Response to the Assessment Technology Standards Request for Information (RFI)
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Introduction

These recommendations are related to accessibility questions under section 3.2.28, and are based on discussions that occurred at the Invitational Research Symposium on Technology-Enabled and Universally Designed Assessments, held in Arlington, Virginia, on July 23, 2009. The symposium was inspired by the interest of researchers at Measured Progress and SRI International, the event sponsors, in the emerging and dynamic field of technology-enabled assessments (TEA) and the principles of universal design for assessment as they relate to students with disabilities. Two publications were produced as a result of the symposium, one regarding cognition and one regarding access as they relate to TEA and students with disabilities: Almond, P., Winter, P., Cameto, R., Russell, M., Sato, E., Clarke-Midura, J., Torres, C., Haertel, G., Dolan, R., Beddow, P., & Lazarus, S. (2010), and Bechard, S., Sheinker, J., Abell, R., Barton, K., Burling, K., Camacho, C., Cameto, R., Haertel, G., Hansen, E., Johnstone, C., Kingston, N., Murray, E., Parker, C.E., Redfield, D., and Tucker, B. (2010). In addition to insights on the design, development, and validation of technology-enabled and universally designed assessment design that includes students with disabilities, these articles recommend a thoughtful research agenda to investigate critical questions for the next generation of assessment.

Main points of discussion

1. Accessibility[1] needs to be considered from the beginning of assessment design and development, especially as the nation moves to produce "Next Generation Balanced Assessments". Therefore, it is not only appropriate but *essential* that interoperability standards for assessment contain clear standards for accessibility. Accessibility standards need to be purposefully incorporated throughout the interoperability standards and conformance testing. Almond, Winter, Cameto, Russell, Sato, Clarke-Midura, Torres, Haertel, Dolan, Beddow, & Lazarus (2010) present a model for accessibility that incorporates three principles into assessment design to guide accessibility standards, i.e., universal design, construct-centered design, and scaffolding.

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[1]   Accessibility is a desired characteristic of testing by which students with physical, cognitive, sensory, or linguistic barriers are provided the opportunity to demonstrate the knowledge, skills, and abilities intended for measurement. It is a prerequisite to validity, the degree to which a test score interpretation is justifiable for a particular purpose and supported by evidence and theory.

2. Accessibility standards, including how accommodations will be addressed, need to be incorporated into the interoperability standards at the outset.[2] Dolan, Strain-Seymour, Deokar, & Ostler (2010) address accessibility in relation to separating item content and format, increasing interactivity, and providing accessible presentation and response options. Currently, draft standards, the Accessible Portable Item Profile (APIP) Standard, are under review on the APIP public forum on the IMS website[3]. APIP represents an eight-state effort to develop a test item interoperability standard that includes accessibility. These accessibility standards should be considered at the outset of development of interoperability standards.

3. The system should be continuously - improving: this requires building into the system a process for monitoring how the interoperability standards are working so that the system can evolve. We recommend establishing a review process for considering relevant emerging research and vetting changes. The standards need to be designed to be flexible to accommodate, for example, new item types that haven't been envisioned yet, empirical support for effective accessibility of content via different presentation, interaction, and/or response conditions, and various semiotic representations of targeted constructs–solutions need to be able to evolve.

4. In addition to how the assessment will be developed and presented to provide students with access to targeted content, systems must collect data for a number of purposes beyond linking student information, performance, reporting, and curriculum. As next generation assessments evolve, technical questions regarding the validity of inferences will arise. The data system needs to be able to address these additional measurement and research purposes, in particular those regarding accessibility features and accommodations. Technology standards need to address and allow for the addition of purposes and uses of assessment and data management systems beyond current uses and purposes.

5. We recommend using a modular approach to the development of the interoperability standards to maximize the ability to add and/or change portions of the standards. The approach needs to begin with basic ideas related to the assessment system itself as the first priority. The RFI seems to ask for solutions covering an entire system, from soup to nuts: from student data, through assessment items, to reporting. A steady, incremental approach may prevent the time-consuming and complex demands for implementing an entire system of interoperability standards from threatening the success of the project and overwhelming the effort to make needed changes.

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[2]   Both accessibility and the use of accommodations should be considered upfront. However, accessibility standards should be incorporated from the beginning of the development of the interoperability standards, whereas considerations regarding accommodations should be considered upfront and revisited toward the end of the development of the standards vis-à-vis the degree to which accessibility has been addressed/incorporated in the standards.

[3]   http://www.imsglobal.org/community/forum/categories.cfm?catid=110

References

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