

## Validity for Licensing Tests: A Brief Orientation

### *Introduction*

The purpose of this document is to provide an overview of validity for licensure tests, with specific reference to the *Praxis*® assessments. This overview provides a brief orientation to validity but is not an exhaustive, technical treatment of validity or issues pertaining to the process of validation.

### *Licensure: A Form of Occupational Credentialing*

According to the latest edition of the [Standards for Educational and Psychological Testing](#) (American Educational Research Association [AERA, APA, and NCME, 2014])<sup>1</sup>, tests used for credentialing purposes (licensure and certification) focus on a candidate's current skill, knowledge, or competency in a particular domain. The process of licensure serves as a gateway into a profession, as a license is often required for entry into an occupation.

“Licensure requirements are imposed by federal, state and local governments to ensure that those who are licensed possess knowledge and skills in sufficient degree to perform important occupational activities safely and effectively . . . Tests used in credentialing are intended to provide the public . . . with a dependable mechanism for identifying practitioners who have met particular standards. The standards may be strict, but not so stringent as to unduly restrain the right of qualified individuals to offer their services to the public. Credentialing also serves to protect the public by excluding persons who are deemed to be not qualified to do the work of the profession or occupation” (AERA, APA, and NCME, 2014, pp. 174-175).

### *ETS® Praxis Assessments*

The *Praxis* assessments consist of an extensive array of content knowledge tests, pedagogical tests, and academic skills tests that are used by states and other credentialing agencies to inform decisions regarding teacher licensure. Colleges and universities also use the academic skills tests to inform decisions regarding entry into teacher preparation programs. The *Praxis* assessments include specific categories of tests that correspond to various milestones in the career of a professional educator.

- **Academic skills: The *Praxis* Core Academic Skills for Educators (Core) tests** measure academic skills in reading, writing, and mathematics. These exams are designed for use as a precursor to entry into a traditional educator-preparation program and for state licensure.

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<sup>1</sup> American Educational Research Association, American Psychological Association, and the National Council on Measurement in Education (2014). [Standards for Educational and Psychological Testing](#). Washington, D.C.: American Educational Research Association.

- **Content knowledge tests: The *Praxis Subject Assessments*** measure knowledge of subject areas such as English, mathematics and biology. These assessments are designed to be taken by prospective teachers who are ready to apply for a state license.
- **Pedagogy tests: The *Praxis Subject Assessments*** also include tests of pedagogical knowledge germane to four grade spans: Early Childhood, K–6, 5–9, and 7–12. These Principles of Learning and Teaching tests are designed to be taken by prospective teachers who are ready to apply for a state license.

## Assessments for Other Educators

ETS also offers assessments for other education personnel:

- **The School Leaders Licensure Assessment** and the **School Superintendent Assessment** are used by many states to license principals, superintendents, and other school leaders.
- **The ParaPro Assessment** is not a licensure test; however, it does measure knowledge and skills in reading, mathematics, and writing, as well as the ability to apply those skills and knowledge to assist in classroom instruction.

## *Validity*

According to the latest edition of the *Standards for Educational and Psychological Testing* (American Educational Research Association [AERA, APA, and NCME, 2014]), validity refers to the accumulation of evidence (logical and empirical) that supports the intended use and interpretation of test scores. Establishing validity involves collecting evidence that justifies the decisions made and actions taken on the basis of test scores. Validity evidence is needed to support each purpose for which test scores are to be used — what may be sufficient validity evidence for one test score use may not be sufficient for another.

“Validation of credentialing tests depends mainly on content-related evidence, often in the form of judgments that the test adequately represents the content domain associated with the occupation or specialty being considered. Such evidence may be supplemented with other forms of evidence external to the test. For example, information may be provided about the process by which specifications for the content domain were developed and the expertise of the individuals making judgments about the content domain. Criterion-related evidence is of limited applicability because credentialing examinations are not intended to predict individual performance in a specific job but rather to provide evidence that candidates have acquired the knowledge, skills, and judgment required for effective performance ... In addition, measures of performance in practice are generally not available for those who are not granted a credential.” (AERA, APA, and NCME, 2014, pp.175-176).

## *The Process of Accumulating Validity Evidence for the Praxis Tests*

The validation process used to justify the interpretation of *Praxis* scores is consistent with the technical guidelines presented in the Standards for Educational and Psychological Testing (AERA, APA, and NCME, 2014). Central to the process is the connection or alignment between the content of the test and the knowledge and/or skills judged important for entry-level practice. This is accomplished through multiple means, beginning with a systematic analysis of job requirements (knowledge and/or skill levels). This analysis involves gaining the input of educators, both practitioners and faculty who prepare educators, and reviewing national disciplinary standards. Test development committees of educators and ETS subject experts conduct reviews for test content appropriateness and fairness. The process culminates in passing score or standard setting studies. These sources of validity evidence are described in more detail below.

### *Job Analysis*

A domain of job-related knowledge and/or skills is defined through reviews of education literature and disciplinary standards, and is then modified and refined by National Advisory Committees, which typically include practicing teachers in the content domain and faculty who prepare teachers. Committee members are selected for their subject expertise, as well as their representativeness and diversity (for example, racial, ethnic, regional, gender). A large-scale survey of educators is also conducted to collect independent judgments of the job-relatedness (or occupational importance) of the defined content domain.

The National Advisory Committees, working with ETS subject experts, use the results of the job analysis survey to create test specifications. Test specifications define the content areas to be measured by the test. They are sometimes referred to as the “blueprint” of the test, as they describe and define the content architecture of the test. The process of deriving test specifications from the job analysis creates the connection between the test content and the job-related knowledge and/or skills being measured.

### *Item Writing and Reviewing*

Test development committees, which also include practicing teachers and teacher educators, work with ETS subject experts to write, review, and revise test items to align with the defined specifications — once again, reinforcing the job-relatedness of the test content. Committee members are trained by ETS experts in how to write content-appropriate and fair items as part of an overall quality control process. The process continues with reviews of each item by ETS experts to confirm linkages to test specifications, appropriate perceived difficulty levels, and compliance with the ETS Fairness Guidelines.<sup>2</sup>

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<sup>2</sup> [ETS Standards for Quality and Fairness](#). (2014). Princeton, N.J.: Educational Testing Service.

## *Standard Setting Studies*

When a new test is developed or an existing test has been substantially revised, a standard setting study is scheduled. A primary objective of the study is to recommend a minimum test score that a prospective educator needs to earn to be considered qualified to enter the teaching profession. This passing score recommendation is based on the judgments of a committee of educators (practicing teachers and college faculty who prepare teachers) nominated by the user state or states, following technically sound, well-established, and widely accepted standard-setting procedures (for example, Modified Angoff Method for selected-response items, Extended Angoff Method for constructed-response items). Based on the results of the standard setting study, as well as on other relevant information, each state licensing agency determines its own threshold for the minimum teaching knowledge and subject knowledge required of entry-level teachers in that state.

## *Test Reviews*

In addition to the test development activities through which validity evidence is accumulated, each state or licensing agency interested in adopting one or more *Praxis* tests is strongly encouraged to conduct a test review. The purpose of a test review is for representatives of the state or licensing agency to examine the content covered by a test and to determine if it satisfactorily represents content believed to be important in satisfying that state or licensing agency's professional educator credentialing requirements. Test reviews may be conducted with one or more committees of practicing teachers, college faculty who prepare teachers, and other stakeholders. Committee members provide input in determining the importance of the test content for use in professional educator licensing decisions in that state. In this regard, test reviews attest to the state-specific validity of the test content.

## *Ongoing Reviews*

For each content area (e.g., mathematics, special education, etc.), ETS establishes a Standing Committee of subject-matter experts to review the content of *Praxis* tests. Standing Committees review the test specifications for each *Praxis* test annually to determine whether the content of the test continues to represent knowledge and skills relevant and important for beginning practice. ETS test development specialists also monitor relevant activities (e.g., national content standards) in the field to help assure that each test's content is current and reflects expectations for new teachers. If the test specifications are deemed to be in need of revisions, ETS revisits the content of the test. Minor revisions may be needed to update a test while significant redesign may be needed to reflect larger changes in the field. Significant redesigns would require completing the steps in the development process described above.

## *For Further Information*

This overview is intended to help users of educator licensure testing programs understand validity in licensure testing as it pertains to the *Praxis* assessments. For questions concerning the *Praxis* assessments or any of the topics addressed in this overview, please contact ETS at [teachandlearn@ets.org](mailto:teachandlearn@ets.org).