

The Science Behind
Predictive
Hiring
for Fit



The Koru7™ Impact Skills

A whitepaper by

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About the Authors



Josh Jarrett

Josh is a Co-founder and Chief Product Officer of Koru. Prior to Koru, Josh was Deputy Director of Postsecondary Success at the Bill & Melinda Gates Foundation.

Earlier in his career, Josh served as a consultant at McKinsey & Company, product manager at Enkata Technologies, and business planning consultant for the National Park Service.

He is a frequent author, presenter, and advisor to education technology startups, college presidents, and senior White House and Education Department policy leaders.

Josh is a graduate of Dartmouth College, and he holds an MBA from the Harvard Business School.



Sarah Croft

Sarah Croft is the Senior Director of Assessment and Instructional Design at Koru.

She researches and builds data-driven assessments, virtual modules, and in-person sessions to help recruiters hire qualified, diverse candidates without bias.

Prior to Koru, Sarah was the Director of Instructional Design at UniversityNow, a higher education social venture. She also spent time at Kaplan Higher Education and Kaplan Tutoring.

Sarah is an alumna of Williams College and Harvard's Graduate School of Education.

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WHAT YOU'LL GET OUT OF THIS WHITEPAPER:

We show how the Koru7™ Impact Skills are better screening criteria for hiring and more predictive of career success.

Combining these measures with data analytics and best practice hiring techniques can decrease time-to-hire and increase the number of successful hires for companies.



FACT:

Top employers receive 100's of resumes, yet many complain they can't find qualified candidates.

And when they do make a hire, 20-30% of the time they end up calling it a "mistake."¹

How is this possible?

Could it be that all those applicants are underqualified? Or could it be that the traditional signals we've used for years to search through stacks of resumes — school attended, GPA, name brand of last employer, etc. — are actually the wrong filtering criteria?

At Koru, we set out to research this problem by engaging with talent executives, hiring managers, recruiters, researchers, and learning specialists to help shed new light on solving hiring challenges. This research led to the development of the Koru7™ Impact Skills. Our pre-hire assessment measures these skills — ones that our research told us employers want and that can predict success on the job.



G.P.A.s are worthless as a criteria for hiring, and test scores are worthless . . . We found they don't predict anything.²

Laszlo Bock, the SVP of People Operations at Google, describing an internal study of resume signals

¹ Based on interviews with Koru partner employers and other high-growth companies, with a particular emphasis on early-career hiring.

² <https://www.nytimes.com/2014/02/23/opinion/sunday/friedman-how-to-get-a-job-at-google.html>

Let's introduce you to the

Koru7™ Impact Skills

Here's
what each
skill means:

Grit



Tenacious and resilient in fast-paced, ambiguous environments

Curiosity



Creative, inquisitive, agile, and open to change

Impact



Motivated to achieve, seeks to solve problems and drive business value

Rigor



Analytical, data-driven, and organized

Teamwork



Collaborative, works effectively with diverse teams

Ownership



Dependable and takes initiative in service of others

Presence



Professional; communicates effectively and authentically across business

Evaluating “Soft Skills” vs. Personality

LATE 19TH CENTURY

Employment pre-screening began over 100 years ago using intelligence and cognitive tests

EARLY 1990's

Personality-focused tests like the Myers-Briggs and “The Big 5” became the focus for pre-screening potential employees

2008 TO PRESENT

Research shows that adding non-cognitive characteristics, or “soft-skills,” to candidate skill-set review shows better predictive power for employers

What makes one person more likely to excel in a job over others? For over a century, researchers and business leaders have been trying to answer that question.

There have been three major phases of development in pre-hire screening.

- 1** The initial phase started over 100 years ago and featured intelligence and cognitive tests. Research showed that these tests were often predictive with a correlation coefficient between intelligence and job performance as high as 0.55 — a moderate relationship.³ However, numerous researchers have noted that cognitive tests are prone to racial and gender bias and often deliver a poor candidate experience.
- 2** The next phase started in the early 1990s and focused on personality (e.g., Myers-Briggs, “The Big 5”). While helpful for individuals and teams looking to improve their working relationships, these broad personality traits show only a mild correlation (.04 to .022) with job performance.⁴
- 3** Research in the last 10 years has focused on non-cognitive characteristics (“soft-skills, e.g., grit, emotional intelligence). Assessments around these soft skills are proving to be on par with intelligence tests for predictive power without the adverse impact or poor candidate experience, with correlations between .40 to .60.⁵ Given this emerging research, leading employers are seeking to source and hire based on skill sets (a function of intelligence) and behaviors (a function of soft skill competencies), with decreasing emphasis on personality.

³ In this case, statisticians would interpret these correlation coefficients as 0.30 = weak relationship, 0.50 = moderate relationship, and 0.70 = strong relationship.

⁴ Barrick, M. R., & Mount, M. K. (1991). The big five personality dimensions and job performance: A meta-analysis. *Personnel Psychology*, 44, 1-26.

⁵ Evidence-Based Decision-Making: EREZ, A., & GRANT, A. M. (2014). Separating Data From Intuition: Bringing Evidence Into the Management Classroom. *Academy Of Management Learning & Education*, 13(1), 104-119.



Synthesizing Employer Needs and the Latest Research

Companies with a high volume of applicants are constantly seeking ways to find solutions to their hiring challenges:

- ✓ Finding best fit candidates
- ✓ Sifting through resumes with little work experience
- ✓ Aligning candidates to rapidly changing job requirements
- ✓ Increasing efficiency

Popular signals for talent screening such as college reputation, GPA, or prestigious past employers are no longer effective. They are limiting, have minimal impact on performance, and can potentially lead to a less diverse workforce. Hiring for potential, therefore, can be more helpful than hiring for past experience.

Hiring For Potential

The Koru7 Impact Skills (and the accompanying work behaviors test designed to measure them) endeavor to help employees hire for potential. While some assessments of soft skills already exist to support recruitment and hiring decisions, none of these assessments focus specifically on the unique competency set and outcome measures needed by individual organizations. What works at one big company is not going to automatically work for another — despite similar job titles or industries.

Hiring for potential, therefore, can be more helpful than hiring for past experience and pedigree.

Kristen Hamilton
CEO, Koru

How We Arrived at the Koru7 Impact Skills

We started our research by talking to recruiters and hiring managers, interviewing over a hundred individuals for key signals.

What they were looking for:

“people who go beyond their assigned tasks”

“individuals who set and meet big goals”

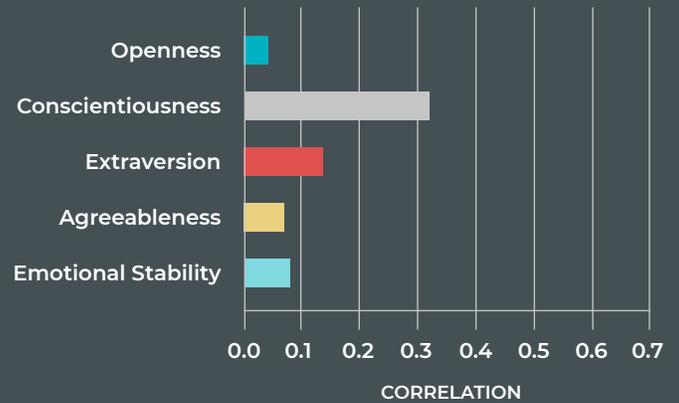
“people who care about their co-workers.”

A shortlist of behaviors and mindsets emerged, and we dove into the research to see which ones overlapped with job performance.

We then reviewed more than 85 existing organizational psychology studies, social psychology studies, and learning science research reports that tested indicators associated with individual work performance (IWP), retention, and life outcomes. Our review examined the strength of the indicator’s relationship with work performance and retention, and captured how these indicators have been defined and measured in existing organizational research and education. Evidence tied to innovation and complex knowledge work was of particular interest, especially research positively correlated with employee and organizational performance, work engagement, and retention. Our shortlist indicators from our interviews were cross-referenced and refined to create the Koru7 Impact Skills.

Meta-analyses of research studies on the Koru7 Impact Skills demonstrate the powerful relationship these competencies have with job performance. The figure to the right shows correlations between each competency and job performance, based on separate meta-analyses of each competency. The research base also shows that the Koru7 Impact Skills predict job performance more strongly than the “Big Five” personality dimensions.

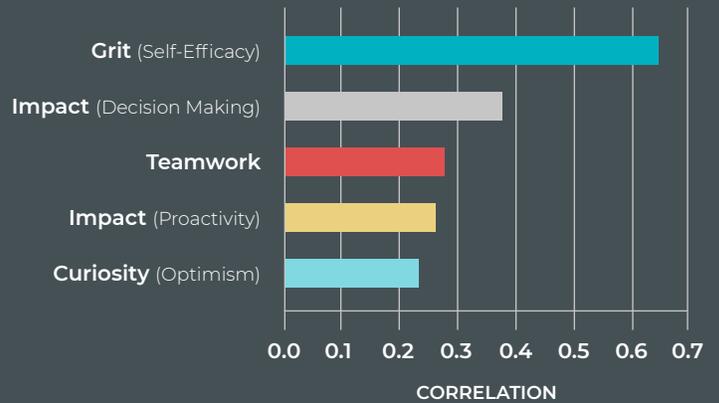
“BIG FIVE” CORRELATION WITH JOB PERFORMANCE



Schmidt & Hunter; Big 5 Personality Factors, Barrick & Mount, 1991



Koru7 CORRELATION WITH JOB PERFORMANCE



Organizational Citizenship: Carpenter, Berry, & HÇouston, 2014; Self-Efficacy: Stajkovic & Luthans, 1998; Decision-Making: Miller & Monge, 1986; Emotional Intelligence & Proactivity: O’Boyle, Humphrey, Pollack, Hawver, & Story, 2011; Optimism: Kaplan, Bradley, Luchman, & Haynes, 2009.

The Koru7: Digging into the Details



We've shared the research behind the Koru7 and correlations to work performance. Now it's time to dive in. Below you'll find how we define each impact skill and examples of how they show up in the workplace.



Grit

Grit is the ability to stick with it when things get hard. When directions are not explicit, hires can make sense of ambiguous situations.

Validated sub-competencies:

Perseverance, Self-Efficacy

EXAMPLES:

I finish projects that I start, even when they are difficult.

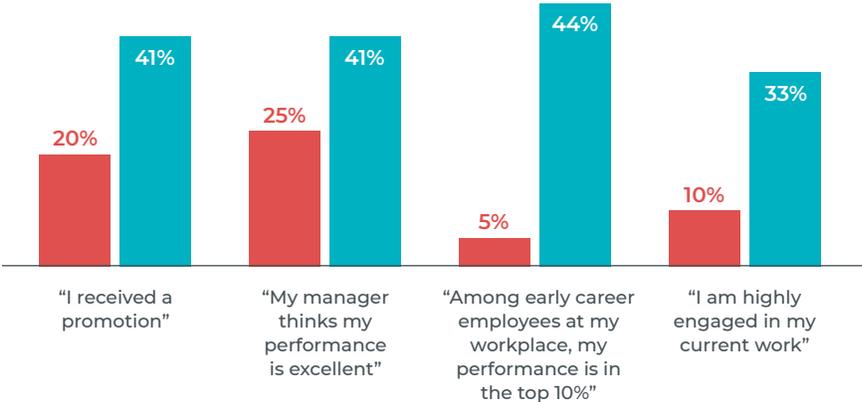
I believe that I can learn new skills, even in areas outside my expertise.



GRIT AS A PREDICTOR OF FIRST JOB OUTCOMES

Koru 2017 research panel of 250 respondents

- Low Grit (1+ stnd dev below mean)
- High Grit (1+ stnd dev above mean)





Ownership

Positive and empathetic hires are a joy to work with and contribute to great teams. Those with ownership are able to work in service of others and help other talent stand out.

Validated sub-competencies:

Organizational citizenship behavior (OCB),
Dependability

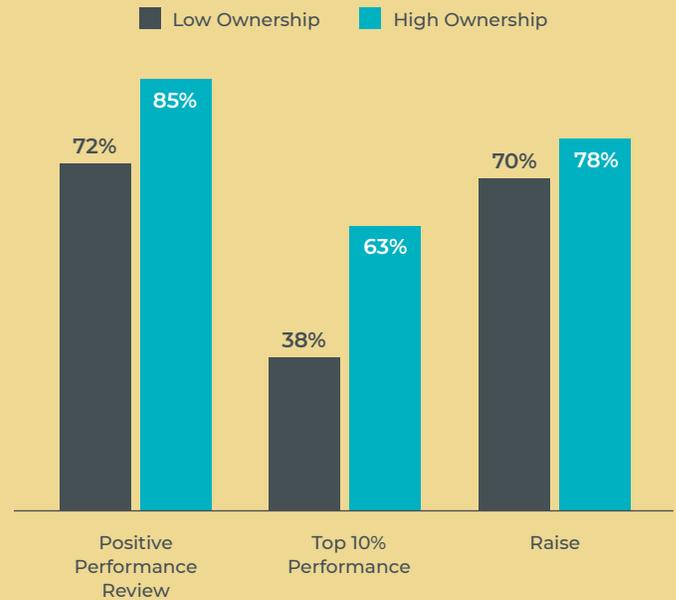
EXAMPLES:

Even if the tasks aren't fun, I'm happy to do them if it helps my team.

I always show up on time or early outside my expertise.

OWNERSHIP ON PERFORMANCE OUTCOMES

Koru 2017 research panel of 250 respondents



Teamwork

There are no dark corners in organizations anymore. Everyone must collaborate to produce work and drive results; having an aptitude for Teamwork is essential. Even software developers work in teams.

Validated sub-competencies:

Emotional Intelligence, Collaboration

EXAMPLES:

I tend to notice how people around me are feeling

I work best when I'm on a team



Curiosity

Beyond simply asking why, Curiosity can also spark innovation. Hires that are curious, not only about their product or role, but also about the roles of others or about competitive products, tend to be better informed, have a better eye for detail, and often ask the right questions.

Validated sub-competencies:

Creativity, Openness to change

EXAMPLES:

I thrive in creative environments

I'm typically untroubled when my tasks change at work outside my expertise



Rigor

Ability to read, interpret, and process data quickly and in a detail-oriented way.

Validated sub-competencies:

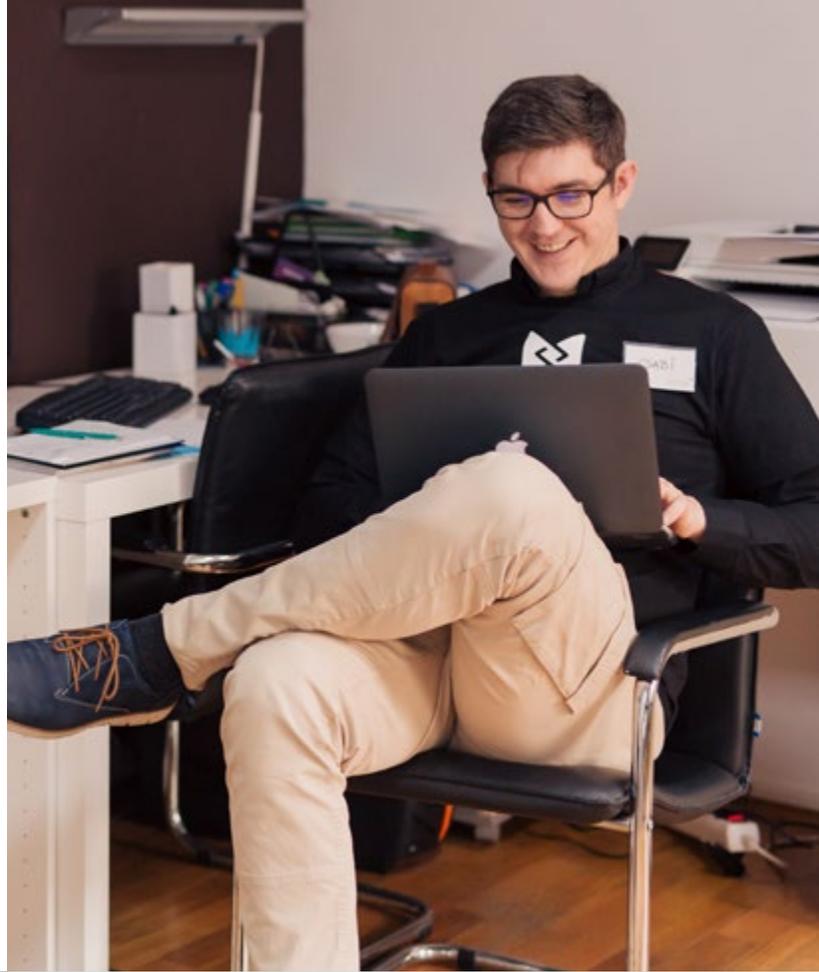
Analytical, Orderliness

EXAMPLES:

I work in an organized, methodical manner

When I make a decision, I trust data more than

I trust my instinct



Presence

Effective communication is important for co-workers and clients alike. From writing effective emails to asking thoughtful questions, workers with presence are great communicators.

Validated sub-competencies:

Communication, Authenticity

EXAMPLES:

I'm comfortable in front of an audience

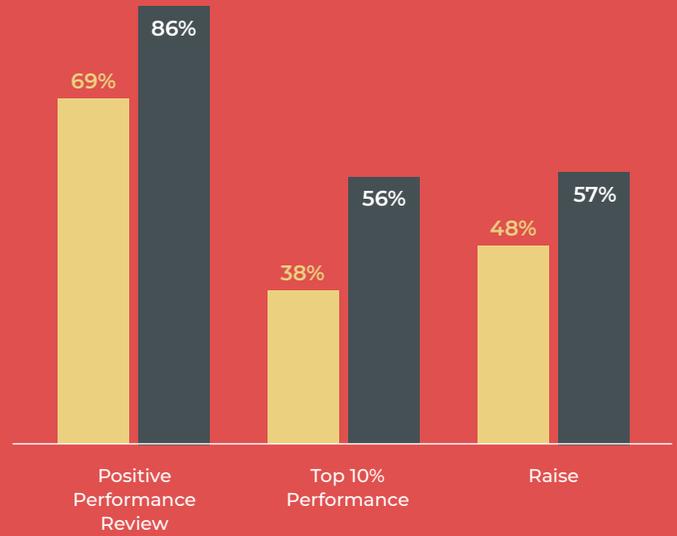
I generally don't have a problem saying what I mean



IMPACT ON PERFORMANCE OUTCOMES

Koru 2017 research panel of 250 respondents

Low Impact High Impact



Impact

Great hires can not only do the duties in their role, but they can also understand their contribution to — and impact on — the larger organization’s objectives.

Validated sub-competencies:

Achievement Orientation, Problem-Solving

EXAMPLES:

I think that any feedback is always useful

I’m motivated by setting and achieving challenging goals



Soft skills assessments are here to stay. In today’s environment there is such a demand for information.

Courtney Storz
Head of Global Campus, Recruiting, Citi
[LinkedIn: Global Recruiting Trends 2018](#)

Measuring the Koru7



As you move away from analyzing traditional hiring signals, you can start to see how the Koru7 could be used to better predict a great hire. Instead of grades, you screen for Grit. Instead of college name, you look for Rigor and Impact.

But how do you actually measure them?

We have developed a proprietary work behaviors and strengths test — The Koru Pre-Interview Assessment — to assess the Koru7 competencies.

The Koru Pre-Interview Assessment collects four main types of structured data.

1. Work-related preference data using forced-choice preference triads, where the candidate selects from three work-related statements, one that is most like them and one that is least like them.
2. Past experiences from work and non-work jobs or organizations in a structured format.
3. Demographic biographical data is used to ensure the assessment is unbiased.
4. Situational judgement tests often used in behavior assessments. These questions present a workplace scenario and ask candidates what they would do.

Upon completion, the candidate's recorded responses give us over 400 individual data points to determine their strengths and predict success on the job.

As information from the assessment may be used in conjunction with interviews and other sources to aid in hiring and development decisions, additional research and testing was done to address the following concerns.

- **Adverse impact / Bias in assessment**
- **Test security**
- **Appropriate levels of difficulty**

Auditing for Bias

Koru's Pre-Interview Assessment has been validated, evaluated for negative disparate effects on racial minorities and women (there are none), and correlated to career success.

Gender and Race

Koru is committed to adhering to best practices under the EEOC's Uniform Guidelines. Koru continuously tests and audits the assessment and each model for adverse impact. While the Koru Pre-Hire Assessment has been continuously tested to ensure it is free of bias, Koru frequently investigates incumbents and/or candidate's performance on the assessment compared to a representative, diverse sample for that role.

In all panels since 2015, the Pre-Hire assessment does not show bias against women or minority respondents. For most competencies and sub-competencies, there is usually no adverse impact recorded. If impact is observed, it is in favor of women or minorities.



Correlations to Career Success

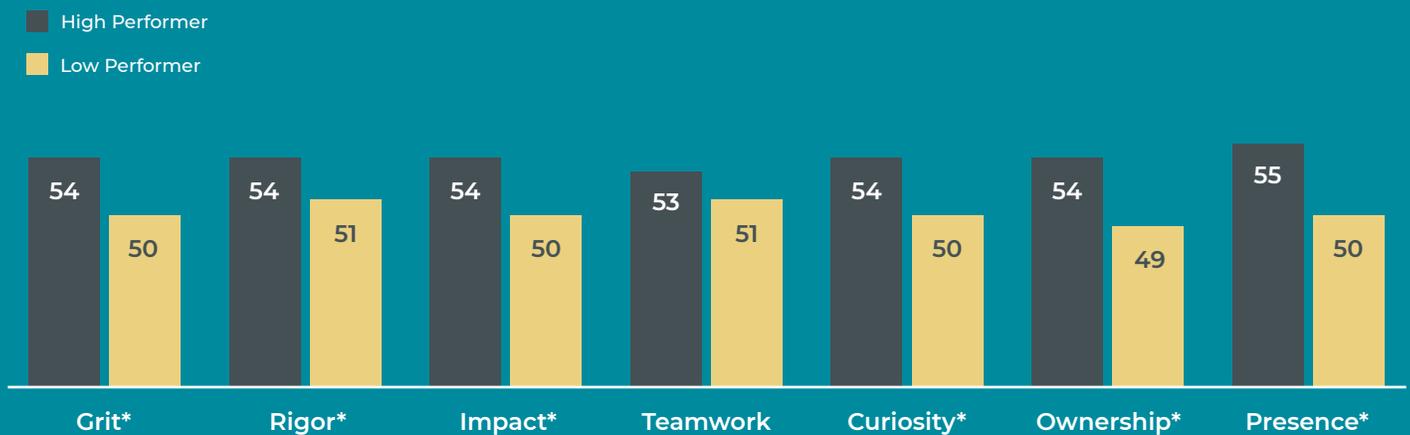
We've completed multiple studies along the development process of the assessment to see strong correlations for the Koru7 Impact Skills to job performance. In a study involving college graduates ages 22–27, we found that their early career successes such as promotions, engagement at work, and top performance were positively correlated to sub-competencies under Grit, Ownership, and Teamwork.

In another study involving a national normed sample of 382 females and 373 males, high performers scored higher than low performers on all seven competencies. In addition, six out of seven scores were statistically significant.

High Performers vs. Low Performers in a National Panel (n=757)

AVERAGE IMPACT SCORE BY PERFORMANCE

**Indicates statistically significant*



Real-World Results

The Koru7 Impact Skills and Pre-Interview Assessment work for the real world, not just in the research lab. We call it “predictive hiring.” Koru’s software identifies the drivers of performance in your company, increases high quality hires, and reduces bias.

Here’s how it works:

We develop your company’s predictive model.

This is a data-informed picture of the factors that define quality of hire for your jobs at your company.

Every candidate completes an online pre-interview. Candidates take a simple and fun 20-minute assessment and receive automated, customized feedback.

Identify top prospects with the candidate fit score. Each candidate receives a fit score and Koru7™ profile, empowering your team to make faster, data-driven hiring decisions.

Koru customers have seen 30-60% increases in high performing employees using predictive hiring, with associated ROI in the millions per year.

See it in action — schedule your personalized, predictive hiring software demo today.

www.joinkoru.com



KORU Predictive
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