



Table of Key Measures for Reliable and Valid Assessments

eBook

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When you use assessment results to make decisions about people – whether that’s to hire or fire them, promote or certify them — you need access to defensible metrics. You’re investing a lot of time and money into building your assessment programs, so it’s incredibly important to understand whether things are performing as expected. Are they paying off? Are they measuring the right knowledge and skills or are you testing the wrong learning objectives?

Every learning and measurement professional should care about assessment reliability and validity. A great motto from testing guru Bill Coscarelli is "you don't get what you want, you get what you test." It's therefore crucial to identify whether what you're testing is in fact reliable and valid.

Reliable assessments measure the same thing consistently and reproducibly. An unreliable assessment does not measure anything consistently and cannot be used for any trustable measure of competency. Being reliable is not good enough on its own. A test can be reliable but not measure what it is meant to measure. An assessment is valid if it accurately measures the set learning objective. Trustworthy defensible assessment programs must be reliable AND valid. So how do you get there?

For assessments to be reliable and valid, it is necessary to follow structured processes at each step of assessment development. This table breaks up the key areas of assessment development and highlights key measures you should be using if you want defensible assessment results.



Planning the assessment

Measure to aid reliability and validity	Questionmark	Your System?
<u>Planning the Assessment</u>		
Use job task analysis surveys to help blueprint assessments	✓	
Organize items in an item bank with topic structure	✓	
Metatag items to associate with task knowledge, skill or ability	✓	
Secure authoring processes to protect against content theft	✓	
Manage translations to aid multilingual assessments	✓	

Authoring items

Measure to aid reliability and validity	Questionmark	Your System?
<u>Authoring Items</u>		
Authoring tool subject matter experts can use directly	✓	
20+ questions type	✓	
Ability to use relevant stimulus including video, audio and equations	✓	
Use observational assessments to help measure performance	✓	
Item version history for legal defensibility	✓	
Easy collaboration for item reviewers to help make items more valid	✓	
Search questions to identify those that need updates	✓	
Retire questions that are no longer useful	✓	

Assembling the assessment

Measure to aid reliability and validity	Questionmark	Your System?
<u>Assembling the assessment</u>		
Rules-based or random selection of questions from item bank	✓	
Random ordering of questions and choices	✓	
Set a pass score including topic prerequisites	✓	
Topic scoring and feedback	✓	
Set assessment time limit (and override if required)	✓	

Pilot and review

Measure to aid reliability and validity	Questionmark	Your System?
<u>Pilot and review</u>		
Easily deliver assessments for trial purposes	✓	
Participants can comment on questions and provide feedback to improve validity	✓	
Use experimental questions in live assessments without impacting scores	✓	
Run useful reports on the results of trial assessments	✓	

Delivery

Measure to aid reliability and validity	Questionmark	Your System?
<u>Delivery</u>		
Consumer-quality participant user interface	✓	
Blended delivery with mobile support and printing and scanning	✓	
Accessible to employees with disabilities	✓	
Results saved on the server "as you go" so IT failures do not lose data	✓	
Option to present different questions on a retake	✓	
Forced time period before a retake	✓	
Option to require monitor to confirm participant identity	✓	
Secure browser to provide exam integrity	✓	
Launch and track assessments from other systems of record	✓	

Analyze results

Measure to aid reliability and validity	Questionmark	Your System?
<u>Analyze results</u>		
Accurate, robust and tamper-proof	✓	
Differential security for results so only the right people see them	✓	
Item analysis report to weed out poor items	✓	
Test analysis report to calculate reliability	✓	
Wide range of accurate reports to help professionals make good decisions	✓	
Results can be anonymous to help make employee surveys valid	✓	
“Big data” potential to make better business decisions	✓	



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