



How to Predict

Employee Success –

Validating Searchlight's Predictive Talent Platform

Connecting pre- and post-hire data through a virtuous cycle of validation drives talent success

Introduction

Today, Heads of Talent and HR leaders are eager to better understand hiring metrics across their talent ecosystem. It gives them a competitive advantage. In fact, academic research has found that top performing employees deliver **up to 400% more productivity** than average ones. And if in a role that fits their working styles and passions, not only will these employees thrive, they'll also produce more value for an organization.

But any predictions about employee performance without validation of post-hire outcomes is just that, a prediction. Which means it's crucial to connect and analyze pre- and post-hire data to close the predictive

talent loop and validate performance – essentially answering the question, “Are we getting it right?”

But how is this done today? People leaders and those responsible for talent acquisition want to holistically understand candidates, predict performance, and verify success post hire. In this guide, we'll review Searchlight's approach to measuring pre- and post-hire talent, explore our methodology around designing and validating our assessments and metrics, and look at how one of our customers successfully predicts new hire performance.



The Brief: Searchlight's Predictive Talent Platform

Searchlight collects and analyzes behavioral reference data that enables Heads of Talent and HR leaders to do three things. 1) Hire with more confidence (by seeing candidates more holistically) and efficiency; 2) Understand and evaluate if that new hire has been successful (by looking at the impact they have on the organizations); and 3) Create a virtuous feedback loop to improve future hiring.

When it comes to understanding who to hire, Searchlight measures pre-hire behavioral data to provide a 360-degree view of applicants — and how they'll do on the job. The behavioral data produces what's called the **Searchlight Score**, which is the predicted effectiveness of an applicant in a given role.

Our Predictive Talent Platform measures four types of pre-hire behavioral data:

COMPETENCIES

- These are the skills, knowledge, and experience necessary to do a particular job well. Searchlight's quantified, corroborated feedback on a candidate's mastery of specific skills helps recruiters prove or disprove gut feelings on whether a candidate can do the job.

CULTURAL ALIGNMENT

- This refers to the core values, beliefs and practices from which a company operates. Searchlight's customized, forced-choice methodology provides an accurate picture of a candidate's culture-add.

STRENGTH AND GAPS

- These are the attributes that together describe how someone works. Searchlight's 360 assessments generate an unbiased, comprehensive list of a candidate's strengths and gaps based on input from their references.

CAREER INTERESTS

- This is an employee's short and long-term goals and motivations. Searchlight's open-ended questions and forced-choice ranking provides a 360-degree view of a candidate's goals and expectations, providing a crucial understanding of who they are and what they want.

When it comes to understanding if you've hired the right people, Searchlight measures post-hire behavioral data to pinpoint the ROI produced by engaged, well-aligned new hires. The 360-degree view of how your new hires are performing produces a **Quality of Hire (QoH) metric**, which is the impact that each new hire has on the organization. We evaluate QoH along two primary dimensions: Performance and Retention.

High quality employees not only perform effectively in their role but also intend to stay in the organization. In this way, organizations that optimize QoH avoid attrition and costly backfills as well as create value that a high-performing employee brings when they're in a role that's a good fit for them.



Searchlight's Methodology for Designing and Validating Assessments and Metrics

For more than 100 years, researchers in organizational psychology have investigated how to conceptualize and measure organizationally relevant attributes such as job performance. Most of this research is buried in academic journals. To leverage this research in designing our assessments and metrics at Searchlight, we hired Ph.D. scientists in organizational psychology to help design and validate our methodology.

Here is the procedure we followed:

1. We consulted the academic literature to build off past research. For instance, when selecting the types of behavioral data to focus on for our Searchlight Score, we reviewed academic research about candidate competencies, ties between strong culture and business performance, matching new hire values to hiring organizations, career interest alignment and more.
2. We reviewed current talent acquisition and HR trends associated with the new post-pandemic work environment. We noticed a push in the HR space for an **elevated Employee Experience**, the rise of the idea of **"Total Talent"**, and the essential need to **mitigate bias in the hiring process**.
3. We partnered with People, Recruiting, and L&D leaders to understand how these academic constructs and rising trends translate in practice. Based on more than 100 structured interviews with HR leaders, we drafted our initial assessments and metrics.
4. We engaged Ph.D. trained scientists in organizational psychology and psychometrics to refine our assessments and metrics. This enabled us to follow best practices in measurement. For instance, we avoided double-barrel questions and randomized question order. We also focused on 360-degree assessments (called multi-source ratings in the academic literature) instead of just self-ratings (which is more typical with survey assessment tools) because **academic research** shows that such 360-degree assessments are more predictive of job performance.
5. We worked closely with user interface (UI) and user experience (UX) designers to put our assessments through rigorous usability testing, from ensuring that our questions are engaging and easy to use to maintaining accessibility in our colors. We also made sure the language is approachable for individuals regardless of their background.
6. We pilot tested our platform with over 10,000 respondents and conducted an adverse impact analysis, which is a statistical test that determines whether an assessment is unfairly biased against underrepresented individuals. The results suggested that individuals across different gender and ethnic groups scored similarly on our assessments and metrics. And we continuously conduct adverse impact analyses (read more about that **here**).
7. We worked with our clients to continuously test for our platform's validity of a psychometrically sound assessment (read on to learn how we did that with one of our customers).



As you can see, our confidence in our methodology is based on converging evidence from several sources: the longstanding and highly vetted scientific literature, subject matter experts who know the field, and

statistical tests which remove human judgment. But how does this work in practice? Let's look at a real world customer experience with Searchlight.

Put Into Practice – Scientific Validation with a Customer

One of our clients — a 750+ employee high-tech company with a \$5B+ valuation — provided a great test case to see how well predictive talent metrics actually predict future success.

We tested two metrics for validity: the **Searchlight Score** (the predicted effectiveness of an applicant in a given role, measured pre-hire) and our **Quality of Hire metric** (the impact that the new hire has on the organization, measured post-hire). We did this by comparing Searchlight's predictions about candidates to our customer's own internal employee performance reviews (conducted independently) for candidates hired using Searchlight technology.

We performed three specific tests to evaluate validity:

1. We checked if the results from an applicant's pre-hire Searchlight Score statistically predict their job performance (measured by their performance reviews). This is called **predictive validity**. If the Searchlight Score estimated that an employee would perform well on-the-job, and they did perform well, the Searchlight score is predictively valid.

2. We checked if the results from an applicant's pre-hire Searchlight Score statistically predict their job performance (measured by their performance reviews)—above and beyond the effect of other known predictors of job performance (such as interview scorecards). This is called **incremental validity**. If the Searchlight Score estimated that an employee would perform well on-the-job, and they did perform well even controlling for other known predictors of job performance (interview scorecards), the Searchlight score is incrementally valid.
3. We checked if Searchlight's post-hire QoH metric aligns with our customer's job performance reviews. This is called **concurrent validity** (testing against a technically sound independent evaluation). If Searchlight's QoH metric matched what our customer's independent performance reviews found, the QoH metric is concurrently valid.

The results?



Predictive Validity

To test for predictive validity (e.g., the correspondence between Searchlight’s quantitative outputs and behavior in the future), we tested for the correlation between the Searchlight Score and our customer’s independent evaluation of job performance. Essentially, to what extent do Searchlight metrics predict future outcomes?

We found a statistically significant, positive correlation (Pearson $r = .24$), indicating that the Searchlight Score (collected pre-hire) can accurately predict post-hire job performance outcomes in the form of the performance review. When a correlation is statistically significant, we can conclude the relationship between the two variables (e.g., Searchlight Score and post-hire job performance) is unlikely due to chance.

This is evidence of predictive validity.

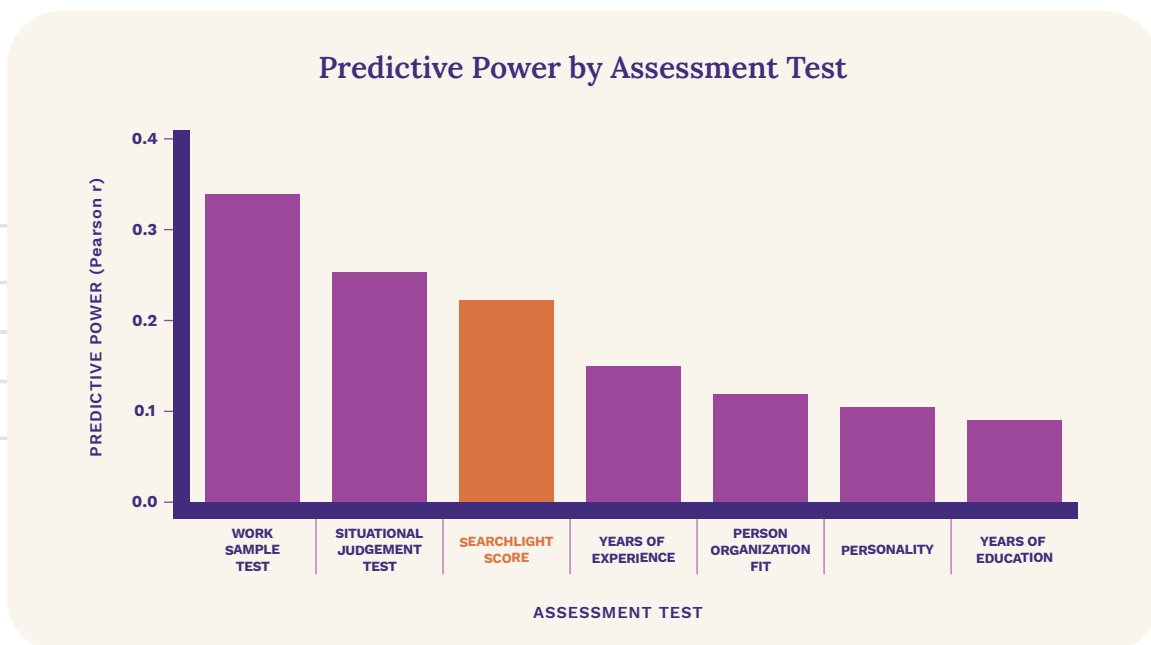
But exactly how predictive is the Searchlight Score of job performance?

Based on prior research which quantitatively reviewed over **100 years of academic research**

(across industries and occupations in the U.S.), we can conclude the predictive power of the Searchlight Score (Pearson $r = .24$) is more substantial than or on par with the predictive power of these commonly used applicant screening / interviewing tools such as situational judgment tests, years of prior work experience, education, personality traits, and emotional intelligence.

We also found that employees who scored in the top 20% of the Searchlight Score (measured pre-hire) had post-hire job performance 15% stronger those who scored in the bottom 20% of the Searchlight’s Score.

These results indicate that the Searchlight Score provides an accurate, early indication of the impact someone will have in an organization, enabling recruiters to make evidence-based decisions about who to hire. To put this in business context - what is the value of an Account Executive who sells 15% more than the average?



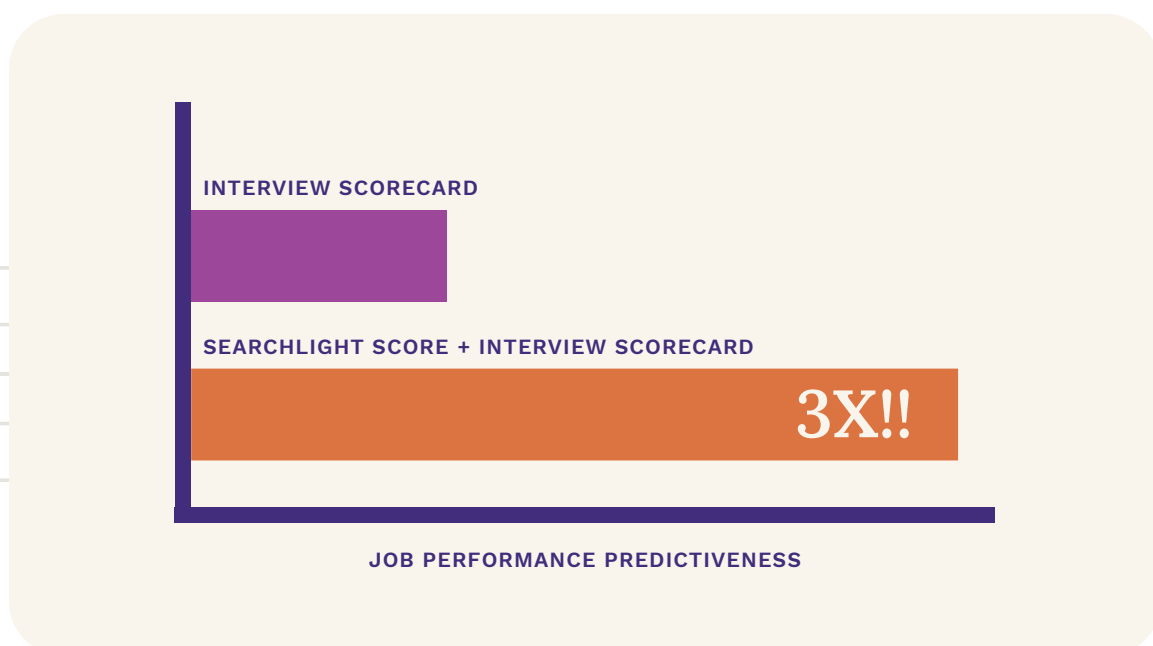


Incremental Validity

To test for incremental validity (e.g., the degree to which the Searchlight Score can predict behavior in the future above and beyond other known predictors), we ran a two-step regression analysis.

- In the first step, we added the average of overall recommendations in Greenhouse interview scorecards (where “definitely not” was scored as 1 and “strong yes” was scored as 4) as a predictor of job performance. This is because, in the absence of other criteria, most organizations tend to review the full set of interviewer scorecards in order to make a selection decision.
- In the second step, we added those same mean interview scorecard values, but also the Searchlight Score. This is to approximate how well a hiring decision can predict performance on the job when both interview scorecards and the Searchlight Scores are considered by the selection committee.

When we compared the first model (just interview scorecards) and the second model (both interview scorecards and Searchlight Scores), the **scorecards + Searchlight Scores model was more than three times more powerful at predicting job performance** than interview scorecards alone. Specifically, the R-Squared (a statistical measure that quantifies the proportion of variance in job performance that can be explained by predictors) was 3x larger in the model with interview scorecards **and** Searchlight Scores as opposed to the model with just interview scorecards. Given that this model was also statistically significant, this is strong evidence of incremental validity. In other words, **Searchlight Scores were clearly providing additional value beyond interview scorecards in predicting performance on the job.**





Concurrent Validity

To test for concurrent validity (e.g., the correspondence between Searchlight’s quantitative outputs and a technically sound independent evaluation), we tested for the correlation between Searchlight’s QoH metric and our customer’s independent evaluation of job performance. Essentially how well do Searchlight metrics correlate with a previously validated measure?

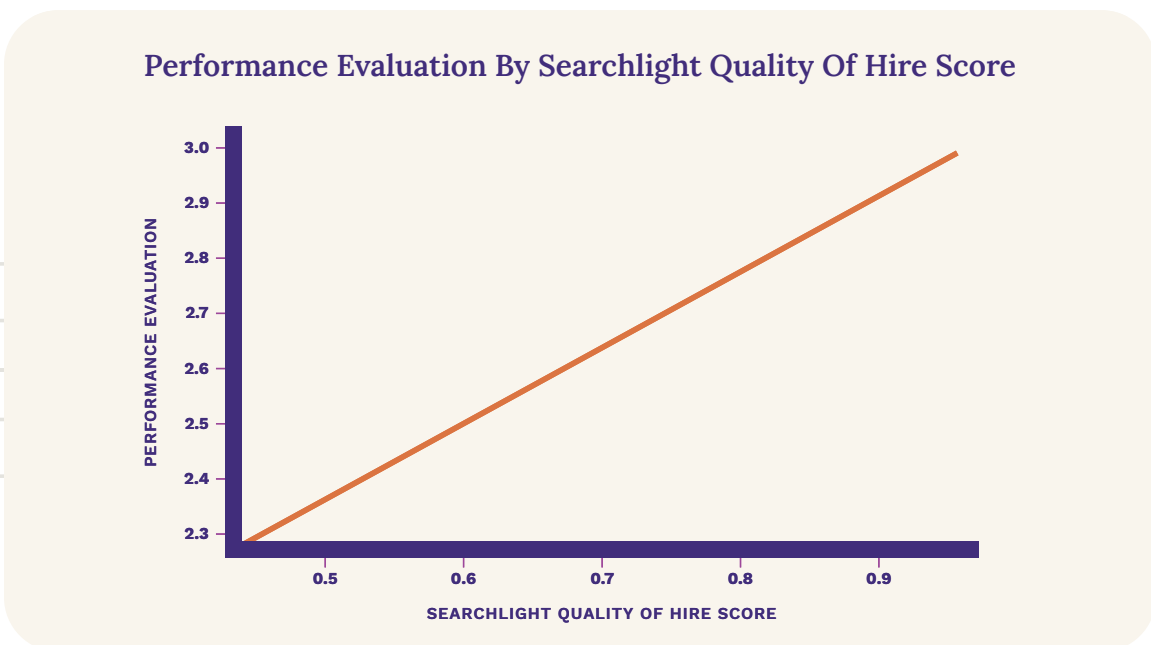
We found a statistically significant, positive correlation (Pearson $r = .31$), indicating that **there is substantial correspondence between Searchlight’s QoH metric and an independent evaluation of job performance and thus evidence of concurrent validity.**

To put this statistical relationship (Pearson $r = .31$) in context, the relationship between Searchlight’s QoH metric and job performance is **stronger** than other measures that have been the focus of significant

company investment in the past decade such as the relationship between employee commitment and tenure, and between organizational wellness programs and employee absenteeism.

We further found that **employees in the top 20% of Searchlight’s QoH metric performed 22% better than those in the bottom 20% of Searchlight’s QoH calculation.** These results indicate that Searchlight’s QoH metric tracks job performance, which is a key factor to an individual’s impact on the organization.

To put this into business context, a People team that seeks to invest in promoting strong employee performance and retention should look at the factors measured by Searchlight’s QoH score as a better investment of company time and resources than engagement surveys measuring employee commitment and absenteeism.





The Business Implications of Validating Predictive Hiring Models

It's clear that HR and Talent Leaders can gain a competitive advantage by measuring and tracking the Searchlight Score for new applicants and that Searchlight's QoH metric for new hires.

More specifically, Searchlight insights, which are vetted by science, enable organizations to hire and retain the right people. Our candidate assessments and QoH measurements have predictive, incremental, and concurrent validity with on-the-job performance. Having the right people on your team impacts the financial bottom line. Our **case studies** show that using the scientific insights from Searchlight can affect business outcomes, such as reduced time-to-fill, better job performance, and enhanced employee retention.

Furthermore, objective scientific hiring methods reduce bias and align with diversity goals. According to vetted **academic research** from the Kellogg School of Business at Northwestern

University, instincts and gut feelings can easily mask unconscious biases that affect the hiring process, reducing the diversity of the talent pool. By measuring and identifying proven signals for success, Searchlight's scientific approach can expand the diversity of the talent pool without completely removing the intangibles from the process.

And finally, reliance on vetted research promotes trust within the organization. The introduction of science-backed practices in hiring demonstrates to key stakeholders (e.g., top management, employees, prospective applicants, customers) that your organization makes hiring decisions, at least in part, on impartial and objective information that has benefited from rigorous review by academic leaders and subject matter experts. This will increase the trust that stakeholders have in your process, enabling you to act with confidence, realign detracting voices, and drive better business outcomes.

If you're interested in learning more about Searchlight's Predictive Talent Platform, [click here](#) to schedule a demo.



Searchlight's Predictive Talent Platform helps companies hire the right people faster by building complete Talent Stories. By connecting candidate reference and self-assessment insights to post-hire outcomes, Searchlight creates a virtuous talent cycle for retention that operationalizes Quality of Hire. Real-time information enables hiring professionals to increase efficiency, eliminate mishires, decrease time-to-fill, and make better data-informed decisions when identifying high performers. Searchlight is on a people-first mission to make hiring a win-win for everyone by understanding talent holistically. See the light with Searchlight. Learn more at [Searchlight.ai](#).