



Prediction is very difficult, especially about the future –

Evidence-centered assessment combines the best qualities of psychometric and cognitive approaches. We still want to know what goes on inside people's minds, but we acknowledge that we have to deduce that by observing their behavior. Thus, we craft tasks and questions

Beyond 2020, evidence-centered design will displace traditional educational assessment design paradigms, but only if certain conditions are met:

1. Evidence-centered design is seen not as a replacement for psychometric procedures by a purely cognitive-based approach but as a marriage of psychometric and cognitive approaches;
2. Graduate-level preparation in educational assessment recognizes this marriage and promotes it, along with a thorough grounding in both cognitive psychology and psychometrics;
3. Undergraduate teacher preparation stresses the relevance of evidence-centered

poised to replace land-line phones. Many of our clients are now using our online test delivery system (MIST – Measurement Incorporated Secure Testing) interchangeably with paper-based testing, and some are using it exclusively. We are now able to offer item types (e.g., technology enhanced) and feedback that would be impossible with traditional paper-based tests. Other companies are having similar experiences.

The technology and psychometrics for computer adaptive testing (CAT) have existed for at least 50 years. Why hasn't it caught on? Actually CAT has caught on in a variety of settings but not yet in large-scale educational assessment. The Smarter Balanced Assessment Consortium (SBAC) is promoting it now and expects to see widespread use of CAT by 2015. This time, we think it will work, for two reasons:

1. Big money is promoting it – CAT has been another of those academic curiosities for the past 50 years because the expertise to create and maintain the software resides in the heads of very smart and therefore fairly expensive individuals, the technology to house the system is expensive, and the item banks required to make it work optimally are much larger and therefore more expensive than conventional item banks. All of these problems can be solved with money, and at least on the technology side of the equation, prices are dropping.
2. It is directly associated with online assessment – which is rapidly gaining acceptance. Students who begin their educational careers taking only online tests will not notice when one of those tests branches to new items based on their responses to the previous items. It will seem perfectly natural to them.

The remaining objection to CAT is the notion that somehow scores are not comparable unless the tests are identical. "You got a higher score than I did because you took an easier test," is easy to refute if the person making the claim understands psychometrics, but virtually impossible if not. However, we will eventually overcome even this objection as more and more people take online, computer-adaptive tests. The sheer weight and volume of CAT will ultimately overwhelm this objection long before logic will.

The U. S. Department of Education and the Federal Communications Commission have joined forces to publish the *Digital Textbook Playbook* to "advance the conversation toward building a rich digital learning experience" (p. 3). These two federal agencies, along with a host of schools, districts, nonprofit groups, and commercial vendors, have seen the future of education, and it is digital. The *Playbook* shows users how to make the transition to a digital learning environment, not at some distant time in the future but now.

Many schools and districts are already employing digital technologies to provide instruction, formative assessment, and grading for large numbers of students. Two North Carolina districts,

first step toward change. With a few exceptions, the future still looks a lot like it did in 1985, at least as far as educational testing is concerned. The main difference is that now we have good reason to believe in it.

Educational Testing Service (1986). *The Redesign of Testing for the 21st Century*. Princeton, NJ: Author.

Lissitz, R. W. & Jiao, H. (2012). *Computers and Their Impact on State Assessments*. Charlotte, NC: Information Age Publishers.

Pellegrino, J. W., Chudowski, N., & Glaser, R. (2001). *Knowing What Students Know: The Science and Design of Educational Assessment*. Washington, DC: National Research Council.