

Content Development



Creating test items that meet your standards for quality, diversity, complexity, and accuracy





● ● ● ● ●

A comprehensive approach to content development

● ● ● ● ●

PEMSolutions™ (Pearson Educational Measurement Solutions) offers a comprehensive approach to assessment including a multi-stage content creation process designed to produce interesting, technically sound, and valid test items. Our team of content specialists brings decades of assessment and classroom teaching experience to the delivery of a full range of item and test development services.

In today's world of high-stakes testing and accountability, the assessment instrument used to measure student performance must be well-crafted to measure the academic standards, benchmarks, and foundation skills taught in schools. Results from such an assessment instrument must be empirically sound and represent an accurate measure of those skills and content. Our Test & Measurement Services group has the experience and proven capabilities to build an assessment that supports your state's instructional mission – an assessment that is accurate, defensible, and delivered on time.

Benefits

- **Comprehensive Services.** PEMSolutions offers services to create, deliver, score, report, and analyze tests and test results. Working with a comprehensive provider streamlines services and saves time, cost, and administrative effort.
- **Built for Testing.** Content specialists work in close collaboration with experienced psychometricians, providing leadership that understands the relationship between content and measurement. This collaboration results in successful test development that promotes and supports learning.
- **Staff Development Opportunity.** Experienced content experts provide comprehensive workshops and personal interaction to help train teachers and other education professionals to produce quality items and to participate in review committees.
- **Best Practices.** Our content development processes conform to the Standards for Educational and Psychological Testing (1999, American Educational Research Association, American Psychological Association, and National Council on Measurement in Education).
- **Direct Input.** Local educators and state education representatives work in close collaboration with our content specialists, who are trained to advise on item development, content issues, professional development, and general policy considerations.



Content Development

PEMSolutions Test & Measurement Services offers a team of content specialists in English language arts, science, mathematics, social studies, special education and bilingual education. Content specialists are formally trained in their area of expertise and have extensive classroom and large-scale assessment experience. Additionally, content specialists are trained in designing clear, precise, non-biased items that can be mapped to a test design, are amenable to accommodations, and are accessible to the breadth of a given assessment population. This background and training enables our content specialists to produce items designed to meet all customer requirements for technically sound assessments. The process flow used to develop items includes the following components:

- Information Gathering & Specifications Development
- Project-Specific Documentation
- Passage or Stimulus Research
- Item Writer Training
- Internal Review
- Content and Fairness Reviews
- Customer Review

Proven Capabilities

Our Test & Measurement Services content team produces assessment items for some of the largest and most progressive programs in the nation, including Texas, Washington, Minnesota, Utah, and Louisiana.

Information Gathering & Specifications Development

Our content specialists begin with a review of all pertinent state documentation regarding the assessment program. They work with the customer to develop an Item Development Specifications document for each grade level and subject area to be assessed. This document contains information regarding the specific objectives, style and structure of items and rubrics, and item characteristics such as type, difficulty, and artwork; it also describes standard processes and procedures that maintain consistency within and among assessments.

- Intended test, grade level, or course
- Curriculum category measured
- Curriculum goal and objective measured
- Cognitive skills that a student must employ to answer the question
- Targeted level of difficulty or depth of knowledge
- Single correct response guidelines
- Passage reference
- Graphic file naming convention
- Stem and distractors parameters

The content specialists, along with psychometricians, evaluate the item specifications and the test design to help formulate the goals, strategies, and schedules for the development cycle.

Project-Specific Documentation

The following materials are created for each content area:

- ***Item and Test Development Plan*** – Documents the goals, strategies, and milestones for each subject area assessment, including a chart that indicates the number of items to be developed for each content standard or subtest.
- ***Item Writing Guide*** – A comprehensive and customized training manual for writing effective items for the assessment, including lessons on creating meaningful questions linked to an objective; writing effective stems and convincing response options; creating items that are sensitive, fair, and unbiased; and developing scoring rubrics.
- ***Project Guide for Item Writers*** – Provides program-specific information such as sample items mapped to state content goals and benchmarks, item specifications, and style guidelines.
- ***Passage/Stimuli Specifications*** – Provide researchers with project-specific requirements such as readability, passage or technical stimulus length, and topic or genre as well as general guidelines for evaluating passages/stimuli to avoid bias and related sensitivity issues.

Passage/Stimuli Research

Our content specialists are skilled and experienced in selecting published passages/stimuli and commissioning new passages/stimuli suitable for use in high-stakes, large-scale assessments. Stimuli for assessments may include historical references, maps, technical references, video clips, animations, simulations, etc. We draw from a pool of experienced researchers to locate published reading passages for English language arts tests, stimuli for social studies, and stimuli for science that represent a mixture of required topics or genres, are grade-level and stakeholder appropriate, and are free of ethnic, socioeconomic, religious, gender, physical difference, age, or political bias to the extent possible. All passages/stimuli are carefully reviewed by content specialists to determine whether the passage/stimuli adheres to the specifications, will be engaging to students, and will support the development of items that align with the objectives to be assessed.

Item Writer Training

Our item writer pool includes degreed professionals with teaching experience in the subject areas for which they create items and the capability to produce effective, grade-appropriate items that tap into the relationship between measured standards and cognitive skills. As needed, particularly with new projects or development cycles, we conduct an interactive workshop to train item writers on how to write sound assessment items that are matched to the project and item specifications. Our personal interaction with item writers throughout the development process helps them produce items that meet the specifications within the project's timeline.





Internal Review

Our review process effectively manages and monitors the development of assessment items that meet industry standards and specifications for content and quality. Each item is reviewed by content specialists, universal design reviewers, copy editors, and content researchers for the following features:

- Content accuracy
- Alignment to standards and benchmarks
- Bias and sensitivity issues
- Grade-level appropriateness
- Proper sentence structure
- Proper grammar
- Correct spelling
- Range of difficulty

We build quality checks into all item development processes. Examples of processes that enhance the quality of developed items include:

- Item writers are required to supply valid, reliable sources for all factual data contained in the items so our content researchers can verify the accuracy of the items.
- Content experts verify the content appropriateness of the items, including alignment with state standards.
- Performance scoring experts from our PEMSolutions Scoring Network review constructed-response items, writing prompts, short-answer items, and associated scoring rubrics.
- Copy editors check each item's grammar, structure, spelling, and style for adherence to all established writing conventions.
- Subject area leads review each item's compliance to the project's quality standards before giving final approval for delivery to the customer.

Content and Fairness Reviews

Reviews by customer stakeholders such as educators, curriculum specialists, administrators, and community representatives are an important component of the content validation process. We often facilitate review meetings with committees comprised of educators and other stakeholders to review passages/stimuli and test items from the perspectives of content appropriateness for subject area and grade level, conformance to customer standards, fairness and sensitivity to demographic groups represented in the state, and maximum accessibility to special populations such as English language learners and special education students.

Customer Review

Customer reviews of passages/stimuli and test items before they appear on a field test are critical to the development of defensible assessment materials. Reviews occur at key milestones in the development process and are an essential component of a successful assessment program.

*To learn how to put PEMSolutions content development to work for you,
visit www.PEMSolutions.com or call 1-800-627-0365.*

