



# Using Recruitment Methods to Predict Performance

Whitepaper

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## EXECUTIVE SUMMARY

# Insights into the science behind recruiting and the tools to use

Today the **cost of making a 'bad hire' is estimated at three times the starter's salary – on average this is around \$30,000**; a significant cost-impact for any organization. But being able to predict how an employee will perform upon hire is challenging.

The process to source and select candidates is complex. HR professionals need to be able to evaluate the capabilities, characteristics, and motivations required for a role. Making incorrect decisions is easy.

Around **two-fifths of organizations** anticipate an increase in their recruitment and talent management budgets over the next year, reflecting increasing resource challenges and costs ([CIPD, 2022 Report](#)). In the following paper we look at the role of psychometrics and statistical analysis in recruitment selection methods.

Drawing on the scientific information published in [The Science Behind Predicting Job Performance at Recruitment](#), whose paper considered **over 100 years** of scientific evidence on the effectiveness of different tools that can be used in the recruitment process; and how evolving this information in a hiring strategy can help to mitigate risk.

Within this guide, we explore developments in technology. Given that **93% of organizations** are concerned about employee retention (LinkedIn Learning's 2023 Workplace Learning Report), we also consider what HR teams can do to evolve performance in the future to make hiring a long-term success.

## What do we mean by job performance?

Job performance refers to how an employee carries out their role against often measurable objectives. An organization's goal will be to maximize the value of their employee's output. However, this is influenced by any number of factors from the technology available for an employee to carry out their job, their onboarding experience, match to skill sets, and opportunities for training to name a few.

Often, when businesses fail in one or more of these areas, we see a high employee turnover rate. Recent research highlights that nearly **three quarters (73%) of employees** are seeking a new job in 2024 and **90% have concerns about their current employment**.

A low retention rate will impact business objectives, team performance and morale along with the cost and time of sourcing and selecting a new employee. Whereas a positive work experience generates better retention, **'For every 100 employees who move their company ratings from fair or poor to excellent, 37 fewer employees would leave in the next year, amounting to \$555,000 in savings.'** ([Work Institute 2019 Retention Report](#)).

There is a common consensus that job performance is affected by four key areas:

- 01 Skills, qualifications, and experience
- 02 Cognitive ability
- 03 Personality or behavioral fit
- 04 Motivation, values, and interests.

Depending on the role being filled, different weights would be applied to the four areas. For example, the first area relates to the skills, experience, and knowledge that are relevant to the role. For specialist jobs such as nurse or engineer, this area is of high importance. However, for a role which does not require specialist knowledge or specific training, the weighting traditionally would be much lower. With a new emphasis on the success of skills-based hiring that looks at all skill sets including soft and hard skills, the attention applied to this area has increased across all types of careers.

The second area, cognitive ability, or general mental ability (GMA) refers to how quickly you can learn on the job. Nearly all jobs require a level of cognitive ability.

The third area is how your personality traits and behavioral preferences fit the job; whether the role requires a candidate to be highly organized, independent, or tolerant of stress for example. The level of these and many other personality traits can be measured in a questionnaire and the likely 'fit to role' score determined.

The final factor is how well the role and organization fit your values, interests, and motivation. Motivation is the most variable of the factors and can be influenced by many things, but it is also one of the key areas that impacts jobs performance the most. You can have all the right experience, skills, and behaviors for a job but if you aren't motivated you are unlikely to perform to the best of your ability.

The weighting of each area will depend on the job role itself and is best achieved by carrying out a job analysis. As [CIPD research](#) highlights employers are facing challenging conditions across roles: 70% of respondents reported that competition for well-qualified talent has increased over the last year, whilst one in four also reported challenges attracting low-skilled candidates. Working to obtain a complete picture of your candidates considering these areas can help ensure better hiring outcomes.

## Can you predict job performance?

With over 70% of HR practitioners ([CIPD, 2022 Report](#)) reporting that competition for well-qualified talent has increased over the last year, being able to predict employee performance can help make the difference between a successful hire and a costly mistake.

Recruitment is a game of risks where the chances of identifying a candidate who will turn out to be an effective employee are balanced against the risks of spotting someone who will not work out as expected. If these risks are effectively managed, recruiters are more likely to identify candidates who perform well in the job. Fortunately, there are statistical techniques for identifying candidates' potential. In the whitepaper, "The Science Behind Predicting Job Performance at Recruitment,"

Angus McDonald and Wyn Davies highlight the following areas:

### Correlation

Any number of tools can be used as part of the recruitment process, and whilst many statistical techniques can be used to determine how effective any assessment tool is for candidate selection, most of these are based on the idea of correlation.

Correlation is a statistical technique that looks at the strength of association between two variables, typically the score or scores obtained on an assessment tool and some measure of job performance. The stronger the correlation, the more closely associated with each other the two measures are said to be.

### The Concept of Validity

In the context of recruitment, validity concerns the appropriateness of a specific assessment tool for a defined purpose. Tools with higher validity therefore enable recruiters to more accurately identify those candidates who are likely to go on to perform well in the job. Having strong validity means an assessment tool can predict job performance with a good degree of accuracy. By knowing this, it is possible to use assessment scores to identify those candidates most likely to perform well in the job.

What tools can be used to predict job performance, and which is most successful?

### GMA/Cognitive tests

There are numerous tests designed to assess mental ability. "At least 80% of the Fortune 500 companies globally use cognitive and IQ tests during the hiring process." Test such as the Watson Glaser Critical Thinking Appraisal and Raven's Adaptive - can be delivered unsupervised online or administered to groups of applicants at a time under supervised conditions, giving them a high level of utility in recruitment settings.

A research paper by Frank Schmidt and colleagues, which summarized the effectiveness of 31 different assessment methods for the prediction of job performance, found that that tests of general mental ability (GMA) were identified as having the highest validity of any selection method. They were also seen to be the best predictor of performance on job-related training. The extensive research underpinning the use of GMA means a high level of confidence can be placed in these findings.

As per the findings, when an employer uses GMA to select employees who will have a high level of performance, that employer is also selecting those who will learn the most from job training programs and will acquire job knowledge faster from experience on the job. Candidates higher in GMA perform better in the job because they acquire job knowledge more rapidly and more deeply than those lower in GMA.

GMA also has validity for a wide range of job roles. Tests of GMA are known to predict effectively for graduate-level roles, but they also have considerable predictive validity for virtually any role, including unskilled. This ability of GMA to predict performance tends to increase as the cognitive



demands of jobs increase. Highest validities are seen for professional and managerial roles, where GMA can account for over 50 per cent of the variability in job performance on average. (Ref: [The Science Behind Predicting Job Performance at Recruitment](#) (talentlens.com)).

### Personality tests

Personality tests such as SOSIE, 2nd Generation are frequently used as part of the recruitment process. They evaluate the dominant traits of a person's character, their behavioral profile in the professional environment, and their motivations and values. They enable HR professionals to go beyond the written application and discover personality traits that do not appear on a resume before or after an interview. By identifying the profile that best corresponds to the open role, this type of **test reduces the risk of recruitment errors**, and the **cost they imply for the company**. If you are looking for a specific personality type, tests before the interview will save time during the candidate screening stage. This then provides information on which you follow up at interview.

In the context of predicting performance, it is worth considering the validity of such instruments. Many researchers and practitioners refer to the **Five Factor Model of Personality** for selection and recruitment (Goldstein, Pulakos, Passmore & Semedo, 2017). Research shows that although the Big Five factors of Conscientiousness and Emotional Stability are moderately predictive of job performance, the effects of most personality factors are almost zero once GMA has been allowed for. The exceptions to this are Conscientiousness, which is a significant part of many integrity measures, and to a slightly lesser extent, Openness to Experience. Personality tests are therefore a valuable tool in the selection process, enabling HR professionals to objectively assess behavioral skills that are of increasing value to the performance of a company.

### Tests of integrity

Integrity tests such as **Giotto** are often used as part of the recruitment process and add the most incremental validity to GMA. A recent **meta-analytic review**, found there to be a significant relationship between integrity tests and deviant work behaviors, indicating an overall corrected mean validity estimate of .43. There are two types of integrity tests that can be identified: those that ask directly about dishonesty ('overt' or 'direct' assessments), and those that are more personality-based ('indirect' assessments).

Direct tests of integrity may ask about attitudes to dishonesty, beliefs about the prevalence of dishonesty and, in some cases, ask respondents directly about past dishonest behavior. In contrast, indirect assessments attempt to identify aspects of a person's character that may underlie dishonest behaviors, whereas personality-based assessments have the advantage of being less transparent and open to deliberate distortion of responses.

Both tests have been associated with behavioral outcomes in the workplace, but direct measures have been found to have slightly higher validity than indirect measures (Ref: [The Science Behind Predicting Job Performance at Recruitment](#) (talentlens.com)). Where there is value in focusing on integrity as part of a role such as military, police force or aviation for example, such tests included as part of the recruitment process can provide a valuable layer of insight that can inform potential performance and aid in the selection of top candidates.

### Interview

Research supports the benefits of interview, as after tests of GMA they are one of the most effective selection methods. Today's candidates could be offered an interview which is structured or unstructured, phone, video or even an on-demand

or asynchronous video interview – which negates the use of an interviewer. Interestingly, the original research suggests that structured phone-based interviews tend to come out as slightly less valid.

However, according to a recent HR Research Institute survey, HR professionals who rated their organization’s overall talent as above average or top-notch were **15% more likely** to use video-based interviewing systems than their counterparts.

Interviews should however be combined with other methods of recruitment selection to be most successful. Research has suggested that structured and unstructured interviews add 18 and 13 per cent respectively to the predictive validity of GMA when combined. Interviews provide the most value in their ability to build rapport, providing both the interviewer and candidate with the opportunity to gain insight into values, motivations, and brand, which may help to predict future success and team fit. (Ref: [The Science Behind Predicting Job Performance at Recruitment \(talentlens.com\)](#)).

### Skills-based hiring

Adopting the approach of skills-based hiring is seen as an effective way to predict job performance. Hiring for skills is **five times** more predictive of job performance than hiring for education and more than two times more predictive than hiring for work experience.

An increasing number of organizations are now moving away from focusing on degrees and qualifications and instead looking at the skills required for a candidate to fulfil their role. This has the advantage of building a more diverse workforce as candidates who have formally been overlooked are progressed further through the hiring process. A more engaged and motivated team whose skills match the role can be developed further, which

can help drive employee retention as skills-based pathways can then be identified to help address the skills gap.



## The role of technology in recruitment selection methods

Technology allows an increasing number of measures to be administered to candidates remotely, including tests of GMA, personality assessments, work samples and even interviews.

Some of the most valid assessment methods can therefore be used without having any direct contact with candidates. This is where the use of AI (Artificial Intelligence) technology such as ChatGPT and BARD can benefit the recruitment process, using prompts regarding the job position, company culture and criteria, such tools can provide interview questions to help the selection process. Additionally, via objective algorithms, AI can help to reduce cognitive bias in the selection process.

Predicting the future performance of candidates

is also streamlined and made more efficient via the integration of talent assessment platforms such as Pearson TalentLens. Our assessments can measure cognitive, personality, and language abilities to effectively assess candidate suitability. The results enable you to develop a data-driven profile of your candidates' abilities, personality, and future potential in the role and company - improving the ROI of hiring a new employee.

## What are the advantages of predicting performance?

### Saves time and reduces the cost of hire

Strategic hiring processes can create a more efficient hiring experience for the candidate. PwC's **Future of Recruiting** survey found that 49% of candidates had turned down a job offer because of poor recruiting experience.

A poor experience can affect applicant dropout rates, and future interactions between the company and candidate. Using psychometric assessments and other recruitment tools together can help screen out candidates who are a poor fit to role and advance those who are more likely to perform well. With the cost of a 'bad hire' 3 times the average salary, organizations cannot afford to make a mistake which will be both costly and inefficient.

### Improves overall team performance and morale

Research indicates that predicting performance and making a 'good hire' has a direct impact on employee retention and reputation. 'For every 100 employees who move their company ratings from fair or poor to excellent, 37 fewer employees would leave in the next year, amounting to \$555,000 in savings.' (**Work Institute 2019 Retention Report**)

### Make data-driven talent decisions

Consistent hiring decisions driven by data can result in positive talent acquisitions. Objective assessments can help to avoid bias and much work has been done to reduce or eliminate bias within psychometric testing. Using tools such as Pearson TalentLens' Role Assessments it is possible to obtain an objective fit-to-role rating that is instantly compared to all other applicants.

### Improve company brand and candidate experience

Today the recruitment process starts before a vacancy is advertised. With the amount of data available via social media and the internet, potential candidates can research the organization and decide if their brand and values align with their own. Selecting the most suitable recruitment tools, the selection process can engage applicants and improve their experience; which could in turn lead to reengagement in the future.

## Limitations to consider

Designing a hiring strategy takes time and research. Each process must be tailored to the organization's needs and the roles' requirements. Angus McDonald, Chartered Psychologist outlined the following areas:

- 01 What does the job analysis tell us is needed for successful performance?
- 02 How do we assess the essential and desirable characteristics for the role in the most valid ways?
- 03 How are we going to structure the recruitment process and use information gathered to successively filter candidates?
- 04 How and when do we want to engage candidates with the organization through the recruitment process?



By addressing these questions, HR professionals can consider which selection methods best meet their needs. Factors such as group bias and diversity all need to be accounted for. In fact, 33% of organizations are recruiting a more diverse workforce compared with the previous year.

Attention also needs to be paid to the limitations of selection methods themselves, interviews for example, can only provide so much information and are often rehearsed. Shaping your recruitment selection process and using technology to drive insights and opportunity can help to predict outcomes and successful placements.

## You've predicted performance – what next?

### Calculating your Return on Investment (ROI)

Hiring new employees is costly, especially if a mistake is made and the process must be restarted. Keeping track of your ROI is one way to assess how your hiring strategy is performing and whether your selection methods are correct for the role. HR professionals can review areas such as:

- » Cost to hire
- » Time to hire
- » Employee retention rate
- » Time for onboarding
- » Time to productivity.

Reviewing these statistics regularly can inform your future recruitment processes and help to predict employee performance more accurately.

### Developing performance

Performance within a role is something that can be shaped over time. Spotting the potential of a

candidate to succeed is one of the advantages of using psychometric insights as it can highlight aptitude for learning and training. Key steps to help shape the team dynamic and improve performance levels include:



### 1. Identify skills gaps / potential

The extent of this exercise is naturally dependent on the size of your team. Look at their existing capabilities, skills gaps but equally importantly, areas in which team members wish to develop.



### 2. Build meaningful relationships

The most important management skill remains communication. Individual's values and learning styles will dictate how and to what extent this occurs but if you are to be successful, you need to be in it together. In [PwC's 2023 Trust Survey](#) of more than 2,000 employees, 53% said it is very important that their purpose and values be aligned with their employers'.



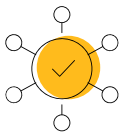
### 3. Identify and promote talent

Encourage team members development. If they are interested in learning a new skill that could be of benefit to the business, try to help them receive some exposure. 76% of respondents belonging to gen Z believed learning is key to success (Statista, 2021), encouraging investment in skills can not only improve performance but drive talent retention.



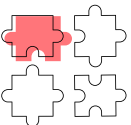
#### 4. Play to people's strengths

It is important to have a clear view of the individual strengths of your team members. This should not be bound by qualifications or job title - what they do and how efficiently this is carried out will make or break the team.



#### 5. Delegate

As leader, it is your role to place expectations and make sure the right outcomes are achieved. Team members should take responsibility to ensure that they contribute accordingly. Critical thinking skills have never been in so much demand, developing this skill in your existing team as well as recruiting staff with this ability is key.



#### 6. Take collective responsibility

It is vital that once your team has embarked on a project everyone is on the same page. Once a decision has been reached, the policy must be one of unity.



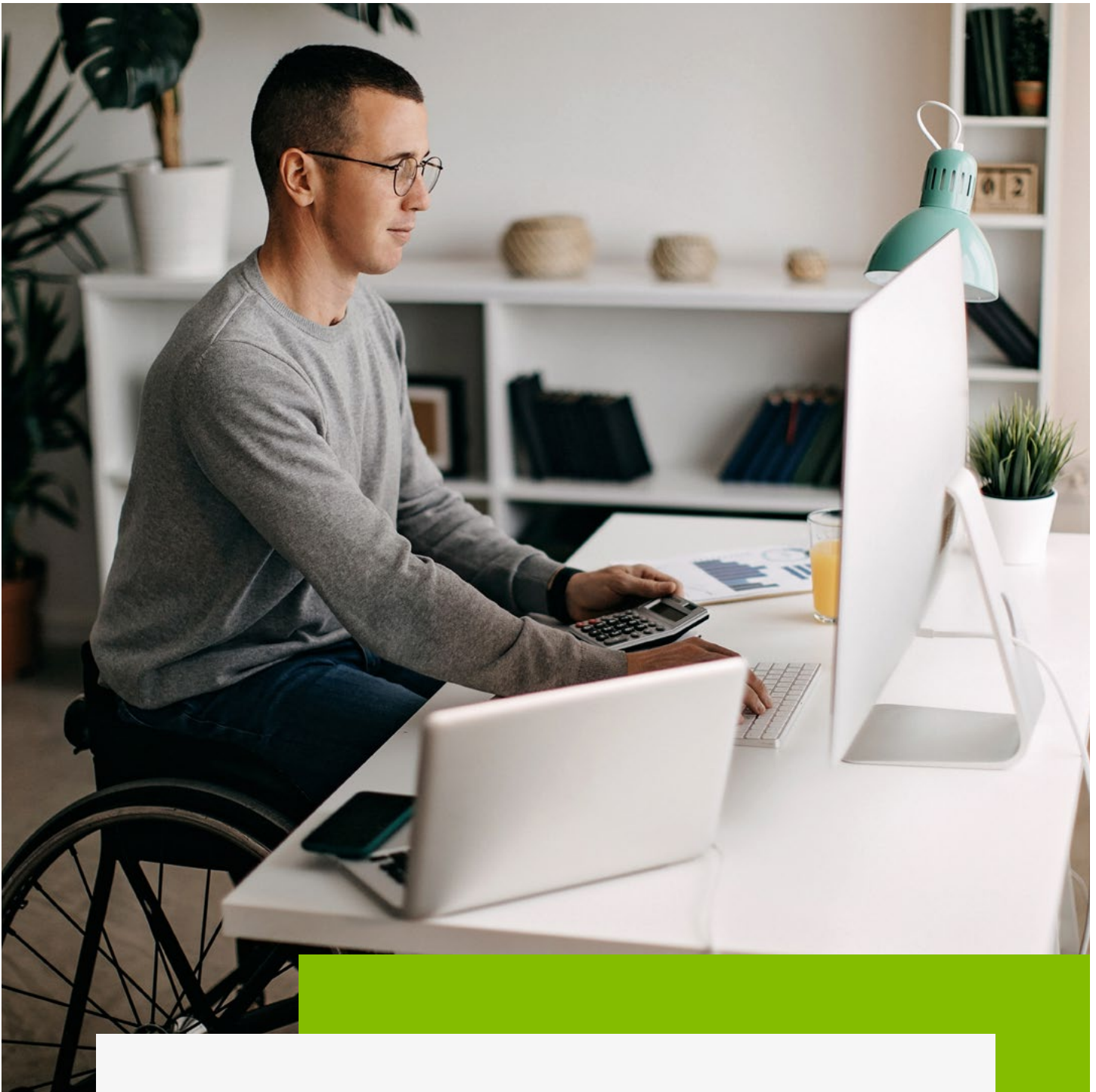
#### 7. Be positive

By remaining fair and consistent, team members are more likely to trust you and deliver to the best of their ability.

## Conclusion – Next Steps

Predicting performance in recruitment is a science where the cost of making a bad hire is an expensive mistake. Using the following areas, HR professionals can help to reduce the risk involved in hiring new employees and empower their teams for the future.

- » Carry out job analysis and get to know the skills and qualities that will best drive performance
- » Design a hiring strategy that meets your needs now and can be evolved in the future
- » Consider a range of recruitment methods, which ones will add value to your decisions, and which can be left out
- » Consider the limitations of selection methods, choose objective and reliable assessments that can help you compare and advance applicants
- » Embrace technology and the use of AI to shape interview questions, job descriptions and automate processes so that you can free time to focus on your talent process
- » Invest in development – performance is not a static concept but can be shaped and developed. Take time to review individuals' goals and career aspirations, it may save time and investment for the future



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## About TalentLens

Pearson TalentLens is a core component within the Workforce Skills division of Pearson plc, the world's lifelong learning company and global market leader in assessments. Workforce Skills is comprised of TalentLens - Pearson's established and successful workplace psychometrics team, plus two exciting new acquisitions, Faethm AI - the world's first data backed and truly end to end future of work company and Credly, the global leader in digital credentials. Supported by over 70 years of research, our psychometric tests, such as the Watson Glaser test, are used by hundreds of companies around the world for their employee recruitment and development projects. As experts from the business world, our primary objective is to provide you with ongoing assistance to review your practices, understand and define your needs, and support you in choosing and using our assessment solutions