



**pennsylvania**

EDUCATOR CERTIFICATION TESTS

# **PECT Test Development Process and Test Preparation**

**May 2013**

# Program Background

- In May 2007, the Pennsylvania State Board of Education approved an amended version of Chapter 49-2.
- The amended regulations:
  - define new certificate areas for grades PreK through 8th grade and Special Education, and
  - incorporate accommodations and adaptations for diverse learners and English language learners.

## Tests in the Program

- The Pennsylvania Department of Education (PDE) initiated development of a new testing program: the Pennsylvania Educator Certification Tests (PECT).
- The tests included in the program are:
  - Pre-service Academic Performance Assessment (PAPA)
  - PreK–4
  - Special Education PreK–8
  - Special Education 7–12

# Evaluation Systems Program States



# Goals of the Test Development Process

Provide tests that are:

- based on the unique needs/requirements of Pennsylvania,
- consistent with Pennsylvania educational standards and practice,
- reflective of subject knowledge required for entry-level teachers in Pennsylvania,
- accurate and valid, and
- free from bias.

# Program Design Parameters

- Test objectives define test content.
  - PreK–4 and Special Education test objectives were based on the *Pennsylvania Program Framework Guidelines*.
  - PAPA test objectives were based on *Pennsylvania Academic Standards*.

# Program Design Parameters

- Test **content validity** was established by extensive participation of Pennsylvania public school teachers and teacher educators.
  - Equity Assurance Panel
  - Content Advisory Committees
  - Content validation surveys

# Program Design Parameters

- **Freedom from bias:** Eliminating potential bias is a constant, major focus of development efforts.
- **Reflect Pennsylvania practice** by alignment with Pennsylvania standards and involvement of Pennsylvania educators.



# Program Design Parameters

- The tests are **criterion-referenced**.
  - Candidates must meet a qualifying score that represents the required level of knowledge and skills based on the judgments of a panel of Pennsylvania public school teachers and teacher educators.

# Test Development

- The tests were developed over a period of 17 months beginning in October 2010.
- Initial meetings with the PDE included discussion of the standards to be used for test development.
- For each test, Pearson drafted a set of objectives, based on Pennsylvania standards, which define the content to be assessed.
- In December 2010, teacher education programs and LEAs were notified about the development of the tests and asked to help identify teachers and teacher educators to serve on advisory committees.
- Pennsylvania advisory committee members reviewed, revised, and approved the test objectives and the test items.

# Test Development Process

- Develop and Review Test Objectives
- Conduct Content Validation Survey
- Develop and Review Test Items
- Conduct Field Test
- Marker Response Selection
- Conduct Standard Setting

## Field Testing

- Test questions were field tested by candidates in each subject area.
- Over 1,000 field tests were taken.
- Only items with acceptable psychometric characteristics are eligible to appear on operational test forms.

## Standard Setting: Purpose

- The purpose of standard setting is to determine a cutscore, or threshold, for each test module which represents:
  - the performance level that those eligible for admission into a Pennsylvania educator preparation program *would* achieve on the PAPA
  - the performance level that effective novice teachers *would* achieve on the PreK–4 and Special Education tests
- Pennsylvania educators (both teachers and teacher educators) were convened to review the PECT tests.
- Panelists followed industry-accepted procedures for establishing qualifying scores for educator certification tests.

## Standard Setting: Overview

- **Part 1:** Simulated Test-Taking Activity
- **Part 2:** Round One Item-Based Performance Level Judgments
- **Part 3:** Round Two Item-Based Performance Level Judgments

## Standard Setting: Simulated Test-Taking

- Standard setting panelists participate in a simulated test-taking activity in order to experience the test items from the point of view of an examinee.

## Standard Setting: Orientation to the Hypothetical Reference Group— Effective Novice Teachers (PreK–4 & Special Education)

- Candidates for certification have varying levels of knowledge and skills.
- Focus on the “just effective level”—i.e., the level of subject matter knowledge and skills required to *effectively* perform the job of an entry-level teacher. Candidates at this level:
  - would demonstrate sufficient knowledge and skills to meet teacher proficiency expectations as defined by Pennsylvania standards;
  - would likely have a positive impact on student learning; and
  - would meet the definition of an Effective Novice Educator in Pennsylvania as outlined at the standard setting meetings.



## Standard Setting:

### Orientation to the Hypothetical Reference Group (PAPA)

- Candidates for admission have varying levels of knowledge and skills.
- Focus on candidates who are just at the level of reading, writing, and mathematics skills required for admission into an approved Pennsylvania teacher education program.

## **Standard Setting:**

### **Round One: Item-Based Performance Level Judgments**

- Panelists rate every test item to judge how well candidates in the hypothetical reference group would perform.

## Standard Setting:

### Round Two: Item-Based Performance Level Judgments

- Panelists review a summary of Round One ratings and field test data before making their final item judgments.

## Standard Setting: Cutcores

- The panel-based cutscore represents the expected performance of candidates who are just at the required level of the knowledge and skills being assessed.

## Standard Setting: Establishing the Cutscore

- Pearson provided the panel-based cutscores, along with additional analyses, to the PDE for review and approval.

## PECT Test Forms

- All test forms are based on an approved test design.
- Test length is set to allow candidates to take the entire test during one test session.
- Modular design allows candidates to retake only those modules they did not pass.
- Only items with acceptable psychometric criteria are eligible for use as scorable items on operational test forms.
- Item statistics are continually monitored.

## Test Design: PAPA

<b>Reading</b>	40 multiple-choice questions	45 min.
<b>Mathematics</b>	40 multiple-choice questions	60 min.
<b>Writing</b>	<ul style="list-style-type: none"><li>• 40 multiple-choice questions</li><li>• 2 sentence corrections</li><li>• 1 essay (600 words)</li></ul>	75 min.
<b>Total Test</b>	--	180 min.

## Test Design: PreK–4

<b>Module 1</b>	40 multiple-choice questions	45 min.
<b>Module 2</b>	50 multiple-choice questions	75 min.
<b>Module 3</b>	50 multiple-choice questions	75 min.
<b>Total Test</b>	--	195 min.



## Test Design: Special Education PreK–8 and 7–12

<b>Module 1</b>	45 multiple-choice questions	60 min.
<b>Module 2</b>	45 multiple-choice questions	60 min.
<b>Total Test</b>	--	120 min.

# PECT Test Administration

- Computer-Based Testing
  - Tests are available year round, by appointment, at **43** sites in Pennsylvania and at over 225 test centers throughout the United States and its territories (e.g., Puerto Rico), plus selected sites worldwide.
  - Candidates can register as few as 24 hours before taking a test.
  - Candidates may reschedule a test or cancel a test for a full refund as few as 24 hours before their test appointment.
  - A computer-based testing tutorial (downloadable, interactive) is available on the PECT website.
  - A timer displays the amount of testing time remaining.
  - Candidates receive a warning when 30 minutes of testing time remain.
  - Unofficial scores are provided for most tests upon conclusion of testing.

# PECT Test Administration Experience

- Test centers:
  - meet Pearson’s security, technology, and administrative standards.
  - provide a carefully planned and controlled, distraction-free environment to encourage peak candidate performance.
  - use uniform, consistent procedures.
  - focus on security, comfort, service, and efficiency.
  - are clean, quiet, secure, and ADA-compliant.
- Online tour of Pearson Professional Centers available
- For issues or concerns about the testing experience:
  - Report to a proctor at the test center
  - Report to Evaluation Systems including specific details (e.g., date, site)
  - Evaluation Systems and VUE will investigate all incidents about which we are informed and appropriate action will be taken.

# Scoring Constructed-Response Assignments

- Scorer Qualifications
  - Public or private school teachers with licensure/certification in a relevant field (e.g., English, Language Arts)
  - Individuals with college-level teaching experience in a relevant field
  - Individuals with a relevant bachelor's (or advanced) degree in a relevant field who have taught at the college or secondary level
- Scorer Orientation and Training
  - Scorers are calibrated to the score scale.
  - Scorers are recalibrated before each scoring session.
  - Scorer performance is monitored.

# Scoring Constructed-Response Assignments

- Scoring the Extended-Response Assignment
  - Focused holistic scoring
    - Focus on a set of performance characteristics approved by the PDE
    - Judge overall effectiveness of the response
  - Every response is assigned a score by at least two scorers on a 1–4 scale.
  - Scorers are calibrated to a set of marker responses selected by members of the Content Advisory Committee.

# Scoring Constructed-Response Assignments

- Scoring the Short Answer Sentence Correction Assignments
  - Each sentence contains two errors (e.g., grammar, mechanics).
  - Candidates are instructed to rewrite the sentence so that the errors are addressed and the original meaning is maintained.

# Score Reporting

- Scaled Scores
  - Score scale of 100–300
  - The same score scale is used for:
    - All test forms within a field
    - New versions of tests that may be developed in the future
    - New tests developed for the program
  - A common scale is used for all tests in the PECT program
    - Allows for consistency in score reporting across tests and test modules
    - Maintains the meaning of scores over time (e.g., a scaled score of 220 represents that an examinee has met the performance criterion established for the test)

# Helping Candidates Prepare

## Analyzing Overall Results

- Use data available in *ResultsAnalyzer*<sup>™</sup> to identify subareas and/or objectives in which your students, as a group, do not show strong performance, and strengthen your program's preparation in those areas.



## Helping Candidates Prepare

- Use Faculty Resources available on the PECT website to:
  - Align curriculum to the PECT test objectives
  - Ensure candidates have taken the appropriate courses to thoroughly cover all the knowledge and skills required for certification
  - Assess candidates' readiness for testing

## Helping Candidates Prepare

- Ensure candidates are using the preparation materials available on the PECT website.
- Use results on the practice test to identify a candidate's areas of weakness.
- Recommend additional coursework, study materials, study techniques, and other preparation activities, as needed.

## Helping Candidates Prepare to Retest

- Use the diagnostic information on the score report to identify the candidate's areas of strength and weakness.
- Focus on subarea(s) with the most objectives, which count the most toward a candidate's score.
- Improved performance on any area of the test (not just weak areas) will improve the candidate's score.
- Recommend additional coursework, study materials, study techniques, and other preparation activities, as needed.