

Universal Design

Developers of large-scale assessments have, for quite some time, stressed the need for participation of populations with unique educational needs, varying cultural experiences, diverse linguistic backgrounds, and numerous special needs. NCLB legislation places a strong emphasis to build assessments that are all inclusive. To meet these challenges, technologies are being used that will enable new and innovative ways to design and deliver large scale assessments.

Computer use for assessment and instruction continues to accelerate as technology becomes more powerful and readily available. Not only are computers becoming more common in usage but they also provide an opportunity to expand the manner in which we conduct our large-scale assessments. As assessments transition to the computer, experts seek to apply the concepts of universal design to consider how computer-based tests can be developed in ways that provide better access for students with disabilities.

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Many features we are now accustomed to in our buildings and public streets came out of this movement. Such innovations include curb cuts on sidewalks, advanced warning of approaching elevators, and improved lighting in buildings.

“Universally designed assessments” are designed and developed from the beginning to allow participation of the widest possible range of students, and to result in valid inferences about performance for all students.

The universal design approach to item development attempts to incorporate features that make a design usable by more than just the typical student. The goal is to provide for the least restrictive assessment environment through design rather than accommodation, and to be able to effectively identify when alternate presentations are required. This includes compatibility with assistive technologies such as screen readers, alternate input devices, and screen magnification software, as well as design solutions that enhance ease-of-use and effectiveness for all users. “Universally designed assessments” are designed and developed from the beginning to allow participation of the widest possible range of students, and to result in valid inferences about performance for *all* students.

In both its online and paper-based assessments, Pearson Educational Measurement (PEM) has incorporated universal design principles into item

development, item review, and assessment construction. Before designing items, all item writers receive and are required to study a style guide that addresses the application of “universal design” principles and procedures in areas such as the design and layout, use of graphics, and format of directions to help ensure access by the broadest possible population of students. Item writers also attend interactive item development workshops facilitated by PEM content specialists, during which item writers receive additional training in how to develop high quality items that are free from bias and sensitivity concerns, follow the principles of universal design, and adhere to customer item and test specifications.

After items have been written, PEM experts in the area of special populations and English language learners conduct a universal design review to check all items, scenarios, and stimuli for fairness, accessibility, sensitivity, bias, and concerns regarding accommodations and modifications. Items will be revised and edited as necessary, with comments sent back to the item writers for their reference.

During item review by educator committees, PEM incorporates universal design principles into committee review guidelines. PEM strongly believes that all educator committees convened to examine items, prompts, and data must conduct their review according to clearly established and articulated guidelines in order to yield high quality items. PEM content facilitators then use these documents for training at committee meetings.

PEM’s current research and development efforts continue our ongoing focus on universal design issues for paper-based and computer-based assessments. PEM is working to incorporate new testing methodologies and technologies into our testing mission to provide the highest possible level of educational testing service and capability to our clients and to make our tests even more accessible to all students and schools.

- Paul Nichols, Ph.D.
- Michael Harms, Ph.D.
- Chris Walsh

Pearson Educational Measurement is the largest comprehensive provider of educational assessment products, services and solutions. As a pioneer in educational measurement, PEM has been a trusted partner in district, state and national assessments for more than 50 years. PEM helps educators and parents use testing and assessment to promote learning and academic achievement.

PEM's full-service offerings for K-12 and other assessment organizations include PEMSolutions™ (Pearson Educational Measurement Solutions) for custom assessments, both online and on paper; PASeries™ (Progress Assessment Series) for formative assessments; Perspective™ for performance reporting; EDWARD™ for assessment-based education data management and reporting, as well as other essential educational assessment products and services.

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