



Questions and Answers
about
Employee Selection Testing

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What can standardized testing do for our company?

Your company's investment in human intellectual capital is probably the single most important component of long-term profitability. Information on mental aptitudes -- the same information that is one of the strongest predictors of long term success on the job -- is very difficult to obtain except through standardized means. Standardized scores from a personality test help you understand how the person is likely to act at work over a long period of time—after they have shed their “best behavior” for the selection interview. Testing can provide additional information far beyond what other selection tools can give you. The insights you can gain about job candidates are often the crucial factors in making the right hiring decisions. And, scores from a personality test can give you insights about applicants that can be used to probe the most relevant topics during the final interview.

How can testing be any better than my current selection process?

Statistical evidence shows without doubt that standardized selection testing improves upon what companies are already doing in their selection. Typically, testing is an additional component of an otherwise comprehensive selection process. We hear time and again from our clients that it both adds vital information to the selection process, and it helps the HR professionals focus their personal attention on the most promising candidates. While testing initially looks like more time and work, people say it saves them time in the long run. The proof also comes when we conduct validation studies for individual companies: a standardized testing program almost invariably produces added value by providing measurements of ability which predict job performance better than any other form of information.

I am a good interviewer--why would I use testing in addition to my own judgment?

Some people are good at interviewing and have exceptionally good insights about who to hire, but not everyone is that perceptive. Two big questions to ask yourself:

- (1) Have you ever felt that you wished you had never hired a particular employee? Do you wish you had made a better choice?
- (2) Could you benefit from having additional valid information about the job candidate at your disposal when doing the interview? In both cases, standardized, validated tests can improve your hiring process.

How can I justify the costs of selection testing to my management?

Here are just 3 examples of how selection testing pays off:

- (1) *In a retail-clothing store, our tests were able to identify superior salespeople produce on average 500% more sales than the average worker.*
- (2) *Our Personal Style Inventory generated evidence that our client could cut turnover by more than half.*
- (3) *A large convenience store chain realized over 3000% ROI on testing of their store managers.*

Senior management in your company will listen when you say you know dramatically increase the percent of superior workers, the. Everyone knows the difficulties and the enormous costs associated with hiring “bad apples” -- additional training and supervision time required, mediocre performance, bad work habits, etc. -- but not everyone knows how valuable superior workers are to a company. Published research shows that the value of an average worker is approximately 2X their annual salary, so if you could minimize the chance of hiring one “bad apple” per year, that could more than justify the cost of the selection testing program for one year.

To read about a lot more examples of how testing has produced tangible savings, contact us to obtain a copy of "Benefits of RA Testing."

If the jobs at your company require a high caliber person, just add up all the ways that superior workers save your company money:

- Superior workers profit easily from instruction so the investment in training dollars is spent wisely.
- Superior workers use their job knowledge to make wise decisions to increase your company's profitability.
- Superior workers get up to full production quicker so you are losing less money during an orientation phase.
- Superior workers make fewer errors so they are more efficient in their everyday work; cut materials waste, and reduce equipment breakdowns.
- Superior workers are observant and thoughtful about their work so they help you improve the processes and save even more money in the long run.
- Superior workers are dependable and reliable so you can count on them.
- Superior workers make better team members, thus they facilitate the power of the entire work group.
- Superior workers are a good fit in the job, so they are more likely to enjoy what they are doing and want to learn and come to work everyday.
- In short, superior workers are an excellent investment of company resources.

It's simple!

An investment in selection testing
reaps tremendous financial benefits year after year.

How good are validated tests as predictors of job performance?

The graphic below provides a graphic representation of the relationship of typical scores from a valid test and job performance. The higher a person's score on a valid test, the more likely he or she will be an outstanding employee.

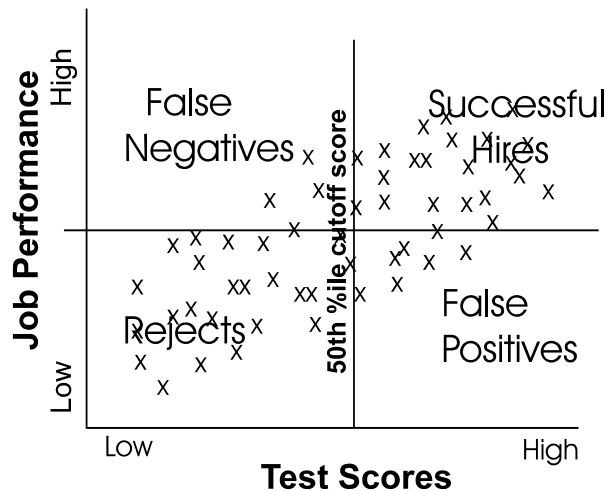
Successful Hires are those people who passed the test and turn out to be good employees. These are your "Stars."

Rejects were people who failed the test and who would, indeed, have been undesirable employees. These are the "Bad Apples" you want to avoid.

False Negatives are people who would have been good performers on the job if they had been hired -- you can say they are "Missed Opportunities."

False Positives are people who should not have been hired because they passed the test but turned out to be bad performers -- these are "Bad Hires."

Validated tests are not perfect predictors, but they almost always give you an added measure of predictability over less valid hiring practices.



How do you measure whether a test is a good predictor of job performance?

Typically, a correlation coefficient is used to assess whether there is a statistically significant relationship between test scores and job performance. It is represented as a small *r*, and ranges from -1 to +1 with no relationship being defined as $r=0.00$. The correlation in the example above is about $r=.45$. In addition to looking at the absolute value of a correlation coefficient, you also need to know if it was significant, i.e., if the probability of random error is less than 5%. Typically, if a correlation coefficient is significant at the 5% level then one asterisk will be used, e.g., $r=.25^*$, or if it is significant at the 1% (which is an even more rigorous test of significance) then two asterisks will be used, e.g., $r=.31^{**}$.

In the previous example, why is the cutoff-score set at the 50th percentile?

This is just one example of where a cutoff score could be set -- where you set the cutoff score for your testing program depends on your situation. The graph also shows that:

- If you set a low cutoff, then almost all of the people you weed out would probably have been poor performers. But, among the people who do make it through the testing process, some will be excellent and some will be only average, and a very few would be bad choices.
- If you set a really high cutoff, then there is a strong likelihood that almost all of the people you hire will be excellent performers.

We want to use a testing process that is fair to all groups. What problems will we run into?

Some people do better on selection tests than do others. Better test performers usually do better work on the job. However, sometimes different groups of people perform better or worse than other groups of people. If that is the case in your selection process, then it is especially important to use tests that have either (a) been validated for your company -- sometimes this is possible and sometimes it is not feasible, or (b) validated in similar settings.

Is testing legal?

Yes, testing is legal. Title VII of the Civil Rights Act of 1964 and the Uniform Guidelines on Employee Selection of 1978 both include pertinent guidelines and instruction on ways in which testing is appropriately used to make hiring decisions. If you follow our advice, you can feel safe that your testing program fits the existing legal guidelines. You may find it interesting that in over 25 years of doing business in this area, Resource Associates has never been sued. Should any legal questions or challenges arise, our Industrial Psychologists are ready to help you generate a rapid response.

What is "Adverse Impact" ?

The concept of Adverse Impact is legally defined Uniform Guidelines on Employee Selection, 1978, and is overseen by the Equal Employment Opportunity Commission (EEOC). Several formulas exist to define adverse impact (e.g., 80% rule and Two Standard Deviation rule). In our society, we are concerned about whether minority groups have as good a chance to be selected into a job as majority candidates. If a testing process is judged to have adverse impact, then a minority group typically has a statistically significant lower chance of passing a selection test than someone in the majority group. If the EEOC determines that adverse impact is evident for a particular selection test, then the company would need to demonstrate evidence that the test is a valid predictor of job performance. Presence of adverse impact should not, by itself, eliminate a valid test from your hiring process.

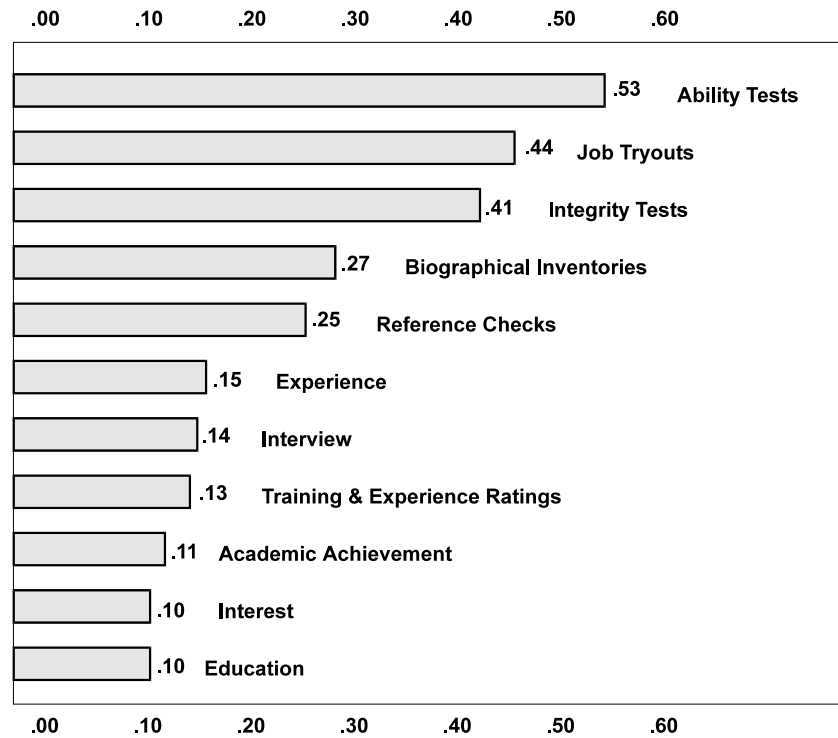
Are Resource Associates' tests fair?

Yes, Resource Associates' tests have demonstrated their fairness time and time again. Fair tests are ones where the research shows them to be good predictors of future job performance. High scores on fair tests mean that the person has a better chance of being an outstanding performer in the company later on. Unfair tests either don't predict well or they over-predict or under-predict certain groups more than others. The researchers at Resource Associates help you create a testing program that can demonstrate good predictability for your particular job.

How does testing compare to other selection methods?

Studies published in leading scholarly journals support what we see repeatedly with our own clients: standardized testing of aptitude is more reliable, accurate, and cost effective than other selection tools. It is a well-established scientific fact that cognitive ability is the best predictor of long term success at work. And, using valid, reliable measures of personality builds on that – it doubles your ability to predict who will be an outstanding performer on the job! Resource Associates selection testing can add value to whatever you are already doing in your selection process.

The graphic below shows very clearly that standardized testing for cognitive ability is superior to all other selection practices. (See Hunter and Hunter, 1984 and Ones, Viswesvaran & Schmidt, 1993)



How should test scores be used to make hiring decisions?

We recommend that scores on a validated test be incorporated into your hiring process as only one component of the overall decision. That being said, sometimes it is appropriate for you to establish a Pass / Fail criterion on the test -- i.e. if people fail to meet a certain score, they will not be considered further in the hiring process. How should that score be set? This is a judgment made by the company (we will certainly provide useful advice) based on several factors:

- ***What are your hiring goals?*** Do you seek to staff the position with a person of superior talent or are you more interested in weeding out people who are likely to be poor performers? Different hiring goals lead to different test cutoff scores. A company with a lot of high tech equipment that employees are supposed to manage using a great deal of independent judgment will probably find that setting a high cutoff score would reap many rewards. On the other hand, where most people can succeed in the position, your goal may be simply to weed out those who are incapable of learning the tasks or those who have poor retention potential--here a low cutoff score would be appropriate.
- ***How healthy is your applicant flow?*** If you have an adequate pool of job applicants, you can afford to weed out a lot and still have a reasonable number of people from which to choose. If not, then you will probably have set the cutoff score lower and thus accept more marginal candidates.
- ***How much are you willing to spend on recruiting?*** If you desire to hire "cream of the crop" individuals, then you will need a large pool to draw from because a high cutoff score on the test will create a high rate of failures. Recruiting enough people to eventually fill your needs will cost a lot. Setting a very high cutoff score can also create negative attitudes in the community if people get the idea that no one can pass your test.
- ***How crucial is it for the job to be staffed with outstanding candidates?*** If the job does not require top of the line employees, then you can afford to set a lower cutoff for the test.
- **** Balanced approach.*** We have found that many of our clients find it useful to establish a target percentage of the applicants to weed out of the hiring process. This is accomplished by establishing a baseline test score distribution for your applicants (usually 100 or more applicants), then setting test score cutoffs based on what percent you wish to fall into three categories: (a) unacceptable candidates, (b) marginal recommendation, and (c) full recommendation.

Note: The Industrial Psychologists at Resource Associates can work with you to create a customized approach to setting cutoff-scores for an Overall Recommendation on test reports.

When should test scores not be used as a Pass/ Fail criterion?

In many hiring situations, test score information will simply be used as a guide in the interview process. Here, test scores provide insights about potential problem areas that need to be probed during the interview. In small companies, where the main criteria for hiring is whether the candidate will get along well with current employees, a pass-fail designation would be inappropriate.

What are the first steps in starting a testing program?

The Resource Associates Industrial Psychologist who works with you to set up a selection testing program will guide you through this process. Step one is to thoroughly understand the job requirements. Since Resource Associates has a large number of validated tests, we can help you choose which tests are the best ones to provide the information you need to make wise hiring decisions. If a test validation study or a benchmarking study is called for in your situation, our experience and knowledge in this area will be invaluable.

What is the best way to integrate the testing process into our other selection activities?

Most companies find that selection tests are most cost-effective if it is used early in the selection process. Information on cognitive ability and personality can help you identify those people on whom you should focus most of your time with reference checking, interviewing, providing a tour, etc. Likewise, this information gives you valuable clues to help you probe into potential problem areas during other contacts with the candidates.

Don't people fake personality tests?

To some degree, almost everyone wants to think of themselves in a positive light and most of us want others to think well of us. So, yes, people are motivated to inflate their answers and appear "better" than they really are. The scoring formulas we use to measure personality are designed to take this phenomenon into account. Also, the items (questions) are designed so that not everybody answers the same way--those differences between people give us the information on which to distinguish between people and make predictions about future behavior on the job.

Doesn't an aptitude test have to measure the same thing that the person would have to do in the job?

Sometimes YES. Where the candidate is supposed to know certain things before hire then, yes, the test should present questions about job content. For example, a bus driver should be a competent driver before being hired into the job.

Usually NO. In most jobs, people are given the opportunity to learn most aspects of the job during on-the-job training. In this case, it would be unfair (and illegal) for a job candidate to be expected to know exactly the same things as a current employee. Therefore, aptitude tests for selection purposes are good predictors of whether the person would be quick to learn new job information, capable of using that knowledge to reason through problems in the job, and efficient in managing that type of information.

I took the personality test for practice and got mostly low scores -- what's wrong?

First, our personality tests are normed on people who are applying for jobs, and they are notoriously self-aggrandizing. So, if they can figure out what the "right" or "better" answer is, they will present themselves in glowing terms, i.e., never late for meetings, work is always perfect, never get annoyed with people, always work hard, etc. So, if you are responding to the inventory in a very "honest" frame of mind, your scores will be low. If a candidate "gives an inch" in how he describes himself, then we "take a mile" in terms of how we interpret their answers. A little bit of negative information that candidates reveal about themselves is taken very seriously.

Each dimension score is based on an average of 8-10 individual questions. In developing a scoring formula, we display a distribution of average scores for a large number of people who took the test, the distributions are positively skewed, i.e., almost everyone gives "good answers" so we have to make some fine distinctions between average scores. We set the cutoff for High at about the top 15-20%, Low is the bottom 5-10% so it's usually easier to get a high score than a low score.

Second, sometimes the better answer is on the left and sometimes it is on the right. When people are taking a personality just to get a feel for how it works and how the scores will turn out, sometimes they are not as careful as a real job candidate would be. Averaging in scores for a "wrong" answer here and there in the set of numbers will bring the overall score for that dimension way down.

Last, we are the first to admit that personality inventories are not perfect, but they are valid in most cases. Being a valid predictor means that they offer some value above and beyond the pre-existing hiring process. And, bear in mind that no predictor is perfect -- even face-to-face interviews. The best example of that I give is a person's choice of marriage partner: we spend a tremendous amount of time getting to know a person before deciding to marry; but for about half the population, that choice / prediction turns out to be wrong. Hopefully our clients can use the information presented in a personality report as a general indicator of the type of person the candidate will turn out to be months and years down the pike.

People complain about how long the tests take. How can I justify this requirement?

If you were to detail the cost of your recruiting efforts (advertising, headhunters, travel, hotel), other staff time needed to interview the candidate and show him/her around, your total investment in the hiring process will surely add up to be a very substantial amount. You might also want to detail some of the costs involved with hiring the wrong person: lost productivity from someone who is not a good performer, cost of mistakes -- the higher level job the greater the cost of bad judgment -- bad morale among co-workers if this person is difficult to get along with, and cost of replacement if he/she decides to leave your company in a short period of time. All these costs add up -- and it is often shockingly large amount of money. So, asking a candidate to invest some of his or her time to help make sure a hiring decision is a good one is a small thing to ask. Besides, it is of benefit to both the company and the candidate for the hiring decision to be a good one -- it is not fun for either side if the person is a bad fit for the job and things don't work out. Hiring a poor performer is bad enough, but you also want to avoid hiring a mediocre performer who will hang around your company for years dragging down your potential for success.

QUESTIONS AND ANSWERS ABOUT VALIDATION STUDIES

What is a validation study?

A validation study generates evidence that the tests you are using to assess people are actually good predictors of later job performance. When a testing program is valid you have assurance that the information used to make hiring decisions is worthwhile and fair to job candidates. Typically, a validation study includes:

- A job analysis.
- A rationale for tests used.
- Information on how employees or job candidates perform on the tests.
- A demonstrated relationship between test scores and some measure(s) of success on the job --usually supervisor ratings or other objective measures (e.g., calls per hour).

Does our company need a validation study?

Every company that uses standardized testing for selection purposes needs some documentation to support their compliance with EEOC and / or ADA Guidelines. Since Resource Associates' tests have been validated in many companies for many jobs, you have access to this accumulated validation evidence. For most companies, this is sufficient.

Sometimes, if a company feels that challenges are likely to arise and if they have a large enough workforce to allow a suitable research study, a full-scale validation study can be done. Of course, we would provide the expertise and assistance to complete the study.

Resource Associates will help you decide what type of initial validation effort needs to be done to ensure that your testing system conforms to legal guidelines established by EEOC.

If my company wants to do some initial work to ensure that tests are valid here but we didn't want to go through the hassle of a validation study, is there an alternative?

Rather than going through the process of testing a large number of current employees, many companies elect to establish a profile of their best people. This process is often called **BENCHMARKING** or **PROFILING**. With this approach, you would identify about 15-20 of your best performers, give them the test, look at their pattern of scores, then try to establish a target profile against which to compare job candidates' profiles. *Please note that if your testing program was challenged in court, a benchmark study does not meet the EEOC requirements for a validation study.*

What are the various types of validation studies?

Content Validation Studies: Sometimes a validation study involves simply documenting that the content of the job is similar to jobs for which the tests have been previously developed and validated. This approach is often used with a new company where no employees have been hired, or a situation where there are only a small number of employees in one job category.

Concurrent Validation Studies: Sometimes, a validation study involves using the tests on current employees and correlating their test scores with measures of their job performance. When the company can provide a large enough group of employees in one job category, we can do a full-scale correlational study. The Concurrent Validation Study requires large sample sizes (150 or more people in one job category).

Predictive Validation Studies: Other times, we can start with job candidates and follow them through the job orientation and initial training process to evaluate whether the tests could predict which people were more successful than others. This type of study also requires a large sample size (150 or more in one job category.)

Criterion Related Validation Studies: This is another name for what was described above. Anytime, you take test scores from a group of people, then correlate them with an outcome measure of some type (e.g., supervisor ratings, error rates, annual sales, etc.) then you are doing a criterion-related validation study.

How do we know what type of validation study is right for our company?

The Industrial Psychologists at Resource Associates are experienced in helping you make good decisions about appropriate kinds of test validation. The final choice of which strategy is best depends on:

- How many employees are currently working in this job. A research project of this type requires at least 150 people in the job family for which the testing program is being implemented.
- Whether there are any reasonable ways to reliably measure job performance. If yours is a new company, you may not have employees yet. Or, your employees may not have been on the job long enough for you to judge how successful they are.
- The rate at which new employees are brought into the company. If new employees are not hired very often, it would not be feasible to do a predictive validation study.
- The length of time before you can reasonably judge the value of a new employee. If it takes only a month or two to evaluate the worth of an employee, then a predictive study is a reasonable choice, vs. if it would take several years, a predictive study becomes more difficult and time consuming to complete.

Your representative from Resource Associates can help clarify the right strategy to take to ensure legal defensibility of your testing program.

Do you have more questions? The Industrial Psychologists at Resource Associates would be happy to talk with you about your particular situation. Please call us.

Toll free: 1-866-840-4749