

Board of Education Agenda Item

Item: C.

Date: May 19, 2011

Topic: Final Review of a Recommendation of the Advisory Board on Teacher Education and Licensure (ABTEL) to Approve a Cut Score for the Reading for Virginia Educators (RVE): Elementary and Special Education Teachers Assessment

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Origin:

Topic presented for information only (no board action required)

Board review required by
 State or federal law or regulation
 Board of Education regulation
 Other: _____

Action requested at this meeting Action requested at future meeting: _____ (date)

Previous Review/Action:

No previous board review/action

Previous review/action
date April 28, 2011
action First Review of a Recommendation of the Advisory Board on Teacher Education and Licensure (ABTEL) to Approve a Cut Score for the Reading for Virginia Educators (RVE): Elementary and Special Education Teachers Assessment

Background Information:

In response to House Joint Resolution Number 794 (HJR 794) of the 2001 session of the Virginia General Assembly, the Advisory Board on Teacher Education and Licensure (ABTEL), in cooperation with the State Council of Higher Education for Virginia, conducted a series of initiatives to determine the proficiency of Virginia teachers in teaching systematic explicit phonics. A resolution to enhance reading instruction was adopted on March 17, 2003, by ABTEL. The resolution was presented to the Board of Education for first review on March 26, 2003, and approved by the Board on April 29, 2003. This resolution called for the following:

1. the development of a statewide reading assessment aligned with the Virginia Standards of Learning and the National Reading Panel's five key components of effective reading instruction: phonics, phonemic awareness, vocabulary, comprehension, and fluency; and

2. the requirement of a reading instructional assessment for teachers of special education (Emotional Disturbances, Learning Disabilities, Mental Retardation, Hearing Impairments, and Visual Impairments), elementary prek-3, and elementary prek-6 no later than July 1, 2004. In addition, individuals seeking a reading specialist endorsement would be required to complete a reading instructional assessment no later than July 1, 2004.

In response to this resolution, the Virginia Department of Education contracted with National Evaluation Systems to develop the Virginia Reading Assessment (VRA) and Virginia Reading Assessment for Reading Specialists (VRA for Reading Specialists). Between July 1, 2004, and June 30, 2006, the VRA was required of all candidates applying for an initial license with endorsements in Early/Primary PreK-3, Elementary Education PreK-6, Special Education (Emotional Disturbances, Learning Disabilities, Mental Retardation, Hearing Impairments, and Visual Impairments) and individuals seeking an endorsement as a Reading Specialist. Also, as a result of the Board's action on July 27, 2005, institutions of higher education with preparation programs in teaching endorsement areas requiring the VRA were given another year to continue aligning their programs with required reading competencies.

At the July 27, 2005, meeting, the Board of Education approved cut scores for the Virginia Reading Assessments (VRA) for elementary and special education teachers (Emotional Disturbances, Learning Disabilities, Mental Retardation, Hearing Impairments, and Visual Impairments) and reading specialists. The Board approved a score of 235 for elementary and special education teachers and a score of 245 for reading specialists, effective July 1, 2006.

Based on Virginia's procurement regulations, from time to time contracts for certain tests must be opened for competitive solicitation and new contracts awarded. As a result of the solicitation, the Virginia Department of Education contracted with the Educational Testing Service (ETS) on July 20, 2010, to develop the following two new reading assessments that will become effective July 1, 2011.

Reading for Virginia Educators (RVE): Elementary and Special Education Teachers Assessment

This assessment will be required for Virginia teachers seeking an initial license with an endorsement in Elementary Education PK-3, Elementary Education PK-6, Special Education-General Curriculum, Special Education-Hearing Impairments, and Special Education-Visual Impairments and will replace the Virginia Reading Assessment (VRA) for Elementary and Special Education Teachers.

Reading for Virginia Educators (RVE): Reading Specialist Assessment

This assessment will be required for individuals seeking the reading specialist endorsement and will replace the Virginia Reading Assessment (VRA) for Reading Specialists.

The Educational Testing Service worked with the Virginia Department of Education to assemble test development committees composed of Virginia teachers and higher education faculty involved in the preparation of reading teachers. These committees met in September 2010 to review the proposed test specifications and approve specific test items for the new assessments. ETS also conducted field tests of the two new assessments across Virginia in January and February 2011.

Summary of Major Elements:

To support the decision-making process for the Virginia Department of Education with regards to establishing a passing score, or cut score, for the Reading for Virginia Educators (RVE): Elementary and Special Education Teachers (0306) Assessment, research staff from Educational Testing Service (ETS) designed and conducted a standard-setting study. The study also collected content-related validity evidence to confirm the importance of the content specifications for entry-level elementary and special education teachers with regards to teaching reading.

The study involved an expert panel comprised of teachers, administrators and college faculty. The Department of Education recommended panelists with (a) elementary or special education experience, either as elementary or special education teachers or college faculty who prepare elementary or special education teachers and (b) familiarity with the knowledge and skills required of beginning elementary or special education teachers with regards to teaching reading. A roster of participants is included in the Appendix of the attached report. The panel was convened on February 28 and March 1, 2011, in Richmond, Virginia.

The *RVE: Elementary and Special Education Teachers Test at a Glance* document (ETS, in press) describes the purpose and structure of the assessment. In brief, the assessment measures whether entry-level elementary or special education teachers have the content knowledge and skills related to teaching reading believed necessary for competent professional practice. The specifications for the assessment were provided by the Virginia Department of Education and consistent with the current knowledge and skill content specified for licensure.

The two and one-half hour assessment is divided into two parts. Part A contains 100 multiple-choice questions covering *Assessment and Diagnostic Teaching* (approximately 19 questions), *Oral Language and Oral Communication* (approximately 19 questions), *Reading Development* (approximately 43 questions), and *Writing and Research* (approximately 19 questions). Part B contains three constructed-response questions covering three of the four content areas as Part A (*Oral Language and Oral Communication* is not covered by one of the constructed-response questions). While the sections are not separately timed, suggested time limits of 105 minutes for Part A and 45 minutes for Part B are provided.

Candidate scores on the two parts are combined and reported as an overall score; five category scores – one for each content area covered in Part A and one for the combined constructed-response questions in Part B – also are reported. The constructed-response questions in Part B are weighted to contribute 20 percent of the total raw-score points. The maximum total number of raw points that may be earned on the assessment is 100, 80 points from Part A and 20 points from Part B. The reporting scales for the RVE: Elementary and Special Education Teachers (0306) assessment ranges from 100 to 200 scaled-score points.

The panel's cut score recommendation for the Reading for Virginia Educators (RVE): Elementary and Special Education Teachers (0306) assessment is 66.68. The value was rounded to 67 (out of 100 raw score points that could be earned on the assessment), the next highest whole number, to determine the functional recommended cut. The scaled score associated with 67 raw points is 163.

When reviewing the Standard Error of Measurement (SEM) for the cut scores recommended by the Virginia Standard Setting Study, there is an overlap in the scaled scores. The SEM is a statistical phenomenon and is unrelated to the accuracy of scoring. All test results are subject to the standard error of measurement. If a test-taker were to take the same test repeatedly, with no change in his level of

knowledge and preparation, it is possible that some of the resulting scores would be slightly higher or slightly lower than the score that precisely reflects the test taker’s actual level of knowledge and ability. The difference between a test-taker’s actual score and his highest or lowest hypothetical score is known as the standard error of measurement. The Standard Error of Measurement for the recommended cut scores for the Virginia Standard Setting Study is shown below. Note that consistent with the recommended cut score, the cut scores at the different SEMs have been rounded to the next highest whole number.

Standard Error of Measure Summary
Reading for Virginia Educators: Elementary and Special Education Teachers Assessment

Cut Scores Within 1 and 2 SEMs of the Recommended Cut Score

<u>Recommended Cut Score (SEM)</u>	<u>Scale Score Equivalent</u>	<u>Field Test Pass Rate</u>	
	67 (4.55)	163 (Panel Recommendation)	52%
-2 SEMs	58	151	72%
-1 SEM	63	157 (ABTEL Recommendation)	63%
+1 SEM	72	169	40%
+2 SEMs	77	176	27%

Note: Consistent with the recommended cut score, the cut scores at the different SEMs have been rounded to the next highest whole number.

In addition to the results of the Standard Setting Study, the Advisory Board on Teacher Education and Licensure (ABTEL) also reviewed the results from the field test conducted by ETS. A total of 764 candidates participated in the field test for the RVE assessment conducted in January-February 2011. The percentage of field test candidates passing at the scale score equivalent is also shown above.

On March 21, 2011, ABTEL recommended that the Board of Education set a cut score of 157 for the Reading for Virginia Educators (RVE): Elementary and Special Education Teachers Assessment.

Superintendent's Recommendation:

The Superintendent of Public Instruction recommends that the Board of Education approve the Advisory Board on Teacher Education and Licensure’s recommendation to adopt the cut score of 157 for the Reading for Virginia Educators (RVE): Elementary and Special Education Teachers Assessment.

Impact on Resources:

Costs associated with the administration of the Reading for Virginia Educators (RVE): Elementary and Special Education Teachers Assessment will be incurred by the Educational Testing Service. Prospective elementary and special education teachers will be required to pay a fee for test administration and reporting results to the Virginia Department of Education.

Timetable for Further Review/Action:

Upon approval by the Board, school divisions and institutions of higher education will be notified of the cut score for the Reading for Virginia Educators (RVE): Elementary and Special Education Teachers Assessment.



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Standard Setting Technical Report

**READING FOR VIRGINIA EDUCATORS:
ELEMENTARY AND SPECIAL EDUCATION TEACHERS (0306)**

Prepared for the Virginia Department of Education

Educational and Credentialing Research

Educational Testing Service

Princeton, New Jersey

March 2011

Executive Summary

To support the decision-making process for the Virginia Department of Education (VDOE) with regards to establishing a passing score, or cut score, for the Reading for Virginia Educators (RVE): Elementary and Special Education Teachers (0306) assessment, research staff from Educational Testing Service (ETS) designed and conducted a standard-setting study on February 28 and March 1, 2011. The study also collected content-related validity evidence to confirm the importance of the content specifications for entry-level elementary and special education teachers with regards to teaching reading.

Recommended Cut Score

The recommended cut score is provided to help the VDOE determine an appropriate cut (or passing) score. For the RVE: Elementary and Special Education Teachers (0306) assessment, the average recommended cut score is 67 out of 100 (on the raw score metric). The scaled score associated with a raw score of 67 is 163 (on a 100 to 200 scale).

Summary of Content Specification Judgments

Panelists judged the extent to which the knowledge and/or skills reflected by the content specifications were important for entry-level elementary and special education teachers with regards to teaching reading. The favorable judgments of the panelists provided evidence that the content of the assessment is important for beginning practice.

To support the decision-making process for the Virginia Department of Education (VDOE) with regards to establishing a passing score, or cut score, for the RVE: Elementary and Special Education Teachers (0306) assessment, research staff from Educational Testing Service (ETS) designed and conducted a standard-setting study. The study also collected content-related validity evidence to confirm the importance of the content specifications for entry-level elementary and special education teachers with regards to teaching reading.

The study involved an expert panel, comprised of teachers, administrators and college faculty. The VDOE recommended panelists with (a) elementary or special education experience, either as elementary or special education teachers or college faculty who prepare elementary or special education teachers and (b) familiarity with the knowledge and skills required of beginning elementary or special education teachers with regards to teaching reading.

The panel was convened on February 28 and March 1, 2011, in Richmond, Virginia. The following technical report is divided into three sections. The first section describes the content and format of the assessment. The second section describes the standard-setting processes and methods used. The third section presents the results of the standard-setting study.

The passing score recommendation for the RVE: Elementary and Special Education Teachers (0306) assessment is provided to the VDOE. The VDOE is responsible for establishing the final passing score in accordance with applicable state regulations. The study provides a recommended passing score, which represents the combined judgments of one group of experienced educators. The full range of the VDOE's needs and expectations could not be represented during the standard-setting study. The VDOE, therefore, may want to consider both the panel's recommended cut score and other sources to information when setting the final RVE: Elementary and Special Education Teachers (0306) cut score (see Geisinger & McCormick, 2010). The VDOE may accept the recommended cut score, adjust it upward to reflect more stringent expectations, or adjust it downward to reflect more lenient expectations. There is no *correct* decision; the appropriateness of any adjustment may only be evaluated in terms of its meeting the VDOE's needs.

Two sources of information to consider when setting the cut score are the standard error of measurement (SEM) and the standard error of judgment (SEJ). The former addresses the reliability of RVE: Elementary and Special Education Teachers (0306) scores and the latter the reliability of

panelists' cut-score recommendations. The SEM allows the VDOE to recognize that a RVE: Elementary and Special Education Teachers (0306) score—any test score on any test—is less than perfectly reliable. A test score only approximates what a candidate *truly* knows or *truly* can do on the test. The SEM, therefore, addresses the question: How close of an approximation is the test score to the *true* score? The SEJ allows the VDOE to consider the likelihood that the recommended cut score from the current panel would be similar to cut scores recommended by other panels of experts similar in composition and experience. The smaller the SEJ, the more likely that another panel would recommend a cut score consistent with the recommended cut score. The larger the SEJ, the less likely the recommended cut score would be reproduced by another panel.

In addition to measurement error metrics (e.g., SEM, SEJ), the VDOE should consider the likelihood of classification error. That is, when adjusting a cut score, policymakers should consider whether it is more important to minimize a false positive decision or to minimize a false negative decision. A false positive decision occurs when a candidate's test score suggests he should receive a license/certificate, but his actual knowledge/skill level is lower (i.e., the candidate does not possess the required knowledge/skills). A false negative occurs when a candidate's test score suggests that she should not receive a license/certificate, but she actually does possess the required knowledge/skills. The VDOE needs to consider which decision error to minimize; it is not possible to eliminate both types of decision errors simultaneously.

Overview of the RVE: Elementary and Special Education Teachers Assessment

The *RVE: Elementary and Special Education Teachers Test at a Glance* document (ETS, in press) describes the purpose and structure of the assessment. In brief, the assessment measures whether entry-level elementary or special education teachers have the content knowledge and skills related to teaching reading believed necessary for competent professional practice. The specifications for the assessment were provided by the Virginia Department of Education and consistent with the current knowledge and skill content specified for licensure.

The two and one-half hour assessment is divided into two parts. Part A contains 100 multiple-choice questions covering *Assessment and Diagnostic Teaching* (approximately 19 questions), *Oral Language and Oral Communication* (approximately 19 questions), *Reading Development*

(approximately 43 questions), and *Writing and Research* (approximately 19 questions)¹. Part B contains three constructed-response questions covering three of the four content areas as Part A (*Oral Language and Oral Communication* is not covered by one of the constructed-response questions). While the sections are not separately timed, suggested time limits of 105 minutes for Part A and 45 minutes for Part B are provided.

Candidate scores on the two parts are combined and reported as an overall score; five category scores – one for each content area covered in Part A and one for the combined constructed-response questions in Part B – also are reported. The constructed-response questions in Part B are weighted to contribute 20% of the total raw-score points. The maximum total number of raw points that may be earned on the assessment is 100, 80 points from Part A and 20 points from Part B. The reporting scales for the RVE: Elementary and Special Education Teachers (0306) assessment ranges from 100 to 200 scaled-score points.

Processes and Methods

The following section describes the processes and methods used to train panelists, gather panelists' judgments and to calculate the recommended passing score, or cut score. (The agenda for the panel meeting is presented in the Appendix.)

The panelists were sent an e-mail explaining the purpose of the standard-setting study and requesting that they review the test content specifications for the assessment (included in the *Test at a Glance* document, which was attached to the e-mail). The purpose of the review was to familiarize the panelists with the general structure and content of the assessment.

The standard-setting study began with a welcome and introduction by James Lanham, from the VDOE. The ETS facilitator, Jack Burke, then explained how the assessment was developed, provided an overview of standard setting, and presented the agenda for the study.

Reviewing the Assessment

The first activity was for the panelists to “take the test.” (Each panelist had signed a nondisclosure form.) The panelists were given approximately two hours to respond to the multiple-choice questions and to sketch responses to the constructed-response questions. (Panelists were

¹ The number of questions for each content area may vary slightly from form to form of the assessment.

instructed not to refer to the answer key for the multiple-choice questions while taking the test.) The purpose of “taking the test” was for the panelists to become familiar with the test format, content, and difficulty. After “taking the test,” the panelists checked their responses against the answer key for the multiple-choice questions and the scoring rubric for the constructed-response questions.

The panelists then engaged in a discussion of the major content areas being addressed by the assessment; they were also asked to remark on any content areas that they thought would be particularly challenging for entering elementary or special education teachers, and areas that addressed content that would be particularly important for entering elementary or special education teachers.

Defining the Just Qualified Candidate

Following the review of the assessment, panelists internalized the definition of the Just Qualified Candidate (JQC). The JQC is the test taker who has the minimum level of knowledge and/or skills believed necessary to be a qualified elementary or special education teacher with regards to teaching reading. The JQC definition is the operational definition of the cut score. The goal of the standard-setting process is to identify the test score that aligns with this definition of the JQC.

The panelists were split into smaller groups, and each group was asked to write down their definition of a JQC. Each group referred to *RVE: Elementary and Special Education Teachers Test at a Glance* to guide their definition. Each group posted its definition on chart paper, and a full-panel discussion occurred to reach consensus on a final definition (see the consensus JQC definition in the Appendix).

Panelists’ Judgments

The standard-setting process for the RVE: Elementary and Special Education Teachers (0306) assessment was conducted for the overall test, though one standard-setting approach was implemented for Part A (multiple-choice questions) and another approach was implemented for Part B (constructed-response questions). The panel’s passing score for the assessment is the sum of the interim cut scores recommended by the panelists for each section. As with scoring and reporting, the panelists’ judgments for Part B, the constructed-response questions, were weighted such that Part B contributed 20% of the overall score.

Standard Setting for Part A (multiple-choice questions). A probability-based Angoff method (Brandon, 2004; Hambleton & Pitoniak, 2006) was used for Part A (multiple-choice questions). In this approach, for each question, a panelist decides on the likelihood (probability or chance) that a JQC would answer it correctly. Panelists made their judgments using the following rating scale: 0, .05, .10, .20, .30, .40, .50, .60, .70, .80, .90, .95, 1. The lower the value, the less likely it is that a JQC would answer the question correctly, because the question is difficult for the JQC. The higher the value, the more likely it is that a JQC would answer the question correctly.

For each panel, the panelists were asked to approach the judgment process in two stages. First, they reviewed the definition of the JQC and the question and decided if, overall, the question was difficult for the JQC, easy for the JQC, or moderately difficult/easy. The facilitator encouraged the panelists to consider the following rule of thumb to guide their decision:

- difficult questions for a JQC were in the 0 to .30 range;
- moderately difficult/easy questions for a JQC were in the .40 to .60 range; and
- easy questions for a JQC were in the .70 to 1 range.

The second decision was for panelists to decide how they wanted to refine their judgment within the range. For example, if a panelist thought that a question was easy for a JQC, the initial decision located the question in the .70 to 1 range. The second decision was for the panelist to decide if the likelihood of answering it correctly was .70, .80, .90, .95, or 1.0. The two-stage decision-process was implemented to reduce the cognitive load placed on the panelists. The panelists practiced making their standard-setting judgments on four questions on the assessment.

The panelists engaged in two rounds of judgments. Following Round 1, question-level feedback was provided to the panel. The panelists' judgments were displayed for each question. The panelists' judgments were summarized by the three general difficulty levels (0 to .30, .40 to .60, and .70 to 1), and the panel's average question judgment was provided. Questions were highlighted to show when panelists converged in their judgments (at least two-thirds of the panelists located a question in the same difficulty range) or diverged in their judgments. Panelists were asked to share their rationales for the judgments they made. Following this discussion, panelists were provided an opportunity to change their question-level standard-setting judgments (Round 2).

Standard Setting for Part B (constructed-response questions). An Extended Angoff method (Cizek & Bunch, 2007; Hambleton & Plake, 1995) was used for Part B (constructed-response questions). In this approach, for each question, a panelist decides on the assigned score value that would most likely be earned by a JQC. The basic process that each panelist followed was first to review the definition of the JQC and then to review the question and the rubric for that question. The rubric for a question defines holistically the quality of the evidence that would merit a response earning a score of 3, 2, 1, or 0. During this review, each panelist independently considered the level of knowledge and/or skill required to respond to the question and the features of a response that would earn 3, 2, 1, or 0 points, as defined by the rubric.

A test taker's response to a constructed-response question is independently scored by two raters, and the sum of the raters' scores is the assigned score²; possible scores, therefore, range from zero (both raters assigned a score of zero) to six (both raters assigned a score of three). Each panelist decided on the score most likely to be earned by a JQC from the following possible values: 0, 1, 2, 3, 4, 5, 6. For each of the constructed-response questions, panelists recorded the score (0 through 6) that a JQC would most likely earn. The panelists practiced making their standard-setting judgments on the first constructed-response question in Part B.

Consistent with the standard-setting process used for Part A, the panelists engaged in two rounds of judgments for Part B. Following Round 1, question-level feedback was provided to the panel. The panelists' judgments were displayed for each question. The panelists participated in a general discussion of the results. Panelists were asked to share their rationales for the judgments they made. Following this discussion, panelists were provided an opportunity to change their question-level standard-setting judgments (Round 2).

Judgment of Content Specifications

In addition to the two-round standard-setting process, the panel judged the importance of the knowledge and/or skills stated or implied in the assessment content specifications for the job of an entry-level elementary or special education teacher with regards to teaching reading. These judgments addressed the perceived content-based validity of the assessment. Judgments were made using a four-

² If the two raters' scores differ by more than one point (non-adjacent), the Chief Reader for that question assigns the score, which is then doubled.

point Likert scale — *Very Important, Important, Slightly Important, and Not Important*. Each panelist independently judged the knowledge/skills statements.

Results

Expert Panels

The panel included 14 educators. In brief, 10 panelists were teachers, one was an administrator, and three were college faculty. All three of the panelists who were college faculty were currently involved in the training or preparation of elementary or special education teachers. Eleven panelists were White and three were African American. Eleven panelists were female. Thirteen panelists reported being certified elementary or special education teachers in Virginia. Approximately a third of panelists (5 of the 14 panelists or 36%) had between four and seven years of experience as an elementary or special education teacher, and another third of the panelists (5 of the 14 panelists or 36%) had 12 or more years of experience.

A fuller demographic description for the members of the panel is presented in Table 1. (See Figure 1 in the Appendix for a listing of panelists.)

Table 1

Panel Member Demographics

	N	Percent
Current Position		
Teacher	10	71%
Administrator/Department Head	1	7%
College Faculty	3	21%
Race		
White	11	79%
Black or African American	3	21%
Gender		
Female	11	79%
Male	3	21%
Are you currently certified as an elementary or special education teacher in Virginia?		
Yes	13	93%
No	1	7%

Table 1 (continued)

Panel Member Demographics

	N	Percent
Are you currently an elementary or special education teacher in Virginia?		
Yes	10	71%
No	4	29%
Are you currently supervising or mentoring other elementary or special education teachers?		
Yes	6	43%
No	8	57%
How many years of experience do you have as an elementary or special education teacher?		
3 years or less	0	0%
4 - 7 years	5	36%
8 - 11 years	4	29%
12 - 15 years	4	29%
16 years or more	1	7%
At what K-12 grade level are you currently teaching?		
Elementary (K-5 or K-6)	7	50%
Middle School (6-8 or 7-9)	1	7%
Elementary and Middle School (9 - 12 or 10 - 12)	1	7%
High School (9-12 or 10-12)	0	0%
Middle and High School	1	7%
Other	1	7%
Not currently teaching at the K-12 level	3	21%
Which best describes the location of your K-12 school?		
Urban	3	21%
Suburban	4	29%
Rural	4	29%
Not currently teaching at the K-12 level	3	21%
If you are college faculty, are you currently involved in the training/preparation of elementary or special education teachers?		
Yes	3	21%
No	0	0%
Not college faculty	11	79%

Initial Evaluation Forms

The panelists completed an initial evaluation after receiving training on how to make question-level judgments. The primary information collected from this form was the panelists indicating if they had received adequate training to make their standard-setting judgments and were ready to proceed. All panelists indicated that they were prepared to make their judgments.

Summary of Standard Setting Judgments

A summary of each round of standard-setting judgments for Part A (multiple-choice questions), Part B (constructed-response questions), and the overall assessment is presented in Table 2. The numbers in the table reflect the recommended cut scores — the number of raw points needed to “pass” the part or assessment — of each panelist for the two rounds. For Part B, weighted cut scores are presented; for the overall assessment, the weighted cut scores (i.e., sum of Part A and the weighted Part B cut scores) are presented. Note that the RVE: Elementary and Special Education Teachers (0306) assessment reports a single, overall score and that the panel is recommending a single cut score for the combination of Parts A and B. The separate “cut scores” for the two parts are intermediate steps in calculating the overall cut score. The panel’s average recommended cut score and highest and lowest cut scores are reported, as are the standard deviations (SD) of panelists’ cut scores and the standard errors of judgment (SEJ). The SEJ is one way of estimating the reliability of the judgments³. It indicates how likely it would be for other panels of educators similar in make-up, experience, and standard-setting training to the current panels to recommend the same cut score on the same form of the assessment. A comparable panel’s cut score would be within 1 SEJ of the current average cut score 68 percent of the time.

The panel’s cut score recommendation for the RVE: Elementary and Special Education Teachers (0306) assessment is 66.68 (see Table 2). The value was rounded to 67 (out of 100 raw score points that could be earned on the assessment), the next highest whole number, to determine the functional recommended cut. The scaled score associated with 67 raw points is 163.

³ An SEJ assumes that panel members are randomly selected and that standard-setting judgments are independent. It is seldom the case that panel members are randomly sampled, and only the first round of judgments may be considered independent. The SEJ, therefore, likely underestimates the uncertainty of cut scores (Tannenbaum & Katz, forthcoming).

Table 2**Cut Score Summary by Round of Judgments**

Panelist	Round 1			Round 2		
	Part A	Part B (weighted)	Total	Part A	Part B (weighted)	Total
1	51.10	16.65	67.75	51.90	16.65	68.55
2	53.70	14.43	68.13	54.70	14.43	69.13
3	47.80	15.54	63.34	48.80	15.54	64.34
4	43.80	14.43	58.23	45.00	14.43	59.43
5	51.70	14.43	66.13	51.70	14.43	66.13
6	51.70	14.43	66.13	51.20	14.43	65.63
7	56.10	13.32	69.42	55.50	14.43	69.93
8	54.55	11.10	65.65	54.95	13.32	68.27
9	51.20	15.54	66.74	51.05	13.32	64.37
10	45.00	12.21	57.21	46.40	14.43	60.83
11	46.30	14.43	60.73	49.85	15.54	65.39
12	44.50	13.32	57.82	44.50	13.32	57.82
13	53.60	15.54	69.14	55.50	15.54	71.04
14	66.55	16.65	83.20	66.00	16.65	82.65
Average	51.26	14.43	65.69	51.93	14.75	66.68
SD	5.93	1.57	6.59	5.47	1.10	6.05
SEJ	1.58	0.42	1.76	1.46	0.30	1.62
Highest	66.55	16.65	83.20	66.00	16.65	82.65
Lowest	43.80	11.10	57.21	44.50	13.32	57.82

Table 3 presents the estimated standard errors of measurement (SEM) around the recommended cut score. A standard error represents the uncertainty associated with a test score. The scaled scores associated with 1 and 2 SEMs above and below the recommended cut scores are provided. The standard errors provided are an estimate, given that the RVE: Elementary and Special Education Teachers (0306) assessment has not yet been administered operationally.

Table 3

Cut Scores within 1 and 2 SEMs of the Recommended Cut Score

Recommended Cut Score (SEM)		Scale Score Equivalent
	67 (4.55)	163
- 2 SEMs	58	151
-1 SEM	63	157
+1 SEM	72	169
+ 2 SEMs	77	176

Note. Consistent with the recommended cut score, the cut scores at the different SEMs have been rounded to the next highest whole number.

Summary of Content Specification Judgments.

Panelists judged the extent to which the knowledge and/or skills reflected by the RVE: Elementary and Special Education Teachers (0306) assessment content specifications were important for entry-level elementary or special education teachers with regards to teaching reading. Panelists rated the 13 knowledge/skills statements on a four-point scale ranging from *Very Important* to *Not Important*. All of the knowledge statements were judged to be *Very Important* or *Important* by at least 93% of the panelists. The panelists' ratings are summarized in Table 4 (in Appendix).

Summary of Final Evaluations.

The panelists completed an evaluation form at the conclusion of their standard-setting study. The evaluation form asked the panelists to provide feedback about the quality of the standard-setting implementation. Table 5 (in Appendix) present the results of the final evaluations.

All panelists *strongly agreed* that they understood the purpose of the study and that the facilitator's instructions and explanations were clear. All panelists *agreed* or *strongly agreed* that they were prepared to make their standard-setting judgments. All panelists *agreed* or *strongly agreed* that the standard-setting process was easy to follow with 13 of the 14 panelists indicating they *strongly agreed*.

All panelists reported that the definition of the JQC was at least *somewhat influential* in guiding their standard-setting judgments; 11 of the panelists indicated the definition was *very influential*. All the panelists reported that between-round discussions were at least *somewhat influential* in guiding their judgments.

All but one of the panelists indicated they were *very* or *somewhat comfortable* with their recommendation. The remaining panelist indicated being *somewhat uncomfortable* with their recommendation. Thirteen of the 14 panelist indicated that the recommend cut score was *about right*. The remaining panelist indicated the cut score was *too low*.

Summary

To support the decision-making process for the Virginia Department of Education (VDOE) with regards to establishing passing score, or cut score, for RVE: Elementary and Special Education Teachers (0306) assessment, research staff from Educational Testing Service (ETS) designed and conducted a standard-setting study. The study also collected content-related validity evidence to confirm the importance of the content specifications for entry-level elementary or special education teachers with regards to teaching reading.

The recommended cut score is provided to help the VDOE determine an appropriate cut (or passing) score. For the RVE: Elementary and Special Education Teachers (0306) assessment, the average recommended cut score is 67 out of 100 (on the raw score metric). The scaled score associated with a raw score of 67 is 163.

Panelists judged the extent to which the knowledge and/or skills reflected by the content specifications were important for entry-level elementary or special education teachers with regards to teaching reading. The favorable judgments of the panelists provided evidence that the content of the assessment is important for beginning practice.

References

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- ETS. (In press). *Reading for Virginia Educators: Elementary and Special Education Teachers Glance*. Princeton, NJ.
- Hambleton, R. K., & Pitoniak, M.J. (2006). Setting performance standards. In R. L. Brennan (Ed.), *Educational Measurement* (4th ed., pp. 433-470). Westport, CT: American Council on Education/Praeger.
- Hambleton, R. K., & Plake, B.S. (1995). Using an extended Angoff procedure to set standards on complex performance assessments. *Applied Measurement in Education, 8*, 41-55.
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Appendix

AGENDA
Reading for Virginia Educators:
Elementary and Special Education Teacher (0306)
Standard-setting study

February 28, 2011

- | | |
|---------------|--|
| 8:00 – 8:30 | Welcome and Introduction <ul style="list-style-type: none">• Overview of Workshop Events |
| 8:30 – 8:45 | Overview of Standard Setting & Workshop Events <ul style="list-style-type: none">• Welcome by the Virginia Department of Education |
| 8:45 – 9:10 | Overview of the RVE: Elementary & Special Education Teacher Assessment |
| 9:10 – 9:15 | Break |
| 9:15 – 11:30 | “Take” the RVE: Elementary & Special Education Teacher Assessment |
| 11:30 – 12:00 | Discuss the RVE: Elementary & Special Education Teacher Assessment |
| 12:00 – 12:45 | Lunch |
| 12:45 – 3:00 | Define the Knowledge/Skills of a JQC |
| 3:00 – 3:05 | Break |
| 3:05 – 3:30 | Standard Setting Training for M-C Items |
| 3:30 – 5:15 | Round 1 Standard Setting Judgments for Multiple-Choice <ul style="list-style-type: none">• Questions 1-60 |
| 5:15 – 5:30 | Collect Materials; End of Day 1 |

AGENDA
Reading for Virginia Educators:
Elementary and Special Education Teacher (0306)
Standard-setting study

March 1, 2011

8:30 – 8:45	Overview of Day 2
8:45 – 9:30	Round 1 Standard Setting Judgments for Multiple-Choice <ul style="list-style-type: none">• Questions 61-100
9:30 – 10:00	Standard Setting Training for CR Items
10:00 – 10:30	Round 1 Standard Setting Judgments for Constructed-Response
10:30 – 10:45	Break
10:45 – 12:00	Round 1 Feedback & Round 2 Judgments for Multiple-Choice
12:00 – 1:00	Lunch
1:00 – 2:25	Round 1 Feedback & Round 2 Judgments for Multiple-Choice (continued)
2:25 – 2:30	Break
2:30 – 3:00	Round 1 Feedback & Round 2 Judgments for Constructed-Response
3:00 – 3:30	Specification Judgments
3:30 – 3:45	Feedback on Round 2 Recommended Cut Score
3:45 – 4:00	Complete Final Evaluation
4:00 – 4:15	Collect Materials; End of Study

Description of a Just Qualified Candidate
RVE: Elementary and Special Education Teachers (0306)
(Developed for the Virginia Department of Education)

A JQC ...

1. understands that assessments are used to evaluate literacy proficiency.
2. understands how to interpret assessment data to plan differentiated reading instruction.
3. understands the developmental process of oral language acquisition and applies appropriate instructional strategies to meet diverse student needs.
4. understands the development of phonological awareness and applies appropriate instructional strategies to meet diverse student needs.
5. identifies and promotes the development of early literacy skills and strategies.
6. understands and applies explicit, systematic phonics instruction.
7. understands the development of word analysis skills and vocabulary and demonstrates knowledge of appropriate instructional strategies to meet the needs of diverse learners.
8. understands the development of reading fluency and comprehension and demonstrates knowledge of appropriate instructional strategies to meet the needs of diverse learners.
9. understands and applies appropriate instructional strategies to promote comprehension and develops enjoyment and appreciation of fiction, non-fiction, and poetry.
10. understands the developmental writing process and its relationship to reading and demonstrates knowledge of instructional strategies.
11. understands how to promote students' knowledge of correct spelling, usage, and other writing mechanics through appropriate instructional strategies.
12. understands and applies reading and writing techniques and tools for inquiry and research

Figure 1

Panelists Names and Affiliations (RVE: Elementary and Special Education Teachers Standard Setting Panel)

Panelist

Kim Albert
Mary Alice Barksdale
Ann Chatos
Victoria R. Clements
Kristen H. Corboy
Beth Cruse
Kent Faulcon
Phyllis D. Hairston
Denise Johnson
David W. Parrish
Jillian Smith
Evie Tindall
Steven Warren
Latosha Wright

Affiliation

Clays Mill Elementary School (Halifax County)
Virginia Tech
King William County Public Schools
Stanleytown Elementary School (Henry County)
Giles County Public Schools
Harrisonburg City Public Schools
Chesterfield County Public Schools
Martinsville City Public Schools
The College of William and Mary
Pace East High School (Prince William County)
Charlottesville City Public Schools
Regent University
Manchester Middle School (Chesterfield County)
Frederick County Public Schools

Table 4**Specification Judgments (RVE: Elementary and Special Education Teachers Standard Setting Panel)**

	Very Important		Important		Slightly Important		Not Important	
	N	%	N	%	N	%	N	%
I. Assessment and Diagnostic Teaching								
• Understand the characteristics and uses of assessment and screening measures for evaluating students' language proficiency and reading skills	10	71%	3	21%	1	7%	0	0%
• Understand the use of assessment data to plan reading instruction	12	86%	2	14%	0	0%	0	0%
II. Oral Language and Oral Communication								
• Understands the development of oral language and oral communication skills	10	71%	4	29%	0	0%	0	0%
• Understand the development of phonological awareness, including phonemic awareness	11	79%	3	21%	0	0%	0	0%
III. Reading Development								
• Understands how to promote students' understanding of concepts of print and basic phonetic principles	11	79%	3	21%	0	0%	0	0%
• Understand explicit, systematic phonics instruction	7	50%	7	50%	0	0%	0	0%
• Understand word-analysis skills and vocabulary development	9	64%	5	36%	0	0%	0	0%
• Understands the development of reading fluency and reading comprehension	10	71%	4	29%	0	0%	0	0%

Table 4 (continued)**Specification Judgments (RVE: Elementary and Special Education Teachers Standard Setting Panel)**

	Very Important		Important		Slightly Important		Not Important	
	N	%	N	%	N	%	N	%
• Understand reading comprehension strategies for fiction and poetry	9	64%	5	36%	0	0%	0	0%
• Understand reading comprehension strategies for nonfiction	10	71%	4	29%	0	0%	0	0%
IV. Writing and Research								
• Understand writing skills and processes	13	93%	1	7%	0	0%	0	0%
• Understand how to promote students' knowledge of correct spelling, usage, and other writing mechanics	10	71%	4	29%	0	0%	0	0%
• Understand writing and reading as tools for inquiry and research	5	36%	8	57%	1	7%	0	0%

Table 5**Final Evaluation (RVE: Elementary and Special Education Teachers Standard Setting Panel)**

	Strongly Agree		Agree		Disagree		Strongly Disagree	
	N	Percent	N	Percent	N	Percent	N	Percent
• I understood the purpose of this study.	14	100%	0	0%	0	0%	0	0%
• The instructions and explanations provided by the facilitators were clear.	14	100%	0	0%	0	0%	0	0%
• The training in the standard setting method was adequate to give me the information I needed to complete my assignment.	13	93%	1	7%	0	0%	0	0%
• The explanation of how the recommended cut score is computed was clear.	11	79%	3	21%	0	0%	0	0%
• The opportunity for feedback and discussion between rounds was helpful.	13	93%	1	7%	0	0%	0	0%
• The process of making the standard setting judgments was easy to follow.	13	93%	1	7%	0	0%	0	0%

Table 5 (continued)

Final Evaluation (RVE: Reading Specialist Standard Setting Panel)

How influential was each of the following factors in guiding your standard setting judgments?	Very Influential		Somewhat Influential		Not Influential			
	N	Percent	N	Percent	N	Percent		
• The definition of the JQC	11	79%	3	21%	0	0%		
• The between-round discussions	8	57%	6	43%	0	0%		
• The knowledge/skills required to answer each test question	12	86%	2	14%	0	0%		
• The cut scores of other panel members	1	7%	11	79%	2	14%		
• My own professional experience	12	86%	2	14%	0	0%		
	Very Comfortable		Somewhat Comfortable		Somewhat Uncomfortable		Very Uncomfortable	
	N	Percent	N	Percent	N	Percent	N	Percent
• Overall, how comfortable are you with the panel's recommended cut scores?	10	71%	3	21%	1	7%	0	0%
	Too Low		About Right		Too High			
	N	Percent	N	Percent	N	Percent		
• Overall, the recommended cut score is:	1	7%	13	93%	0	0%		