One Pagers

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What Should Your Organization Consider When Evaluating Pass Rates?

Evaluating Pass Rates

There are no globally "acceptable" values for a pass rate, and one must always consider the purpose of the assessment when evaluating a pass rate. Certification assessments are often designed to assess "minimally competent" practitioners, so ideally the pass rate should reflect the rate of competence in the population. Other instruments may be designed to identify elite practitioners and have low pass rates (e.g., advanced credentials, licensure), or they may be designed to weed out a minority of critically underperforming candidates and thus have high pass rates (e.g., driver's license tests). If one is measuring the effects of a company training program, then a 100% pass rate is likely desirable. While there are a myriad of factors that can affect pass rates, we list some common factors below.

Focus on Setting the Passing Score

Rather than worrying about whether a pass rate is too high or too low, test developers should ensure that the passing score for the assessment has been set accurately using a defensible method, such as the Angoff or Bookmark methods. Over time, the pass rate will reflect the actual competency rate of the population, though the pass rate may fluctuate considerably in each administration based on the qualifications of candidates who decide to test.

Pass Rates Depend on the Candidates

While setting the passing score will play a big role in what the pass rate will be, test developers should remember that pass rates are *sample dependent*: pass rates may go up and down due to the qualifications and abilities of the candidates testing in each administration. If an administration happens to have fewer qualified candidates testing, pass rates will decrease, and vice versa.

Valid and Invalid Reasons for Changes in Pass Rates

Test developers should be alert to whether pass rates are changing for valid or invalid reasons. In general, if the assessment results are valid, then the pass rates are sound, regardless of whether they go up or down between administrations. But when content exposure or flaws in the assessment impact the outcome for candidates, the results are not valid, and pass rates will not accurately reflect the true abilities of the candidates.

Examples of Reasons a Pass Rate Might Change ↑↓	
Valid Reasons	**Invalid Reasons**
↑ Improved education or training increases the number of qualified candidates	↑ Content is breached and becomes widely available (e.g., stolen content on "brain dump" sites)
↑ Highly qualified candidates are incentivized to test, such as when top performers are the early adopters of a newly released credential	↑ Public knowledge of the assessment content increases as more candidates take the assessment and item exposure increases
↑ Prerequisites are added to ensure candidates are qualified to test	↑↓ The assessment is misaligned with the purpose and eligibility requirements of the assessment program
↑ Candidates are allowed to retest if they do not pass the first time	↑↓ A new form of the assessment is released without properly equating it with the previous form
↑ Increased public understanding of what the credential means/entails helps unqualified candidates seek additional training before testing	↑↓ The passing score is not set using a defensible method, or the passing score study is contaminated by poor data
↓ The assessment is updated to reflect changes in the domain, but training related to the new content is not widely available yet	↑↓ Statistical bias in the assessment causes one subgroup to perform differently than another
↓ Candidates rush to test due to external motivators without properly preparing (e.g., administration deadline is approaching)	