1.02	31	2.62	1.03
	22	19	2.33	1.08	12	2.63	1.15	31	2.45	1.10
	23	21	1.70	0.89	13	1.79	1.07	34	1.74	0.95
	24	21	1.98	0.75	13	1.75	0.92	34	1.90	0.82
	25	20	3.07	0.84	12	3.31	0.62	32	3.16	0.77
	26	20	3.31	0.87	13	3.44	0.63	33	3.36	0.78
	27	19	3.18	0.68	12	2.88	1.05	31	3.06	0.84
	28	20	3.00	0.92	13	3.29	0.55	33	3.11	0.80
Mean		20.23	2.74	0.76	12.69	2.85	0.74	32.92	2.78	0.76
5th	16	22	3.71	0.49	12	3.81	0.33	34	3.75	0.44
	17	22	3.70	0.57	12	3.70	0.61	34	3.70	0.58
	18	24	1.04	0.20	12	1.00	0.00	36	1.03	0.17
	19	21	3.41	0.67	12	3.45	0.51	33	3.43	0.61
	20	22	3.01	0.59	12	3.38	0.66	34	3.14	0.63
	21	20	2.68	1.03	12	3.26	0.84	32	2.90	0.99
	22	22	2.44	1.16	11	2.99	1.10	33	2.62	1.15
	23	23	2.00	0.93	12	1.67	0.80	35	1.89	0.89
	24	22	1.87	0.87	12	2.18	1.08	34	1.98	0.95
	25	22	3.36	0.52	12	3.51	0.64	34	3.41	0.56
	26	23	3.32	0.63	12	3.67	0.43	35	3.44	0.59
	27	23	3.22	0.78	12	3.56	0.51	35	3.34	0.71
	28	20	2.99	0.95	12	3.33	0.83	32	3.12	0.91
Mean		22.00	2.83	0.72	11.92	3.04	0.64	33.92	2.90	0.71
8th	16	33	3.43	0.72	15	3.30	0.68	48	3.39	0.70
	17	34	3.40	0.83	15	3.22	0.77	49	3.35	0.81
	18	35	1.06	0.34	13	1.12	0.42	48	1.07	0.36
	19	34	2.79	0.73	14	2.98	0.83	48	2.84	0.75
	20	31	2.73	0.89	14	3.05	0.76	45	2.83	0.86
	21	32	2.35	0.89	14	2.41	0.72	46	2.37	0.83
	22	31	2.40	1.03	14	2.41	0.97	45	2.40	1.00
	23	33	1.90	0.91	14	1.84	0.92	47	1.88	0.91
	24	33	1.91	0.68	14	1.66	0.72	47	1.83	0.70
	25	33	3.22	0.66	14	3.07	0.69	47	3.17	0.66
	26	33	3.43	0.67	14	2.98	0.67	47	3.30	0.70
	27	33	3.27	0.65	14	3.16	0.62	47	3.24	0.63
	28	32	3.01	0.69	14	2.93	0.66	46	2.99	0.67
Mean		32.85	2.68	0.75	14.08	2.63	0.73	46.92	2.67	0.74

Table 17.
The effects if teacher's position and grade on their ratings of the provision of various accommodations.

		Ged			Sped			All		
Gr	Q	N	M	SD	N	M	SD	N	M	SD
3rd	29	21	3.46	0.61	13	3.68	0.43	34	3.55	0.56
	30	21	2.91	0.84	13	3.35	0.65	34	3.08	0.79
	31	21	1.00	0.00	13	1.00	0.00	34	1.00	0.00
	32	21	2.58	0.66	13	2.97	0.95	34	2.73	0.79
	33	21	2.02	0.57	13	2.50	0.65	34	2.20	0.63
	34	20	1.64	0.52	13	2.09	0.88	33	1.82	0.71
	35	21	1.90	0.84	13	1.87	0.84	34	1.89	0.83
	36	21	1.26	0.52	13	1.34	0.46	34	1.29	0.49
	37	20	2.05	0.75	13	2.30	0.82	33	2.15	0.78
	38	21	2.56	0.74	13	2.85	0.50	34	2.67	0.67
	39	20	2.95	0.68	13	3.05	0.57	33	2.99	0.63
	40	20	2.10	0.90	12	1.98	0.77	32	2.06	0.85
	41	20	1.98	0.95	13	2.34	0.85	33	2.12	0.91
Mean		20.62	2.19	0.66	12.92	2.41	0.64	33.54	2.27	0.66
5th	29	23	3.45	0.75	12	3.59	0.47	35	3.50	0.67
	30	24	3.05	0.91	12	3.43	0.51	36	3.17	0.81
	31	24	1.00	0.00	12	1.00	0.00	36	1.00	0.00
	32	23	3.04	0.82	12	3.07	0.92	35	3.05	0.85
	33	22	2.24	0.53	12	2.26	0.76	34	2.25	0.61
	34	23	1.78	0.67	12	2.34	1.21	35	1.97	0.91
	35	24	1.90	0.76	12	2.21	0.97	36	2.00	0.84
	36	24	1.64	0.63	12	1.29	0.40	36	1.52	0.59
	37	24	2.20	0.75	11	2.45	0.66	35	2.28	0.72
	38	23	2.72	0.42	12	2.59	0.45	35	2.67	0.43
	39	23	2.77	0.68	12	2.94	0.75	35	2.83	0.70
	40	22	2.30	0.94	12	2.23	0.65	34	2.27	0.84
	41	24	2.04	0.86	11	2.58	0.80	35	2.21	0.87
Mean		23.31	2.32	0.67	11.85	2.46	0.66	35.23	2.36	0.68
8th	29	35	3.23	0.88	15	3.20	0.74	50	3.22	0.84
	30	36	3.06	0.90	15	2.99	0.81	51	3.04	0.86
	31	36	1.00	0.00	15	1.00	0.00	51	1.00	0.00
	32	36	2.45	0.81	15	2.73	0.77	51	2.53	0.80
	33	34	2.14	0.56	14	2.17	0.55	48	2.15	0.55
	34	34	2.02	0.71	15	1.89	0.82	49	1.98	0.74
	35	35	1.68	0.73	15	1.64	0.60	50	1.66	0.68
	36	35	1.48	0.63	15	1.37	0.44	50	1.45	0.57
	37	35	2.40	0.55	15	2.01	0.60	50	2.29	0.59
	38	35	2.82	0.45	15	2.66	0.50	50	2.77	0.46
	39	35	2.67	0.73	14	2.39	0.43	49	2.59	0.66
	40	36	2.02	0.80	15	2.31	0.95	51	2.11	0.85
	41	35	2.14	0.90	14	2.14	0.36	49	2.14	0.78
Mean		35.15	2.24	0.67	14.77	2.19	0.58	49.92	2.23	0.64

Table 18.
Exact match proportions of general and special education teachers' ratings on student proficiency (based on responses on time one).

		Ged			Sped			All		
Gr	Q	N	M	SD	N	M	SD	N	M	SD
3rd	1	21	0.79	0.32	9	0.74	0.36	30	0.77	0.33
	2	20	0.67	0.44	9	0.81	0.25	29	0.71	0.39
	3	20	0.69	0.41	9	0.91	0.15	29	0.76	0.36
	4	20	0.61	0.43	9	0.74	0.30	29	0.65	0.39
	5	21	0.43	0.48	9	0.71	0.43	30	0.52	0.47
Mean		20.40	0.64	0.42	9.00	0.78	0.30	29.40	0.68	0.39
5th	1	22	0.75	0.39	11	0.85	0.23	33	0.78	0.35
	2	22	0.83	0.28	11	0.75	0.24	33	0.81	0.27
	3	21	0.86	0.21	11	0.73	0.36	32	0.81	0.27
	4	20	0.77	0.34	11	0.73	0.35	31	0.75	0.34
	5	20	0.76	0.42	11	0.41	0.49	31	0.63	0.47
Mean		21.00	0.79	0.33	11.00	0.69	0.33	32.00	0.76	0.34
8th	1	35	0.72	0.38	14	0.63	0.37	49	0.70	0.38
	2	35	0.71	0.41	14	0.77	0.36	49	0.73	0.39
	3	30	0.78	0.37	14	0.76	0.31	44	0.77	0.35
	4	30	0.71	0.41	14	0.70	0.32	44	0.71	0.38
	5	26	0.69	0.43	14	0.64	0.42	40	0.67	0.42
Mean		31.20	0.72	0.40	14.00	0.70	0.36	45.20	0.72	0.38

Table 19.
Exact match proportions of general and special education teachers' ratings on how easy it is for the student to engage in various activities.

		Ged			Sped			All		
Gr	Q	N	M	SD	N	M	SD	N	M	SD
3rd	10	20	0.81	0.36	9	0.90	0.22	29	0.84	0.32
	11	20	0.58	0.46	8	0.80	0.35	28	0.65	0.44
	12	20	0.70	0.45	9	0.95	0.09	29	0.78	0.39
	13	20	0.55	0.48	9	0.83	0.33	29	0.64	0.45
	14	20	0.78	0.38	9	0.93	0.12	29	0.83	0.32
	15	19	0.61	0.46	8	0.31	0.39	27	0.52	0.46
Mean		19.83	0.67	0.43	8.67	0.79	0.25	28.50	0.71	0.40
5th	10	22	0.81	0.31	11	0.72	0.34	33	0.78	0.32
	11	22	0.74	0.38	11	0.44	0.43	33	0.64	0.42
	12	21	0.95	0.16	11	0.65	0.42	32	0.85	0.31
	13	22	0.78	0.32	11	0.60	0.43	33	0.72	0.36
	14	22	0.89	0.30	11	0.65	0.40	33	0.81	0.35
	15	21	0.79	0.36	10	0.59	0.45	31	0.73	0.39
Mean		21.67	0.83	0.31	10.83	0.61	0.41	32.50	0.76	0.36
8th	10	36	0.68	0.39	14	0.68	0.31	50	0.68	0.37
	11	36	0.66	0.45	14	0.68	0.31	50	0.66	0.41
	12	36	0.72	0.38	14	0.69	0.29	50	0.71	0.36
	13	36	0.78	0.34	14	0.85	0.27	50	0.80	0.32
	14	36	0.84	0.29	14	0.84	0.19	50	0.84	0.27
	15	24	0.83	0.33	13	0.66	0.41	37	0.77	0.36
Mean		34.00	0.75	0.36	13.83	0.73	0.30	47.83	0.74	0.35

Table 20.
Exact match proportions of general and special education teachers' ratings on the benefit from taking a math test under various accommodations.

		Ged			Sped			All		
Gr	Q	N	M	SD	N	M	SD	N	M	SD
3rd	16	19	0.50	0.43	9	0.54	0.47	28	0.51	0.43
	17	19	0.57	0.42	9	0.63	0.38	28	0.59	0.40
	18	19	1.00	0.00	9	1.00	0.00	28	1.00	0.00
	19	19	0.48	0.46	9	0.54	0.44	28	0.50	0.45
	20	19	0.49	0.44	8	0.52	0.44	27	0.50	0.43
	21	16	0.33	0.44	9	0.48	0.50	25	0.38	0.46
	22	17	0.31	0.46	8	0.50	0.46	25	0.37	0.46
	23	18	0.43	0.47	9	0.51	0.48	27	0.46	0.47
	24	18	0.43	0.47	9	0.51	0.48	27	0.46	0.47
	25	19	0.43	0.44	8	0.39	0.46	27	0.42	0.44
	26	18	0.34	0.46	7	0.29	0.39	25	0.33	0.43
	27	17	0.56	0.47	6	0.50	0.34	23	0.54	0.43
	28	18	0.60	0.46	8	0.58	0.49	26	0.59	0.46
Mean		18.15	0.50	0.42	8.31	0.54	0.41	26.46	0.51	0.41
5th	16	21	0.54	0.46	11	0.73	0.34	32	0.61	0.42
	17	21	0.62	0.44	11	0.59	0.36	32	0.61	0.40
	18	23	0.97	0.10	11	1.00	0.00	34	0.98	0.08
	19	19	0.36	0.47	11	0.59	0.46	30	0.44	0.47
	20	20	0.40	0.48	11	0.41	0.42	31	0.40	0.45
	21	17	0.26	0.37	11	0.63	0.43	28	0.41	0.43
	22	19	0.47	0.43	10	0.43	0.37	29	0.46	0.40
	23	21	0.39	0.43	11	0.61	0.47	32	0.46	0.45
	24	21	0.39	0.43	11	0.61	0.47	32	0.46	0.45
	25	20	0.35	0.44	11	0.53	0.48	31	0.41	0.46
	26	20	0.43	0.46	11	0.43	0.40	31	0.43	0.43
	27	20	0.44	0.45	11	0.46	0.41	31	0.45	0.43
	28	17	0.40	0.47	11	0.49	0.44	28	0.44	0.45
Mean		19.92	0.46	0.42	10.92	0.58	0.39	30.85	0.50	0.41
8th	16	27	0.47	0.43	14	0.52	0.40	41	0.49	0.42
	17	27	0.49	0.43	14	0.54	0.42	41	0.51	0.42
	18	27	0.96	0.11	13	0.96	0.14	40	0.96	0.12
	19	27	0.42	0.44	14	0.43	0.41	41	0.43	0.43
	20	23	0.27	0.42	14	0.42	0.41	37	0.33	0.42
	21	24	0.30	0.41	14	0.24	0.30	38	0.28	0.37
	22	23	0.25	0.40	13	0.25	0.34	36	0.25	0.37
	23	24	0.33	0.43	14	0.53	0.42	38	0.40	0.43
	24	24	0.33	0.43	14	0.53	0.42	38	0.40	0.43
	25	26	0.43	0.47	14	0.49	0.43	40	0.45	0.45
	26	25	0.37	0.44	14	0.46	0.46	39	0.40	0.44
	27	26	0.32	0.40	14	0.52	0.47	40	0.39	0.43
	28	26	0.43	0.49	13	0.58	0.39	39	0.48	0.46
Mean		25.31	0.41	0.41	13.77	0.50	0.39	39.08	0.44	0.40

Table 21.
Exact match proportions of general and special education teachers' ratings on the provision of various accommodations.

		Ged			Sped			All		
Gr	Q	N	M	SD	N	M	SD	N	M	SD
3rd	29	20	0.55	0.46	9	0.57	0.38	29	0.56	0.43
	30	20	0.41	0.45	9	0.44	0.45	29	0.42	0.44
	31	19	1.00	0.00	9	1.00	0.00	28	1.00	0.00
	32	20	0.68	0.40	9	0.48	0.42	29	0.62	0.41
	33	19	0.66	0.46	8	0.21	0.25	27	0.53	0.46
	34	18	0.58	0.45	8	0.41	0.36	26	0.53	0.43
	35	19	0.63	0.43	8	0.55	0.34	27	0.61	0.40
	36	18	0.70	0.43	8	0.73	0.38	26	0.71	0.41
	37	18	0.48	0.46	8	0.62	0.37	26	0.52	0.43
	38	19	0.75	0.39	8	0.50	0.44	27	0.67	0.41
	39	18	0.36	0.47	9	0.40	0.42	27	0.37	0.45
	40	18	0.46	0.47	7	0.38	0.29	25	0.44	0.42
	41	18	0.43	0.45	8	0.48	0.45	26	0.44	0.44
Mean		18.77	0.59	0.41	8.31	0.52	0.35	27.08	0.57	0.39
5th	29	21	0.45	0.44	11	0.33	0.41	32	0.41	0.42
	30	21	0.41	0.42	11	0.80	0.27	32	0.55	0.42
	31	23	1.00	0.00	11	1.00	0.00	34	1.00	0.00
	32	21	0.40	0.47	11	0.43	0.36	32	0.41	0.43
	33	21	0.39	0.40	11	0.40	0.44	32	0.39	0.40
	34	21	0.24	0.35	11	0.55	0.40	32	0.35	0.39
	35	21	0.47	0.41	11	0.62	0.37	32	0.52	0.40
	36	22	0.61	0.37	11	0.87	0.24	33	0.70	0.35
	37	22	0.45	0.44	10	0.39	0.39	32	0.43	0.42
	38	21	0.48	0.46	11	0.40	0.40	32	0.45	0.44
	39	21	0.37	0.42	11	0.37	0.43	32	0.37	0.41
	40	21	0.33	0.40	11	0.48	0.40	32	0.38	0.40
	41	22	0.36	0.39	10	0.39	0.44	32	0.37	0.40
Mean		21.38	0.46	0.38	10.85	0.54	0.35	32.23	0.49	0.38
8th	29	33	0.33	0.41	14	0.50	0.35	47	0.38	0.39
	30	34	0.28	0.38	14	0.52	0.36	48	0.35	0.39
	31	33	1.00	0.00	14	1.00	0.00	47	1.00	0.00
	32	34	0.46	0.43	14	0.27	0.36	48	0.40	0.42
	33	31	0.32	0.40	13	0.43	0.40	44	0.35	0.40
	34	31	0.50	0.41	14	0.52	0.43	45	0.51	0.41
	35	33	0.48	0.44	14	0.35	0.37	47	0.44	0.42
	36	33	0.49	0.45	14	0.46	0.40	47	0.48	0.44
	37	33	0.40	0.43	14	0.32	0.43	47	0.37	0.43
	38	31	0.49	0.46	14	0.41	0.38	45	0.47	0.43
	39	33	0.32	0.42	14	0.39	0.38	47	0.34	0.41
	40	32	0.20	0.35	13	0.61	0.43	45	0.31	0.41
	41	33	0.41	0.43	14	0.48	0.44	47	0.43	0.43
Mean		32.62	0.44	0.39	13.85	0.48	0.36	46.46	0.45	0.38

Table 22.
General and special education teachers' rating differences of student proficiency between two sessions.

		Ged			Sped			All		
Gr	Q	N	M	SD	N	M	SD	N	M	SD
3rd	1	21	0.09	0.40	9	-0.27	0.44	30	-0.01	0.44
	2	20	0.15	0.67	9	-0.03	0.27	29	0.09	0.58
	3	20	0.05	0.54	9	0.07	0.15	29	0.06	0.45
	4	20	0.03	0.81	9	0.15	0.38	29	0.06	0.70
	5	21	0.49	0.59	9	0.22	0.44	30	0.41	0.56
Mean		20.40	0.16	0.60	9.00	0.03	0.34	29.40	0.12	0.55
5th	1	22	-0.09	0.50	11	0.09	0.20	33	-0.03	0.43
	2	22	-0.02	0.39	11	0.00	0.42	33	-0.02	0.40
	3	21	0.11	0.34	11	-0.17	0.33	32	0.01	0.36
	4	20	-0.14	0.49	11	0.14	0.71	31	-0.04	0.58
	5	20	0.05	0.43	11	-0.03	0.39	31	0.02	0.41
Mean		21.00	-0.02	0.43	11.00	0.01	0.41	32.00	-0.01	0.44
8th	1	35	0.07	0.46	14	-0.06	0.44	49	0.03	0.46
	2	35	0.08	0.53	14	-0.13	0.37	49	0.02	0.50
	3	30	0.15	0.40	14	0.02	0.11	44	0.11	0.34
	4	30	0.12	0.49	14	-0.09	0.30	44	0.05	0.44
	5	26	0.15	0.54	14	-0.01	0.39	40	0.10	0.50
Mean		31.20	0.11	0.48	14.00	-0.05	0.32	45.20	0.06	0.45

Table 23.
General and special education teachers' rating differences of how easy it is for the student to engage in various activities between two sessions.

		Ged			Sped			All		
Gr	Q	N	M	SD	N	M	SD	N	M	SD
3rd	10	20	0.02	0.41	9	-0.07	0.20	29	-0.01	0.36
	11	20	-0.16	0.70	8	0.08	0.40	28	-0.09	0.63
	12	20	-0.01	0.54	9	0.00	0.00	29	-0.01	0.45
	13	20	0.19	0.63	9	0.11	0.33	29	0.16	0.55
	14	20	0.13	0.41	9	-0.02	0.07	29	0.09	0.35
	15	19	0.19	0.63	8	-0.08	0.85	27	0.11	0.70
Mean		19.83	0.06	0.55	8.67	0.00	0.31	28.50	0.04	0.51
5th	10	22	-0.05	0.47	11	0.00	0.51	33	-0.03	0.47
	11	22	-0.09	0.50	11	-0.27	0.85	33	-0.15	0.63
	12	21	-0.05	0.22	11	-0.12	0.54	32	-0.07	0.35
	13	22	0.01	0.42	11	0.05	0.47	33	0.02	0.43
	14	22	-0.01	0.31	11	-0.15	0.48	33	-0.05	0.38
	15	21	-0.21	0.43	10	-0.15	0.71	31	-0.19	0.52
Mean		21.67	-0.07	0.39	10.83	-0.11	0.59	32.50	-0.08	0.46
8th	10	36	0.17	0.56	14	-0.04	0.41	50	0.11	0.53
	11	36	0.14	0.49	14	-0.02	0.48	50	0.10	0.49
	12	36	-0.11	0.51	14	0.10	0.56	50	-0.05	0.53
	13	36	-0.01	0.40	14	-0.02	0.40	50	-0.01	0.40
	14	36	0.05	0.34	14	-0.01	0.13	50	0.03	0.29
	15	24	0.00	0.51	13	-0.26	0.65	37	-0.09	0.57
Mean		34.00	0.04	0.47	13.83	-0.04	0.44	47.83	0.02	0.47

Table 24.
General and special education teachers' rating differences of the benefit from taking a math test under various accommodations between two sessions.

		Ged			Sped			All		
Gr	Q	N	M	SD	N	M	SD	N	M	SD
3rd	16	19	-0.13	0.70	9	-0.22	0.44	28	-0.16	0.62
	17	19	0.16	0.58	9	-0.18	0.37	28	0.05	0.54
	18	19	0.00	0.00	9	0.00	0.00	28	0.00	0.00
	19	19	-0.13	1.08	9	0.16	0.86	28	-0.04	1.01
	20	19	-0.04	0.79	8	-0.48	0.74	27	-0.17	0.78
	21	16	0.86	1.35	9	-0.04	0.92	25	0.54	1.27
	22	17	0.36	1.23	8	-0.13	1.13	25	0.21	1.20
	23	18	-0.34	1.08	9	-0.56	0.73	27	-0.41	0.97
	24	19	0.24	1.06	8	0.25	0.71	27	0.24	0.95
	25	18	0.20	0.95	7	0.14	0.69	25	0.19	0.87
	26	18	0.11	0.76	9	-0.23	0.75	27	0.00	0.76
	27	17	0.27	0.84	6	-0.01	0.54	23	0.20	0.77
	28	18	0.15	0.77	8	-0.13	0.35	26	0.06	0.67
Mean		18.15	0.13	0.86	8.31	-0.11	0.63	26.46	0.05	0.80
5th	16	21	-0.42	0.93	11	0.08	0.37	32	-0.25	0.81
	17	21	-0.14	0.79	11	0.05	0.60	32	-0.08	0.73
	18	23	-0.02	0.24	11	0.00	0.00	34	-0.01	0.19
	19	19	-0.50	1.14	11	-0.01	0.49	30	-0.32	0.98
	20	20	-0.33	1.07	11	-0.30	0.69	31	-0.32	0.94
	21	17	-0.34	1.31	11	-0.21	0.83	28	-0.29	1.13
	22	19	-0.51	1.18	10	0.09	1.20	29	-0.30	1.20
	23	21	-0.41	1.44	11	-0.09	0.83	32	-0.30	1.26
	24	20	0.07	1.18	11	0.09	0.83	31	0.08	1.06
	25	20	-0.63	0.79	11	-0.16	0.83	31	-0.47	0.82
	26	21	-0.25	1.30	11	-0.50	0.77	32	-0.34	1.14
	27	20	0.18	1.27	11	-0.16	0.92	31	0.06	1.16
	28	17	-0.20	1.38	11	-0.22	0.89	28	-0.20	1.20
Mean		19.92	-0.27	1.08	10.92	-0.10	0.71	30.85	-0.21	0.97
8th	16	27	-0.24	0.91	14	0.27	0.73	41	-0.07	0.88
	17	27	-0.20	0.90	14	0.51	0.76	41	0.04	0.91
	18	29	0.06	0.22	13	-0.08	0.28	42	0.02	0.24
	19	27	-0.09	1.02	14	0.14	1.03	41	-0.01	1.02
	20	23	-0.04	1.15	14	0.16	0.86	37	0.03	1.04
	21	24	0.00	1.02	14	0.57	0.68	38	0.21	0.94
	22	23	-0.43	1.24	13	-0.50	0.87	36	-0.46	1.10
	23	24	-0.38	1.38	14	0.26	0.98	38	-0.14	1.27
	24	26	-0.05	0.84	14	0.48	1.02	40	0.14	0.93
	25	25	-0.28	0.94	14	0.11	0.96	39	-0.14	0.95
	26	26	-0.85	1.19	14	-0.10	0.89	40	-0.58	1.14
	27	26	-0.38	1.13	14	0.56	0.93	40	-0.05	1.15
	28	26	-0.42	0.95	13	-0.12	0.82	39	-0.32	0.91
Mean		25.62	-0.25	0.99	13.77	0.17	0.83	39.38	-0.10	0.96

Table 25.
General and special education teachers' rating differences of the provision of various accommodations.

		Ged			Sped			All		
Gr	Q	N	M	SD	N	M	SD	N	M	SD
3rd	29	20	-0.15	0.75	9	-0.07	0.54	29	-0.12	0.68
	30	20	0.16	0.81	9	0.22	0.97	29	0.18	0.85
	31	19	0.00	0.00	9	0.00	0.00	28	0.00	0.00
	32	20	0.13	0.56	9	0.22	0.67	29	0.16	0.58
	33	19	-0.11	0.46	8	-0.70	0.78	27	-0.28	0.62
	34	18	0.31	0.71	8	-0.23	0.72	26	0.14	0.74
	35	19	-0.02	0.89	8	0.13	0.35	27	0.03	0.77
	36	18	-0.06	0.64	8	0.00	0.53	26	-0.04	0.60
	37	18	0.07	0.95	8	-0.13	0.83	26	0.01	0.91
	38	19	-0.02	0.34	8	0.00	0.93	27	-0.01	0.56
	39	18	-0.33	1.03	9	-0.47	0.71	27	-0.38	0.92
	40	18	0.33	0.84	7	-0.35	0.62	25	0.14	0.83
	41	18	0.17	0.79	8	0.00	0.76	26	0.12	0.77
Mean		18.77	0.04	0.67	8.31	-0.11	0.65	27.08	0.00	0.68
5th	29	21	-0.38	0.80	11	-0.23	1.00	32	-0.33	0.86
	30	21	-0.11	0.90	11	0.05	0.33	32	-0.06	0.75
	31	23	0.00	0.00	11	0.00	0.00	34	0.00	0.00
	32	21	-0.21	0.96	11	0.38	0.77	32	-0.01	0.93
	33	21	-0.38	0.76	11	0.64	0.78	32	-0.03	0.90
	34	21	0.12	1.05	11	0.20	0.71	32	0.15	0.93
	35	21	-0.30	0.85	11	-0.09	0.58	32	-0.23	0.76
	36	22	-0.16	0.71	11	-0.09	0.30	33	-0.14	0.60
	37	22	-0.18	0.73	10	0.03	0.87	32	-0.12	0.77
	38	21	-0.14	0.79	11	0.32	0.67	32	0.02	0.77
	39	21	-0.33	0.90	11	-0.18	0.96	32	-0.27	0.91
	40	21	0.40	1.25	11	0.11	0.97	32	0.30	1.16
	41	22	-0.04	0.85	10	-0.10	0.88	32	-0.06	0.85
Mean		21.38	-0.13	0.81	10.85	0.08	0.68	32.23	-0.06	0.78