Chapter 11

Lessons Learned from AA-MAS: The Oklahoma Modified Alternate Assessment Program (OMAAP)

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Introduction

The Oklahoma Modified Alternate Assessment Program (OMAAP) is an assessment option intended for students with IEPs for whom the Oklahoma Alternate Assessment Program (OAAP) Portfolio assessment and the general assessments, the Oklahoma Core Curriculum Tests (OCCT), and the End-of-Instruction (EOI) secondary level tests, are inappropriate. Oklahoma opted early on to develop an alternate assessment based on modified achievement standards, in part responding to assertions from parents and teachers that the general assessment, even conducted with accommodations, did not adequately assess what some students with disabilities know and can do. The Oklahoma State Department of Education offices of Accountability and Assessments and Special Education Services supported the creation of the Oklahoma Modified Alternate Assessment Program (OMAAP), which was first administered in spring 2007.

The OMAAP fits within Oklahoma's overall assessment system, the Oklahoma School Testing Program (OSTP), which also includes a regular assessment taken with or without accommodations and an alternate assessment based on alternate achievement standards. More than 600,000 students (U.S. Department of Education, 2006), including 96,342 students with disabilities, are assessed annually under this multicomponent system (U.S. Department of Education, 2005-06).

Oklahoma's regular assessment, the OCCT, is a standards-based, criterion-referenced test designed to measure students' academic performance based on Oklahoma's *Priority Academic Student Skills (PASS)*. For students with the most significant cognitive disabilities, Oklahoma administers the OAAP, a portfolio assessment based on alternate achievement standards. The OAAP's goals are to include students with disabilities in the assessment system; provide them the opportunity to show their knowledge, skills, and growth in performance over time; and provide them with access to standards and benchmarks expanded from the *PASS* that are appropriate for them. Oklahoma received "full approval" from the U.S. Department of Education's Peer Review process for its assessment system in June 2006, indicating that Oklahoma's academic content standards and alternate achievement standards met technical requirements.

The OMAAP is intended to be administered to students for whom neither the regular assessment with or without accommodations nor the OAAP is appropriate—that is, neither allows students to demonstrate attainment of grade-level standards. Although comparable to the regular assessment, the OMAAP is based on modified academic achievement standards and is available to students who are working at grade level, but are not able to reach proficiency in the year covered by their IEP. The Curriculum Access Resource Guide-Modified (CARG-M) is available for teachers to use in IEP development and serves as a modified academic achievement standard. The IEP of a student participating in the OMAAP should reflect goals for subjects assessed alternately and for the grade in which a student is enrolled and should be used to monitor a student's progress toward these goals. The OMAAP is comparable to the regular assessment; however, grade-level

content is addressed in such a way that students are better able to demonstrate their knowledge and abilities.

Unlike the OCCT and the OAAP, which have been in place for a number of years, the OMAAP is a new assessment that does not have procedural and technical documentation of its validity. OSDE partnered with SRI International (SRI) to apply for a General Supervision Enhancement Grant (GSEG) and targeted three aspects of the assessment as the primary areas of concern: (1) the accessibility of the OMAAP reading assessment, (2) the technical adequacy of the OMAAP, and (3) the accurate identification of students eligible for the OMAAP. In fall 2007 SRI International and the Oklahoma State Department of Education (OSDE) were awarded a GSEG to improve the technical quality of the OMAAP.

During the project, SRI conducted a number of research studies related to improving the technical quality of OMAAP that have implications for the Race-to-the-Top Assessment programs. In particular, the findings from these studies highlight the need for and importance of providing high quality, effective professional development for special education teachers in academic content and instruction, research-based interventions that are effective for students who struggle, and the supports and scaffolds embedded in assessments.

In the following sections we briefly describe three of the studies conducted during the GSEG and present their pertinent findings. In the final section we discuss the implications of these studies for the Race-to-the-Top Assessment programs.

Reading Comparison Study

Background

The Oklahoma State Department of Education expressed concerns that too many students with disabilities were participating in OMAAP primarily because IEP teams were unwilling to move students taking the OMAAP back to the OCCT. IEP teams in Oklahoma apply the Criteria Checklist for Assessing Students with Disabilities on State Assessments (OSDE, n.d) when making assessment decisions. Options available include the OCCT, with or without accommodations, the OMAAP with or without accommodations, a combination of the OCCT and OMAAP, or the OAAP portfolio for students with significant cognitive disabilities. According to the Criteria Checklist, the OMAAP (with or without accommodations) is appropriate if the IEP team has answered *yes* to all the following questions:

1. Does the student's IEP reflect curriculum and daily instruction that focus on modified goals and objectives (modified achievement of the standards) that are on grade level?

2. Did the student receive evidence-based response to intervention and continue to progress below grade-level achievement based on classroom assessments or other valid measures?

3. Did the student score at the Unsatisfactory level on the previous year's Oklahoma Core Curriculum Test in Reading/Language Arts, Mathematics, or Science? If these scores are not available, the IEP team may substitute scores equivalent to Unsatisfactory from local assessments to identify students. (Oklahoma State Department of Education, n.d)

If the answer is *no* to any of these items, the IEP team must conclude that the student does not qualify for an alternate assessment (OMAAP or OAAP Portfolio), and the OCCT with or without accommodations is the most appropriate assessment for the student. However, there is little guidance for IEP teams on when to consider moving a student from the OMAAP to the OCCT. The Criteria Checklist states, "Scoring Satisfactory on the previous year's OMAAP does not preclude a student from participating in the OMAAP for the current year."

Purpose and Description of the Study

OSDE's concerns that too many students participated on the OMAAP were supported by Lazarus and Thurlow (2009) who reported that in 2006–07, at grade 4 the participation rate on the OMAAP in reading was 4.8 percent of the total population tested and at grade 7 it was 5.6 percent. These percentages were much higher than those in the other states that also had an AA-MAS option. OSDE requested that SRI develop and conduct a study to determine what score a student assessed on one of the state's assessments would have obtained if he or she had taken a different assessment. One of the research questions posed in the study was: *Given a score of Advanced or Satisfactory on the OMAAP, what is the probability that a student would score Satisfactory or above on the OCCT?*

The study required that students with IEPs scheduled to take the OMAAP in reading during state testing in April 2010 take an OCCT reading assessment administered by SRI in February/March. Similarly, for students with IEPs scheduled to take the OCCT in reading in spring 2010, SRI would administer an OMAAP reading assessment in February/March. Students with IEPs in grades 4 and 7 in the 2010–11 school year were selected to participate in the study. To identify potential participants, SRI and OSDE identified a subsample of students with IEPs on the basis of their grade 3 or grade 6 performance levels on either the OMAAP or the OCCT reading assessments administered in spring 2009. Student performance on the OMAAP, like the OCCT, is classified into four performance level descriptors: Advanced, Satisfactory, Limited Knowledge, and Unsatisfactory. The target sample consisted of students with IEPs who scored Satisfactory or above on the OMAAP and students with IEPs who scored below Satisfactory on the OCCT in reading in 2009.

Students in grades 4 and 7 from 31 school districts participated in the reading comparison study. In February/March 2010 students scheduled to take the OCCT during the April state testing window took the OMAAP, and students scheduled to take the OMAAP during the April state testing window took the OCCT. Students received the assessment accommodations listed on their IEPs. In August 2010, OSDE provided SRI with the 2010 state OCCT and OMAAP testing data in reading for the study participants. The state testing data were matched and compared with the study results and quantile regressions were used to predict the expected percentiles for OCCT scores as a function of OMAAP scores for individuals who were scheduled to take the OMAAP test and to predict expected percentiles of OMAAP scores for individuals who were scheduled to take the OCCT test.

Findings from the Reading Comparison Study

A total of 711 students participated in the study, and 623 of them had both OCCT and OMAAP scores. Sixty-two percent of the participants were male, 54 percent of participants were White, 18 percent were African American, 13 percent were Hispanic, 13 percent were American Indian/Alaska Native, and less than 1 percent were multiracial or other. A majority (51 percent) of students who participated in the study had a learning disability, and 17 percent had other health impairments. About 12 percent of students had speech and language impairments, and 9 percent had intellectual disabilities.

Of the total number of participating grade 4 students with IEPs, most students (91 percent, *n* =318) scored at the Satisfactory (n=80) or Advanced (n=238) levels on the OMAAP, with 12 percent (n=32) scoring at the Unsatisfactory (n=5) and Limited Knowledge (n=27) levels. Conversely, of the tested students most (69 percent, n=243) scored at the Unsatisfactory (n=137) and Limited Knowledge (n=106) levels of the OCCT and 20 percent scored at the Satisfactory Level (n=107). No participating grade 4 student scored at the Advanced level on the OCCT.

Table 1. Performance Level on the OMAAP Compared with OCCT Performance Levels at Fourth Grade

Unsatisfactory		**OMAAP performance level**				
		Unsatisfactory	Limited Knowledge	Satisfactory	Advanced	Total
OCCT performance level	Unsatisfactory	1	23	42	71	137
	Limited Knowledge	3	4	29	70	106
	Satisfactory	1	0	9	97	107
	Total	5	27	80	238	350

Of the total number of grade 7 students with IEPs, most students (88 percent, *n*=240) scored at the Satisfactory (n=89) or Advanced (n=151) levels on the OMAAP, with 12 percent (n=33) scoring at the Unsatisfactory (n=3) and Limited Knowledge (n=30) levels. Conversely, of the tested students most (79 percent, n=117) scored at the Unsatisfactory n=106) and Limited Knowledge (n=111) levels of the OCCT and 20 percent scoring Satisfactory (n=53) and Advanced (n=3).

Table 2. Performance Level on the OMAAP Compared with OCCT Performance Levels at Seventh Grade

Unsatisfactory		OMAAP performance level				
		Unsatisfactory	Limited knowledge	Satisfactory	Advanced	Total
OCCT performance level	Unsatisfactory	3	23	38	42	106
	Limited knowledge	0	5	44	62	111
	Satisfactory	0	2	6	45	53
	Advanced	0	0	1	2	3
	Total	3	30	89	151	273

The data in Table 3 show the likelihood that a grade 4 student with a specific scale score on the OMAAP would score at the Satisfactory level or above on the OCCT. According to the *Oklahoma School Testing Program Technical Report* (OSDE, 2008a), to be in the Satisfactory range on the OMAAP at grade 4, a student's score must be between 250 and 265; for the Advanced level, the score must be between 266 and 350.

Table 3.Predicting Satisfactory Performance on the OCCT from OMAAP Performance Scores at Fourth Grade

Student score on fourth-grade OMAAP	Likelihood of student scoring Satisfactory on fourth-grade OCCT (%)
250	5
260	15
265	15
270	25
280	55
290	70
300	80
Above 305	90

The data indicate that the higher a grade 4 student scored above the Satisfactory level on the OMAAP (that is, above 250), the greater the likelihood that he or she would score at the Satisfactory level on the OCCT. A student scoring 250 (i.e., Satisfactory level) on the OMAAP had a 5 percent chance of scoring in the Satisfactory Level on the OCCT, and a student scoring 265 (around the cut point between Satisfactory and Advanced levels on the OMAAP) had a 15 percent chance of achieving Satisfactory on the OCCT. A student with a score of 300 on the OMAAP had an 80 percent chance of scoring Satisfactory on the OCCT.

Data from Table 4 show the likelihood that a grade 7 student with a specific score on the OMAAP would score in the Satisfactory level on the OCCT. According to the *Oklahoma Modified Alternate Assessment Program 2008 Technical Report* (OSDE, 2008b), a Satisfactory score on the OMAAP at grade 7 is between 250 and 270, and an Advanced level score is between 271 and 350.

Table 4.Predicting Satisfactory Performance on the OCCT from OMAAP Performance Scores at Seventh Grade

Student score on seventh- grade OMAAP	Likelihood of student scoring Satisfactory on seventh-grade OCCT (%)
265	5
275	15
285	35
295	45
305	55
315	75
325 and above	80

A similar picture emerges at grade 7 as at grade 4. However, until students obtained a score of 265 on the OMAAP, there was no likelihood that they would score at the Satisfactory level on the OCCT. Even when a student did score 265, he or she had only a slight chance (5 percent) of scoring at the Satisfactory level on the OCCT. A student with a score of 325 or above had an 80 percent chance of scoring at the Satisfactory level on the OCCT.

The conclusions drawn from the results of the OMAAP-OCCT Reading Comparison study and their implications for schools, teachers, and students are as follows:

1. Some students who have high scores on the OMAAP are also likely to score well on the OCCT. The likelihood that a student who scored Satisfactory and above on the OMAAP would score Satisfactory or above on the OCCT increased as the student's OMAAP score increased and became likely for students scoring at the upper end of the Advanced level. To illustrate, to have a 90 percent likelihood of scoring Satisfactory on the OCCT, a grade 4 student would need a score of 305 or above on the OMAAP and a grade 7 students who

achieved the highest possible score on OMAAP had an 80 percent likelihood of scoring Satisfactory on OCCT. Given these findings, if a classroom teacher wanted to be confident that a student who participates on the OMAAP will be successful (i.e., score at grade-level proficiency) on the OCCT, he or she could consider those students who scored above 305 in fourth grade or 320 in seventh grade for the move to the OCCT.

2. Data suggest that some of the students (i.e., those scoring highly on OMAAP) currently taking the OMAAP would be able to demonstrate grade-level knowledge and skills on the OCCT and could be moved from OMAAP to the general assessment. For example, if fourth-grade students who scored Advanced on the OMAAP had taken the OCCT instead, 41 percent would have scored Satisfactory on the OCCT. If seventh-grade students who scored Advanced on OMAAP had taken the OCCT instead, 31 percent would have scored Satisfactory or above on it.

3. The state may consider developing additional guidance for IEP teams to help them to determine when the OMAAP may no longer be appropriate for a student. However, the state should consider the potential impact on school districts and schools if significant numbers of students previously assessed on the OMAAP are assessed on the OCCT. Currently, all the students who score at the Satisfactory or Advanced levels on the OMAAP count positively toward AYP (subject to the 2 percent cap). If students scoring at the Advanced level on the OMAAP had taken the OCCT instead, 59 percent would have scored at the Unsatisfactory or Limited Knowledge levels and would thus have counted negatively for the purposes of AYP. Furthermore, half these students (those who scored at the Limited Knowledge level) would not be eligible for the OMAAP the next year.

4. The state designed the OMAAP to assess eligible students on the same grade-level content as the OCCT but to make it more accessible to such students. Data suggest that the OMAAP is more accessible than the OCCT because some students who were unable to demonstrate their grade-level knowledge and skills on the OCCT did demonstrate it on the OMAAP. For example, at grade 4, of the 107 students who scored at the Unsatisfactory level on the OCCT, 82 percent scored Satisfactory or above on the OMAAP. Similarly, at grade 7, of the 106 students who scored Unsatisfactory on the OCCT, 75 percent scored Satisfactory and above on OMAAP. The implication is that OMAAP design features could be included on the OCCT to make it more accessible for students with disabilities.

5. It appears only small percentages of highly achieving students taking the OMAAP could achieve proficiency on the regular assessment, however, larger percentages of low performing students with IEPs taking the regular assessment would be more likely to achieve proficiency if they took the OMAAP.

Accessibility of OMAAP Reading Passages

Background

For their AA-MAS, OSDE and their vender needed to develop a reading test that was less difficult than the general assessment. To do this they adapted reading passages and items that had been originally used in the 2005 and 2006 general assessment. Making the AA-MAS more accessible for the reading assessment included reducing the total number of items on the assessment, having fewer items per page, simplifying the instructions to improve readability, and limiting the use of terminology and language from other content areas. In addition, there were fewer reading passages on the OMAAP than on the OCCT, and reading passages were presented in one column and were divided into smaller segments followed by questions related to the segment. Reading passages were not modified for improved readability or accessibility for students reading below grade level but reading test items from the general assessment were revised primarily to reduce the amount of reading. Revisions included both the elimination of words and phrases, as well as simplifying words or phrases in item prompts, minimizing the use of pronouns and prepositional phrases, and avoiding the use of multiple meaning words and words that could function as more than one part of speech. OMAAP items included one correct answer and two distractors rather than three distractors, as in the OCCT. In addition, several supports and scaffolds were built into the OMAAP such as providing definitions for difficult/unfamiliar words (word banks for Grades 3-5 and footnotes for Grade 6-8 and English II), numbering the paragraphs in the reading passage, placing items in order of appearance in the passage, providing the number of the specific paragraph referred to in an item, directing student attention to graphics, underlining/bolding key words in items, and using a larger sized and easy to read type face (Verdana). Finally, graphics to support text, emphasize ideas, and facilitate comprehension were added and existing graphics were simplified removing unnecessary labels, using less gray scale, and using thicker lines when outlining.

Purpose of the Cognitive Interview Study

During the first administration of the OMAAP in spring 2007, educators recognized that while the OMAAP reading assessments were "easier" for some eligible students than the general assessment, other students continued to struggle due to the readability level of the passages. SRI conducted a study to investigate the accessibility of the OMAAP reading assessment for students who were *not* proficient on the 2007 OMAAP assessment and to identify barriers to accessibility for these students. The principal observation procedure for this study was the cognitive interview (Ericsson & Simon, 1994; Johnstone, Bottsford-Miller, & Thompson, 2006; Johnstone, Liu, Altman, & Thurlow, 2007). Each interview lasted approximately 1 hour and was conducted in a separate room by one of two researchers experienced in working with this population. Interviews were audio recorded, and participating students received a gift card at the end of the

session. During the cognitive interview students were asked to "think aloud" as they answered a "pretend OMAAP" assessment. The selected passages and corresponding items used for the cognitive interviews referenced three state content standards and six objectives in reading:

- Reading Standard 1: Vocabulary

  1.1 Words in Context

  1.2 Affixes, Roots, and Derivatives

- Reading Standard 3: Comprehension/Critical Literacy

  3.1 Literal Understanding,

  3.2 Inferences and Interpretation,

  3.3 Summary and Generalization

- Reading Standard 4: Literature—

  4.2 Literary Elements

Interviewers first modeled the think-aloud behavior and students practiced with a short passage and a single item. The cognitive interview was structured to be brief, use an economy of directions, and to begin in an informal classroom-like instructional format. First, each student participated in a warm-up activity in which the interviewer read the passage and the items to the student and the student answered the questions independently, explaining why he or she chose an answer. Following the warm-up activity students participated in two interview conditions: (1) scaffolded with students reading passages and items with help from the researcher, and (2) independent with students reading passages and items according to the standard OMAAP administration. Additional information was gathered during the cognitive interview from students and their teachers regarding their reactions to the passages and items, their test-taking strategies, and their perspective on their reading ability.

Findings from the Cognitive Interview Study

Out of a total of 24 students interviewed, 16 were in fifth grade from five elementary schools and eight were in eighth grade from two middle schools. There were 10 female and 14 male students. All students attended schools within 100 miles of Oklahoma City. Approximately half of the students were white and 58% had a specific learning disability. Two challenges that interviewed students faced in taking the OMAAP reading assessment were observed during the cognitive interview study: reading level or reading ability and testing-taking strategies. Inter-

viewed students had difficulty taking the assessment and showing what they know and can do because they were unable to read the grade-level reading passages independently. There was an apparent discrepancy for most interviewed students between their reading ability and the reading demands of the passages in the OMAAP assessment. Several interviewed students did not effectively employ the scaffolding built into the OMAAP passages used in the interviews. Although, the study did not examine IEP content, review student work, evaluate classroom schedules and lesson plans, or review a student's specially designed instruction, reading level, testing-taking strategies, and possible lack-of-instruction appear to be the actual "barriers" to reading proficiency for students interviewed.

In a follow-up survey teachers were asked to indicate their interest in additional training on OMAAP test-taking preparation and use of scaffolding for students. Nearly half of all respondents indicated that they would like training "on supports to improve test taking skills of students on state assessments." Teachers were also asked to describe the nature of the additional training they would like on this topic. Fifty-seven respondents provided suggestions or comments, with a majority of comments related to the provision of training on OMAAP test taking strategies.

Identifying the Academic And Learning Characteristics and Needs of Students Participating on OMAAP

As part of the GSEG, SRI administered an annual survey, the Oklahoma Special Education Teacher Survey (OSETS) that addressed a number of important issues. Through OSETS, we collected data on the characteristics of students taking OMAAP, assessed teachers' knowledge of and use of eligibility guidelines and guidelines for developing and implementing standards-based IEPs, and identified teachers' professional development needs. In this section we present findings and implications in two of these areas: the academic needs and learning and behavioral characteristics of students who participated on OMAAP and areas for teacher professional development related to the needs of students who participated on an AA-MAS.

Description of the Study

Each year, for three years, special education teachers were randomly selected using the same two-stage process. First, all districts were sorted by student enrollment into three groups that represented approximately the same numbers of students: large districts (those with 10,000 or more students), medium districts (those with more than 1,687 and fewer than 10,000 students), and small districts (those with 1,687 or fewer students). A specified number of districts from each group were randomly selected for participation. In the second stage of selection, approximately 135 teachers were randomly selected from the large and medium district categories and 154 teachers were randomly selected from the small district category. The sample sizes were

404 in 2007–08, 422 in 2008–09, and 422 in 2009–10 (Table 5). This sample size was expected to result in completed surveys from 100 teachers in each category, resulting in a standard error in each category of 10% of the standard deviation of the responses. Across the three groups, the standard error was 6% of the standard deviation of the responses. This process produced a representative sample of special education teachers in Oklahoma.

Table 5. OSETS Sample Frame

	Teachers/District			Districts			Total number of teachers		
	2007-08	2008-09	2009-10	2007-08	2008-09	2009-10	2007-08	2008-09	2009-10
Large	22	22	22	6	6	6	132	132	132
Medium	4	4	4	34	34	34	136	136	136
Small	2	2	2	68	77	77	136	154	154
Total				108	117	117	404	422	422

After district selection each year, the special education director in each selected district was mailed a study packet from SRI. Included in the study materials were a letter from SRI describing the study, a memo from the OSDE encouraging the district's participation in the study, instructions for randomly selecting special education teachers for participation, a pre-addressed postage-paid postcard for reporting to SRI the names of the teachers selected to complete the survey, and the appropriate number of teacher survey packets to be distributed to teachers. The survey packets for teachers contained a letter to the teacher, a copy of the OSDE memo, a copy of the survey, and a pre-addressed postage-paid envelop to return the survey to SRI. The letter included instructions for completing the survey online, which was also an option for teachers. Response rates were 66 percent in 2007–08, 74 percent in 2008–09, and 68 percent in 2009–10.

Findings

Characteristics of Students with Disabilities who Take OMAAP

Presented here are findings related to the academic, learning and behavioral characteristics of students who participated in OMAAP across the 3 years. Teachers were asked to indicate the number of their students from each disability category who took OMAAP in the current school year. Teachers were asked to indicate how often one or more of their students assessed on OMAAP exhibited specific behaviors from a list of 25 characteristics commonly observed in students who have reading, mathematics, or attention and behavioral difficulties. Responses to this question were on a 4-point scale ranging from *All of the time* to *Rarely*. In reporting these data, we collapsed the four categories into two: (1) all of the time and most of time and (2) some of the time and rarely. No significant differences in the percentage of teachers reporting learning and behavioral characteristics of students taking the OMAAP were noted during the three years of annual data collection; data for the 2009-2010 school year are presented.

Figure 1 shows the academic learning characteristics associated with reading of students taking the OMAAP that a majority of teachers reported were typical among their students. A majority of teachers responded that one or more of their students assessed on OMAAP exhibited the following significant challenges in reading all or most of the time: between 50 and 60 percent of teachers reported that one or more of the students they taught had poor sight word recognition skills; lost the spot where they were reading; had difficulty predicting what may happen next in a story, and demonstrated a limited vocabulary compared with same-age peers. In addition over 80 percent of teachers reported one or more of the students they taught who were assessed on OMAAP had difficulty identifying the main idea of grade-level texts, had limited awareness of narrative or expository text structures, read slowly all or most of the time, had difficulty drawing inferences from grade-level text, and had difficulty answering comprehension questions on long passages.

Figure 1. Academic learning characteristics associated with reading of students taking the OMAAP, 2009–10

Percentage of teachers indicating that one or more of their students assessed on the OMAAP exhibited the following learning characteristics all or most of the time:

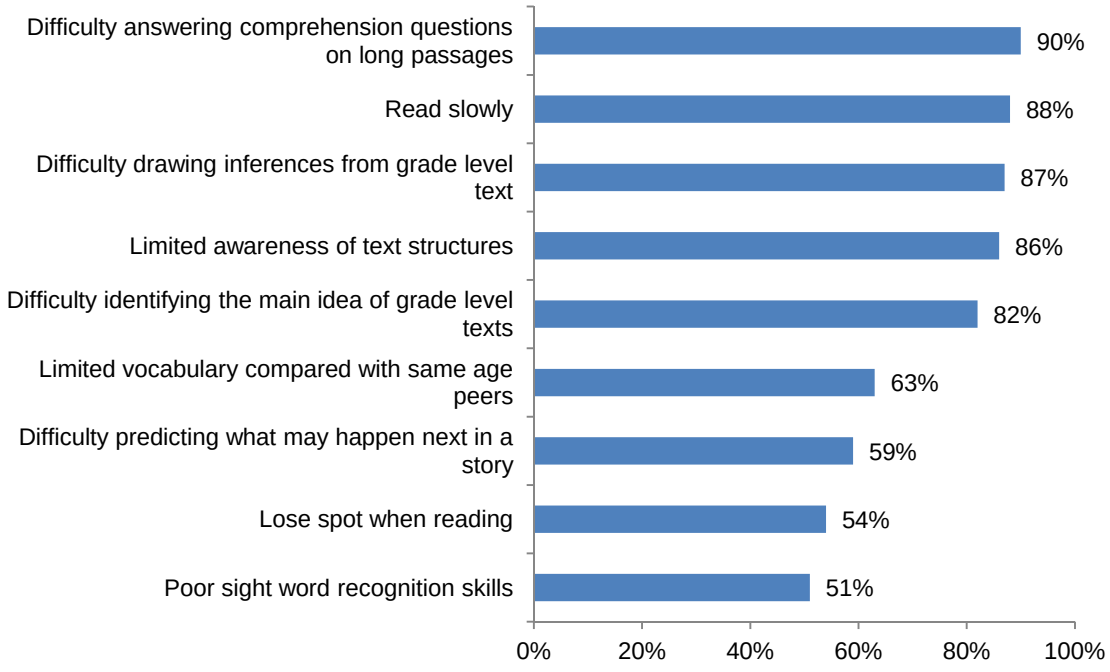


Figure 2 shows the academic learning characteristics associated with mathematics of students taking the OMAAP that a majority of teachers reported were typical among their students. A majority of teachers responded that one or more of their students assessed on OMAAP exhibited the following significant challenges in mathematics all or most of the time: over 50 percent of teachers reported that one or more of the students they taught had difficulty comparing, classifying, or sorting objects; between 60 and 70 percent of teachers reported that the students they taught had difficulty with number concepts and forming mental representations of mathematical concepts. In addition between 70 and 80 percent of teachers reported that their students on OMAAP had slow or inaccurate retrieval of basic math facts and had difficulty understanding and applying mathematical procedures. Finally, over 80 percent of teachers reported that one or more of the students they taught who were assessed on OMAAP had difficulty with problems requiring multistep solutions.

Figure 2. Academic learning characteristics associated with mathematics of students taking the OMAAP, 2009–10

Percentage of teachers indicating that one or more of their students assessed on the OMAAP exhibited the following learning characteristics all or most of the time:

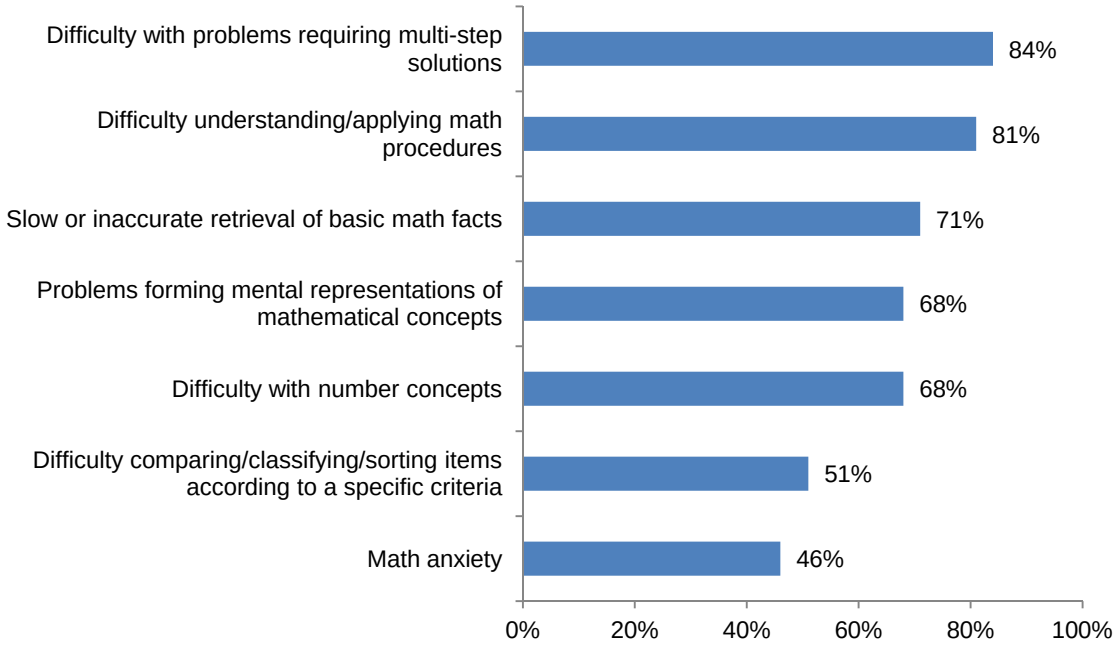
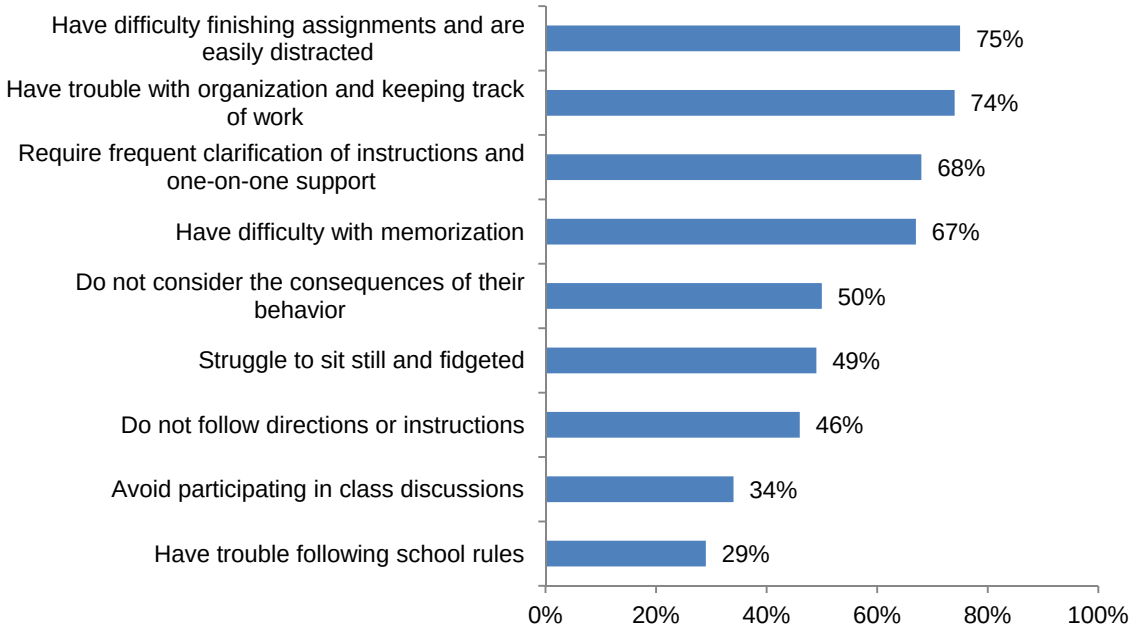


Figure 3 shows the behavioral characteristics of students taking the OMAAP that a majority of teachers reported were typical among their students. A majority of teachers responded that one or more of their students assessed on OMAAP exhibited the following significant challenges in behavior all or most of the time: over 50 percent of teachers reported that one or more of the students they taught struggled to sit still and fidgeted; between 60 and 75 percent of teachers reported that the students they taught who were assessed on OMAAP required frequent clarification of instructions and one-on-one support; had difficulty with memorization, finishing assignments, and were easily distracted; and had difficulty organizing and keeping track.

Figure 3. Behavioral characteristics of students taking the OMAAP, 2009–10

Percentage of teachers indicating that one or more of their students assessed on the OMAAP exhibited the following behavioral characteristics all or most of the time:



Professional Development Needs of Teachers in Reading, Mathematics, and Behavior

Teachers were asked to indicate whether they wanted additional professional development related to the specific academic and learning characteristics demonstrated by their students who participated in OMAAP. Between 50 and 60 percent of teachers indicated they would like professional development on instructional strategies to improve vocabulary acquisition, comprehension of narrative and expository text, retrieval of basic math facts, and computational skills. In addition between 60 and 80 percent of teachers reported that they would like professional development

to improve students' problem-solving skills, strategies to increase task persistence, and improve students' organization and study skills.

Implications and Recommendations for the Race to the Top Assessment Programs

Results of the research studies related to improving the technical quality of OMAAP have implications for the Race-to-the-Top Assessment programs. The need for and importance of providing high quality, effective professional development for special education teachers becomes clear in a range of areas including, academic content and instruction, research-based interventions that are effective for students who struggle, and the purpose of supports and scaffolds that can be embedded in assessments coupled with the need to familiarize students with these supports prior to the assessment.

Implication #1

Developers of the Race-to-the-Top Assessment programs are required to design assessments for all students including most, though not all, students with disabilities (U.S. Department of Education, 2010). This means that students previously eligible for an AA-MAS will, from 2014-15 onwards, participate in the general assessments developed by the Race-to-the-TopAssessment programs rather than an AA-MAS. Based on the reading comparison study there is a strong possibility that some of these students, because of their disabilities and learning characteristics, could perform poorly on the new assessments unless care is taken to remove construct irrelevant barriers that prevent students from showing what they know and can do in grade level content. Both the OMAAP and the OCCT contained grade level content— indeed the reading passages on OMAAP were taken from the OCCT—and many of the students who were unable to demonstrate proficiency on the OCCT could demonstrate proficiency on the OMAAP. We conclude from this that many, (though not all) of the students who participated on OMAAP benefitted from the changes, scaffolds and supports included in the design of the assessment. These changes included additional graphics, one less distractor, fewer items on the assessment, fewer items per page, key text underlined/bolded/bulleted, larger font size, simpler type face, one column format, segmenting of passages, shorter passages, simplified graphics, and simplified language.

Recommendation

Both assessment consortia stated from the outset that they will use universal design principles and accommodations to ensure maximum participation of students with disabilities (National Governors Association and the Council of Chief State School Officers, 2010). The supports and strategies employed in the AA-MAS can provide a sound starting point from which to begin. Some of the supports and scaffolds provided in the AA-MAS can be embedded in the assess-

ment, such as readable type face and simplified graphics, while others may be made available only to the students who require them to demonstrate their knowledge and skills. This could be achieved, for example, through the use of computer delivered assessments which enable teachers to select the scaffolds and supports that individual students require.

Implication #2

The scaffolds and supports in the OMAAP made it more accessible for some students. However, findings from the reading accessibility study suggested that other students did not effectively employ the scaffolding built into the OMAAP assessments.

Recommendation

Students must be provided with exposure to any accessibility features built into the new assessments if they are to make good use of them. This is particularly important for computer based testing (CBT) as this will be a novel approach in many states. Some states have incorporated technology into their AA-MAS (Price, Hodgson, Lazarus, and Thurlow, 2011). For example in 2010-11, 5 states offered CBT in reading and mathematics for their AA-MAS. Some of the states with a AA-MAS computer test option offered students tutorial and practice tests so that students could learn the how to use the accessibility features.

Implication #3

Even with the provision of supports and scaffolds some students who participated on OMAAP struggled with the assessment because they could not read grade level text. Identifying research-based interventions that are effective for students who struggle to learn to read is no easy task. Findings from the survey administered to special education teachers in the state indicated that teachers wanted professional development in several key areas related to improving student performance. One of these areas was research-based instruction in reading. In particular teachers were interested in strategies to improve vocabulary acquisition and improve comprehension of narrative and expository text. In addition, teachers reported that they would like professional development to improve students' problem-solving skills, in strategies to increase task persistence and improve students' organization and study skills.

Recommendation

It is essential that teachers be provided with high quality and effective professional development that enables them to teach most students to the high academic standards provided by the Common Core State Standards (CCSS). Such professional development should focus on the academic *content* included in the CCSS, which may be different to that included in individual state content standards in reading language arts familiar to teachers. In addition, professional development should focus on research-based instructional strategies that are effective with strug-

gling learners and moreover that address the behavioral needs of students at risk of academic failure. Finally, teachers need professional development on the purpose of supports and scaffolds embedded in assessments and on the need to provide students with exposure to these supports and scaffolds prior to the administration of the assessment.

Conclusion

During the Oklahoma GSEG project SRI conducted a number of research studies related to improving the technical quality of the OMAAP. Findings from these studies highlight the crucial role that professional development plays in helping educators understand new initiatives and policies and in enhancing the ability of teachers to implement new curricula and instructional practices. The lessons learned from this project have implications for the development of Race to the Top Assessment programs assessments, namely that special education teachers will need effective professional development in three key areas: (1) the academic content covered by the CCSS, (2) research-based interventions that are effective for students who struggle in reading and mathematics, including positive behavioral supports, and (3) the nature, purpose, and use of supports and scaffolds embedded in assessments.

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