



Financial Advantages of Computer Based Testing

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Whitepaper

ASSESSMENT  SYSTEMS

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Computer based testing (CBAT) has grown from an interesting research topic to the accepted format of delivering exams. In many respects, paper exams have become obsolete, and continuing with paper exams can give the impression to stakeholders that your organization has fallen behind.

Problems with paper tests

Paper tests have a number of drawbacks. Perhaps the most obvious is that anything which is computer-based is impossible, including the use of multimedia (videos, mp3 audio) and the important psychometric advance of innovative items, also known as high-fidelity simulations. Paper tests also prevent automated scoring and immediate score reporting. In addition to the numerous functional differences, there are also substantial financial advantages to delivering tests via CBT.

Financial advantages of CBT

CBT *completely eliminates* the following test development expenses (estimated at 20% to 25% of the cost of test development and delivery):

1. Purchase or printing of answer sheets.
2. Printing of test booklets, in some cases alternate forms of the same test.
3. Packaging and shipping of booklets and answer sheets to testing locations.
4. Packaging and shipping for return of answer sheets and booklets from testing locations.
5. Unpacking shipped materials and preparing answer sheets for scanning.
6. Scanning of answer sheets (including the cost of scanners and their maintenance).
7. Warehousing of booklets and answer sheets, both before and after test administration.
8. Destruction of booklets and answer sheets after they have served their purpose.

CBT and computer-based item banking and test assembly *significantly reduces* the following costs, through efficiencies that can be realized from a Web-based item banking and test assembly system:

1. Proofreading exams prior to delivery.
2. Creating alternate forms of tests.
3. Item banking, review, and revision, particularly if relevant staff are geographically dispersed.
4. Travel costs associated with the item review process.
5. Item and test analysis, especially if psychometric analyses are performed within the item banking system.
6. Manual creation of reports.
7. Production and distribution of a wide variety of reports to various stakeholders.

CBT can create more customer use of tests, and therefore *new and expanded revenue streams*, as a result of:

1. On-demand testing, making tests available when the need arises. This is especially important in education where timely test results from formative evaluations can be used to guide instruction.
2. Instant reports available to teachers on individual students, groups of students, and classes.
3. Instant diagnostic and detailed reports available to students.
4. Continuous monitoring of individual students (and classrooms) on a wide variety of achievement and other indicators.
5. A wide variety of detailed reports available on demand, with no delays, to school, system, city, and state administrators.

6. On-demand information on the psychometric characteristics of tests, leading to more rapid improvement of tests and items and ultimately better measurements.

Computerized adaptive testing, providing more efficient examinee measurement (minimal testing time) and more precise and useful measurements.

About FastTest

FastTest is a comprehensive web-based system for the entire test development cycle:

- Item banking
- Item review
- Test assembly
- Standard setting
- Test delivery (computer or paper)
- Adaptive testing (CAT)
- Score reporting
- Results management
- Back-end reporting
- Psychometric analysis.

While comprehensive, it is flexible and scalable enough to be applied to testing organizations of all types and sizes. Custom solutions are also available.

For more information, visit www.assess.com or contact sales@assess.com