Oklahoma Alternate Assessment Program (OAAP)

Grade 6 Rubrics

2013–2014

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Oklahoma Alternate Assessment Program
Mapping Cut Scores from the 4-point Scale to the 6-point Scale
August 2013

Background

The Oklahoma Alternate Assessment Program (OAAP) Portfolio assessment is designed to assess students with the most significant cognitive disabilities. The Oklahoma State Department of Education (OSDE) has received feedback from educators regarding access limitations to required assessment items collected for the OAAP portfolio assessment.

In order to measure a broader range of performance, the OSDE decided to incorporate two lower score levels into the existing 4-point scale. The new scale, a 6-point scale, will have a scoring rubric that captures the performance of students functioning at extremely low levels of ability; hence, measuring the growth of this group of students. This method, while providing access to students functioning at lower levels, also satisfies Federal requirements for measuring grade-level academic content standards.

The OSDE made changes to the task specifications/rubrics as follows:

- created new score points of 1 and 2;
- changed the scoring range from *1–4* to *1–6;*
- increased the existing score points by moving 1 to 3, 2 to 4, 3 to 5, and 4 to 6.

Even with the rubric extension, the same achievement standards are required for students to earn a Proficient score on the assessment. In other words, the performance level descriptors, which were derived from the expectations for student performance and guide the establishment of cut scores during standard setting, remain the same. Maintaining expectations of the existing performance levels removes the need for additional standard setting. In essence, score levels 1 and 2 in the new scoring rubric are added into the Unsatisfactory performance level. The section below describes the method and result of mapping the current cut scores to the new 6-point scale.

Method

From a scaling viewpoint, adding two score points below the existing scale results in a simple linear transfer of the scale by two (2) points. Those who would receive a score of three (3) points on the 4-point scale will now earn five (5) points on the 6-point scale. This linear relationship between the old and new scale presents a simple mapping solution: the new cut scores are computed by multiplying the number of objectives tested on a subject by two (2) score points and adding this product to the old cut score. The equation is as follows:

$$\text{New Cut Score} = \text{Old Cut Score} + [\text{Number of Objectives X } 2]$$

For example, reading grade 3 has four (4) tasks that measure five (5) objectives. The maximum possible score on the 4-point scale is 20 points. The reading grade 3 cut scores for Limited Knowledge, Proficient, and Advanced levels are 8, 12, and 18, respectively (see Table 1). On a 6-point scale, the maximum possible reading grade 3 score becomes 30 points. When mapping the cut scores to the 6-point scale, the cut scores become 18, 22, and 28, respectively. For example,

$$\text{New cut score} = 8 + (5 \text{ X } 2) = 18$$

In this example, both the maximum possible score and the cut scores all shift by 10 points; since the number of objectives is multiplied by 2.

This method was validated through an examination of the impact data (percentage of students in each performance level) before and after the rubric and cut score transformations. A simulation study was conducted to compare the impact data when transforming cut scores from the 4-point scale to the

6-point scale. The results were identical—the percent classified into each of the performance levels was exactly the same. The mathematical explanation for this is if, for example, a student earns 16 points on the reading grade 3 test on the 4-point scale, this student is at the Proficient level (cut score of 12). After shifting to the 6-point scale, this student's new score is 26 points and will still be classified in the Proficient level (transformed cut score of 22). In sum, because the raw scores and cut scores are transferred by the same constant, their spatial relationship remains the same.

Figure 1 demonstrates the mathematical association of the scale change using reading grade 3 as an example. Figure 1 shows that raw scores of 0 through 20 on the 4-point scale become 10 through 30 on the 6-point scale. The cut scores (8, 12 and 18 on the 4-point scale) shift in the same manner as raw scores (18, 22, and 28). The linear transformation maintains relations between raw scores and cut scores; hence, maintaining the integrity of achievement standards.

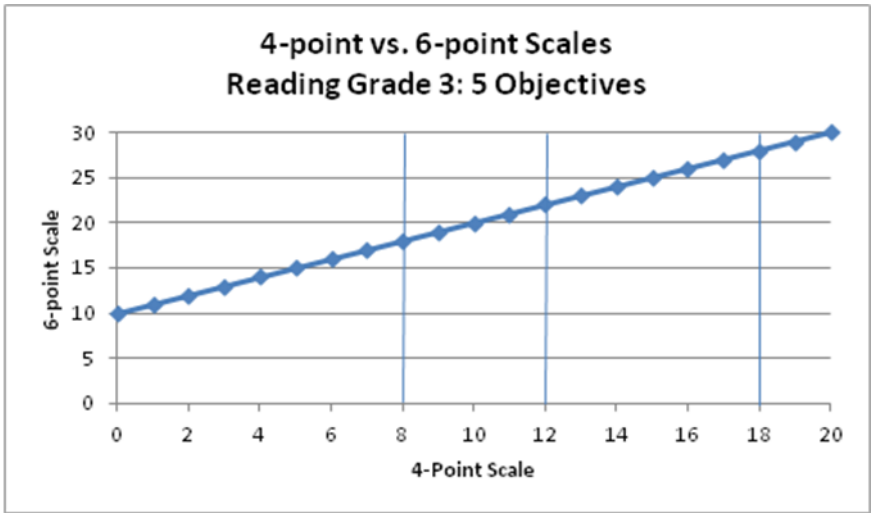

Figure 1: Relation between the 4-point and 6-point Scales

Summary

As a consequence of the above analyses, Pearson recommended moving from the 4-point scale to the 6-point scale by adding two points at the bottom of the scale and shifting the existing points by 2 and following the suggested methodology for transforming the cut scores. The existing cut scores for all OAAP subjects and grades on the 4-point and 6-point scales are presented in Table 1.

Table 1: Cut Scores on the 4-point and 6-point Scales

Subject	Grade	Number of Tasks	4-point Cut Scores			6-point Cut Scores		
			LK	Pro	Adv	LK	Pro	Adv
Math	3	5	8	12	18	18	22	28
	4	6	10	16	21	22	28	33
	5	5	7	12	17	17	22	27
	6	6	9	15	23	21	27	35
	7	5	6	13	19	16	23	29
	8	5	7	13	19	17	23	29
Reading	3	5	6	12	18	16	22	28
	4	5	6	11	17	16	21	27
	5	4	5	9	14	13	17	22
	6	4	5	10	14	13	18	22
	7	6	8	14	20	20	26	32
	8	6	8	14	21	20	26	33
Science	5	7	10	16	25	24	30	39
	8	9	14	22	32	32	40	50
Social Studies	5	8	13	20	29	29	36	45
	7	5	8	12	18	18	22	28
	8	6	9	15	22	21	27	34
Writing	5	5	5	11	18	15	21	28
	8	4	7	11	15	15	19	23
Algebra I	HS	4	6	10	15	14	18	23
Algebra II	HS	3	4	8	11	10	14	17
Biology	HS	10	16	25	35	36	45	55
English II	HS	9	14	22	31	32	40	49
English III	HS	7	10	17	25	24	31	39
Geometry	HS	4	5	10	15	13	18	23
U.S. History	HS	8	12	21	30	28	37	46

Based on peer review (consisting of experts in the fields of standards and assessment), the Oklahoma State Department of Education (OSDE) decided to increase the amount of videos included as part of the evidence to be collected by teachers for the OAAP Portfolio test. Video provides evidence that the task being performed aligns to the content/process standards being assessed. This provides an added measure to ensure content validity in the assessment. It minimizes bias and allows scorers to accurately assess the knowledge and skills of the student. For these reasons, the inclusion of videos signified a major improvement in the assessment. In addition to using the videos as evidence of student performance, the OSDE also uses them for monitoring of appropriate accommodations.

When you see the symbol below, a piece of video evidence is **required**.

Grade 6

Mathematics

Grade 6 Math		
Standard Measured	**Algebraic Reasoning**	**6.1**
Task Specification	The student will identify the solution to a simple one variable equation.	

Objective: Algebraic equations **(6.1)**

6 points	Solve a simple one variable equation in 3 out of 4 trials.
5 points	Identify the solution to a simple one variable equation in 3 out of 4 trials.
4 points	Evaluate simple expressions (e.g., What is the value of 2 + x when x=1?) in 3 out of 4 trials.
3 points	Identify and extend simple algebraic patterns in 3 out of 4 trials.
2 points	Respond when exposed to the identification and extension of simple algebraic patterns in 3 out of 4 trials.
1 point	React when exposed to the extension of a simple algebraic pattern in 3 out of 4 trials.
Total points possible	**6**

Grade 6 Math		
Standard Measured	**Number Sense and Operation**	**6.2**
Task Specification	The student will order fractions one-half, one-third, and one-fourth.	

Objective: Fractions **(6.2)**

6 points	Combine equivalent common unit fractions to equal one whole in 3 out of 4 trials.
5 points	Order fractions one-half, one-third, and one-fourth in 3 out of 4 trials.
4 points	Model fractions one-half, one-third, and one-fourth in 3 out of 4 trials.
3 points	Identify fractions one-half, one-third, and one-fourth in 3 out of 4 trials.
2 points	Respond when exposed to the identification of the fractions one-half, one-third, and one-fourth in 3 out of 4 trials.
1 point	React when exposed to the fractions one-half, one-third, and one-fourth in 3 out of 4 trials.
Total points possible	**6**

Respond refers to any attempted interaction from the student upon exposure to the activity (e.g., assisting, feeling, observing, listening).
React refers to any observable change caused by exposure to the activity (e.g., startle reflex, opening eyes, turning head towards sound or touch).

Grade 6 Math		
Standard Measured	**Geometry**	**6.3**
Task Specification	The student will identify congruent and similar squares, circles, and triangles.	

Objective: Congruent shapes **(6.3.1)**

6 points	Identify corresponding sides of congruent triangles in 3 out of 4 trials.
5 points	Identify congruent squares, circles, and triangles in 3 out of 4 trials.
4 points	Identify congruent circles in 3 out of 4 trials.
3 points	Identify squares, circles, and triangles in 3 out of 4 trials.
2 points	Respond when exposed to the identification of squares, circles, and triangles in 3 out of 4 trials.
1 point	React when exposed to squares, circles, and triangles in 3 out of 4 trials.
Total points possible	**6**

Objective: Similar shapes **(6.3.2)**

6 points	Identify corresponding sides of similar triangles in 3 out of 4 trials.
5 points	Identify similar squares, circles, and triangles in 3 out of 4 trials.
4 points	Identify similar circles and squares in 3 out of 4 trials.
3 points	Identify squares, circles, and triangles in 3 out of 4 trials.
2 points	Respond when exposed to the identification of squares, circles, and triangles in 3 out of 4 trials.
1 point	React when exposed to squares, circles, and triangles in 3 out of 4 trials.
Total points possible	**6**

Total points possible (6.3.1, 6.3.2)	**12**

Respond refers to any attempted interaction from the student upon exposure to the activity (e.g., assisting, feeling, observing, listening).
React refers to any observable change caused by exposure to the activity (e.g., startle reflex, opening eyes, turning head towards sound or touch).

Grade 6 Math		
Standard Measured	**Measurement**	**6.4**
Task Specification	The student will recognize appropriate vocabulary for units of measurement for length, volume, weight and time.	

Objective: Measurement **(6.4)**

6 points	Apply appropriate vocabulary for units of measurement for length, volume, weight and time in 3 out of 4 trials.
5 points	Recognize appropriate vocabulary for units of measurement for length, volume, weight and time in 3 out of 4 trials.
4 points	Select the appropriate instruments to measure length, volume, weight and time in 3 out of 4 trials.
3 points	Differentiate between length, volume, weight and time in 3 out of 4 trials.
2 points	Respond when exposed to the identification of the difference between length, volume, weight and time in 3 out of 4 trials.
1 point	React when exposed to the difference between length, volume, weight and time in 3 out of 4 trials.
Total points possible	**6**

Grade 6 Math		
Standard Measured	**Data Analysis**	**6.5**
Task Specification	The student will organize data into a chart, graph, or table.	

Objective: Data **(6.5)**

6 points	Interpret data in a chart, graph, or table in 3 out of 4 trials.
5 points	Organize data into a chart, graph, or table in 3 out of 4 trials.
4 points	Collect data for a chart, graph, or table in 3 out of 4 trials.
3 points	Differentiate between different types of graphs in 3 out of 4 trials.
2 points	Respond when exposed to the identification of the difference between types of graphs in 3 out of 4 trials.
1 point	React when exposed to the difference between types of graphs in 3 out of 4 trials.
Total points possible	**6**

Respond refers to any attempted interaction from the student upon exposure to the activity (e.g., assisting, feeling, observing, listening).
React refers to any observable change caused by exposure to the activity (e.g., startle reflex, opening eyes, turning head towards sound or touch).

Grade 6

Reading

Grade 6 Reading		
Standard Measured	**Vocabulary**	**6.1**
Task Specification	The student will identify words with the same origins/roots.	

Objective: Word origins **(6.1)**

6 points	Categorize six words by their origins/roots in 3 out of 4 trials.
5 points	Match two pairs of words with the same origins/roots in 3 out of 4 trials.
4 points	Match two words with the same origins/roots in 3 out of 4 trials.
3 points	Identify a word with a specified root in 3 out of 4 trials.
2 points	Respond when exposed to the identification of a word with a specified root in 3 out of 4 trials.
1 point	React when exposed to a word with a specified root in 3 out of 4 trials.
Total points possible	**6**

Grade 6 Reading		
Standard Measured	**Comprehension/Critical Literacy**	**6.3**
Task Specification	The student will make predictions prior to reading, hearing, or viewing text or media and then confirm predictions about characters and main ideas.	

Objective: Make predictions **(6.3)**

6 points	Confirm two predictions as being correct or incorrect, and provide supporting context after reading, hearing, or viewing text or media in 3 out of 4 trials.
5 points	Make two predictions prior to reading, hearing, or viewing text or media and then confirm predictions about characters and main ideas of text or media in 3 out of 4 trials.
4 points	Predict a main idea (or plot event) and then revise that prediction after reading, hearing, or viewing text or media in 3 out of 4 trials.
3 points	Preview text or media and make a prediction about the main character in 3 out of 4 trials.
2 points	Preview text or media and respond when exposed to a prediction about the main character in 3 out of 4 trials.
1 point	Preview text or media and react to a prediction about the main character in 3 out of 4 trials.
Total points possible	**6**

Respond refers to any attempted interaction from the student upon exposure to the activity (e.g., assisting, feeling, observing, listening).
React refers to any observable change caused by exposure to the activity (e.g., startle reflex, opening eyes, turning head towards sound or touch).

Grade 6 Reading		
Standard Measured	**Literature**	**6.4**
Task Specification	The student will identify the author's purpose.	

Objective: Author's purpose **(6.4)**

6 points	Describe the authors' purposes in two different texts in 3 out of 4 trials.
5 points	Identify the author's purpose in 3 out of 4 trials.
4 points	Identify answer to two very simple questions about the author's purpose in 3 out of 4 trials.
3 points	Identify correct answer to a very simple question about the author's purpose in 3 out of 4 trials.
2 points	Respond when exposed to the identification of correct answers to a very simple question about the author's purpose in 3 out of 4 trials.
1 point	React when asked a simple question about the author's purpose in 3 out of 4 trials.
Total points possible	**6**

Grade 6 Reading		
Standard Measured	**Research and Information**	**6.5**
Task Specification	The student will use maps, charts, illustrations, and the Internet to access information.	

Objective: Accessing information **(6.5)**

6 points	Analyze maps, charts, and illustrations to access information for a specific topic in 3 out of 4 trials.
5 points	Locate and use charts to access information in 3 out of 4 trials.
4 points	Identify illustrations to access information in 3 out of 4 trials.
3 points	Identify a map, a chart, and an illustration in 3 out of 4 trials.
2 points	Respond when exposed to the identification of a map, a chart, and an illustration in 3 out of 4 trials.
1 point	React when exposed to a map, a chart, and an illustration in 3 out of 4 trials.
Total points possible	**6**

Respond refers to any attempted interaction from the student upon exposure to the activity (e.g., assisting, feeling, observing, listening).
React refers to any observable change caused by exposure to the activity (e.g., startle reflex, opening eyes, turning head towards sound or touch).