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# The Science Behind Predictive Hiring for Fit

## KORU™ IMPACT SKILLS

Josh Jarrett, Chief Product Officer & Co-founder  
Sarah Croft, Director of Instructional Design

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**TOP EMPLOYERS RECEIVE 250 JOB APPLICATIONS FOR EVERY OPENING<sup>1</sup>, YET 53% COMPLAIN THAT THEY CANNOT FIND QUALIFIED APPLICANTS FOR ENTRY-LEVEL ROLES.<sup>2</sup> EVEN WHEN A HIRE IS MADE, 20-30% OF THE TIME IT IS CONSIDERED A MISTAKE.<sup>3</sup>**



### **HOW IS THIS POSSIBLE?**

Could it be that all those applicants are not qualified? Or could it be that we have been looking at the wrong signals to search through the stacks of resumes?

At Koru, we set out to research this problem and use analytics to shed new light on potential solutions. In this paper, we show how the Koru7™ Job Readiness Competencies are better screening criteria for hiring and more predictive of career success. Combining these measure with data analytics and best practice hiring techniques is showing early evidence of decreasing time to hire and increasing the number of successful hires for companies.

**LESSON**  
**01****SCREENING FOR “SMARTS” BASED ON GPA, MAJOR, AND COLLEGE IS BEING AUGMENTED IF NOT REPLACED BY SCREENING FOR “NON-COGNITIVE” COMPETENCIES.**

There have been three major phases of development in pre-hire screening. The initial phase started over 100 years ago and featured intelligence/cognitive tests. These have been shown to be somewhat predictive in research with a correlation coefficient between intelligence and job performance of 0.55<sup>4</sup> (statisticians typically interpret correlation coefficients as 0.30 = weak relationship, 0.50 = moderate relationship, and 0.70 = strong relationship). However, numerous employers have called this research into question, most recently Laszlo Bock, the SVP of People Operations at Google, who said: “G.P.A.’s are worthless as a criteria for hiring, and test scores are worthless.”<sup>5</sup>

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, they are only mildly correlated with job performance (correlation coefficients between “The Big 5” personality traits and job performance range from 0.04 to 0.22).<sup>6</sup>

The most recent phase of the last 5-10 years has focused on so-called non-cognitive characteristics (e.g., grit, emotional intelligence) and is proving to be on par with intelligence tests for predictive power (correlation coefficients between non-cognitive competencies and job performance range from 0.40 to 0.60).<sup>7</sup>

Given this emerging research, leading employers are seeking to source and hire based on skillsets (a function of intelligence) and behaviors (a function of non-cognitive competencies), with decreasing emphasis on personality.



## LESSON 02

### THE KORU7 JOB READINESS COMPETENCIES SYNTHESIZE EMPLOYERS' NEEDS AND THE LATEST RESEARCH TO COMBINE COGNITIVE AND NON-COGNITIVE MEASURES.

The research told us that there had to be a better way to hire than using traditional measures such as GPA, major, and college to screen stacks of resumes and then conducting a series of unstructured interviews. This problem is most acute for entry-level talent with little work experience. With early career hires essentially being a gamble, it is no wonder that companies look for early career talent with at least 1-3 years of experience. Experience has remained the best indicator for companies to trust whether someone is the right fit for the role, until now.

We set out to find the better solution. First, we worked with innovative, high-growth employers to identify consistent hiring criteria, and reverse engineered the characteristics of top performers. Second, we worked with two domain expert PhDs (Dr. Laura Hamill, Chief People Officer

at Limeade and former Director of People Research at Microsoft and Dr. Maria Langworthy, Senior Strategic Data Officer at the Bill & Melinda Gates Foundation) to identify 16 sub-competencies that predict job performance and are validated by industrial-organizational psychology and education research to predict job performance. Finally, we have trained and placed hundreds of recent college grads through Koru's immersive business program - and tracked their performance over time in the workplace. Through the interviews of hundreds of employers, 85 research studies, and 2 years of business programs within the walls of and high-growth employers, the right hiring signals emerged. We call these signals the Koru7™ Job Readiness Competencies. These competencies span skillsets and behaviors and are:

## LESSON 03

### THERE IS NO MAGIC SINGLE TEST FOR THE KORU7, BUT THEY CAN BE ASSESSED USING BEST PRACTICE HIRING TECHNIQUES AND DATA ANALYSIS.

For high-growth, innovative companies, these competencies make sense. Instead of grades, we care about Grit. Instead of college name, we care about Rigor and Impact. But how do we actually measure them? The answer lies in hiring techniques that have been repeatedly shown to dramatically increase ability to predict job performance.

We have developed a proprietary work behaviors test to assess the Koru7™ competencies: Grit, Ownership, and Teamwork. We use structured mining of past experiences to extract predictive biodata across all of the Koru7. We also look at real work samples such as video interviews, pithy writing samples, and Excel analyses, which are particularly helpful on assessing Polish, Rigor, and Impact.<sup>8</sup>



### GRIT

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: Grit; Growth Mindset; Self-Efficacy



### OWNERSHIP

Positive and empathetic hires can be a joy to work with, contributing to great teams. Being able to not only do work in service of others, but also take initiative when things are not clear help early career talent stand out.

Validated sub-competencies: Proactivity; Citizenship; Integrity; Conscientiousness



### 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 competitive products, tend to be better informed, have better eye for detail and often ask the right questions.

Validated sub-competencies: Creativity; Empathy



### POLISH

No matter your role, being an effective communicator is important for co-workers and clients like. From writing effective emails to asking thoughtful questions, workers with Polish are great collaborators.

Validated sub-competencies: Communication



### TEAMWORK

There are no dark corners in organizations anymore. Everyone must collaborate to produce work and drive results. Even software developers work in teams.

Validated sub-competencies: Emotional Intelligence; Collaboration; Positivity



### RIGOR

Innovative companies care about data in all areas, so we screen for the ability to read, interpret and process data quickly and in a detail-oriented way.

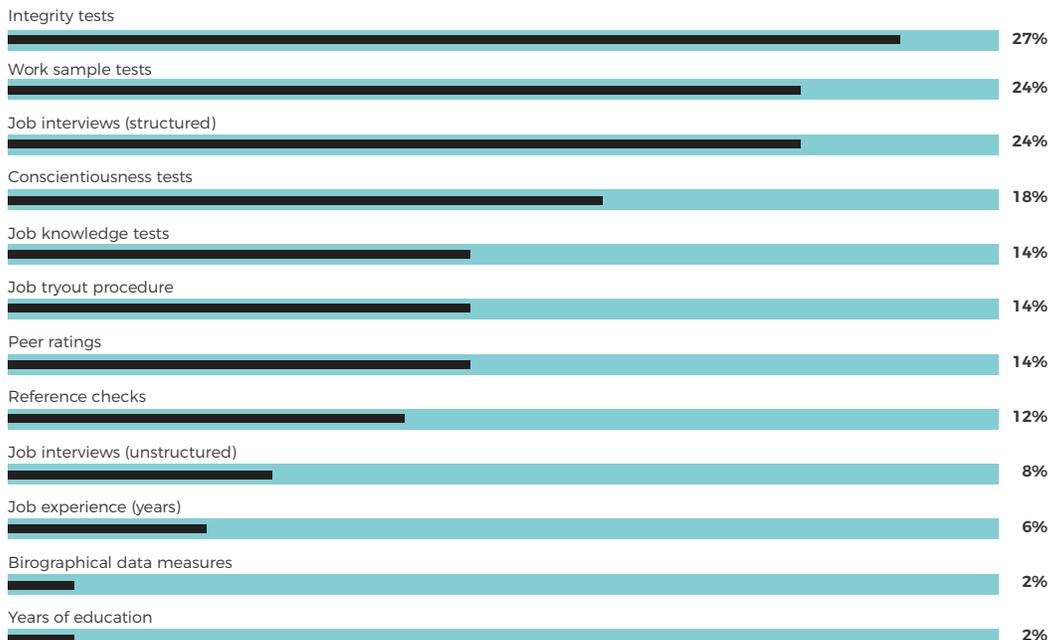
Validated sub-competencies: Evidence-Based Decision-Making



### IMPACT

Great early hires not only can do the duties in their role, but they also understand their contribution and impact to the larger organization's objectives. Hires with Impact are efficient, and think about the company's success instead of just their own.

Validated sub-competencies: Real-World Problem-Solving; Innovation



### DATA ANALYSIS

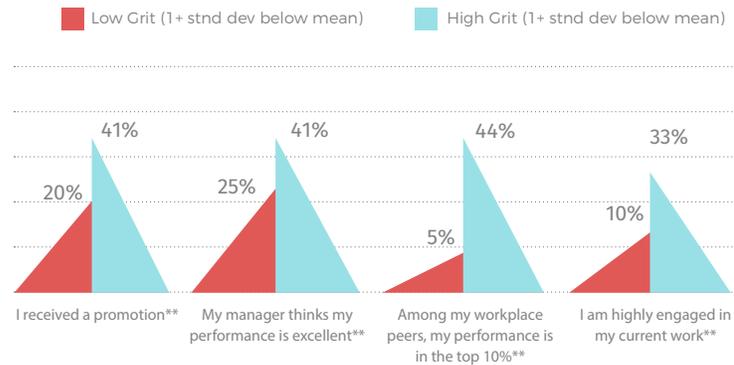
Percentage increase in predicting job performance over general mental ability.

## LESSON 04

### EARLY CAREER HIRES WHO SCORE WELL ON THE KORU7 HAVE DRAMATICALLY HIGHER WORKPLACE SUCCESS.

Koru's work behaviors test has been validated, evaluated for negative disparate effects on racial minorities and women (there are none), and correlated to early career success. In a study involving college graduates ages 23-27, we found that their early career successes such as receiving a promotion, being engaged at work, and being a top performer, were positively correlated to sub-competencies under Grit, Ownership, and Teamwork. For example:

#### GRIT AS A PREDICTOR OF FIRST JOB OUTCOMES



## LESSON 05

### THE KORU7 WORK FOR THE REAL WORLD, NOT JUST IN THE RESEARCH LAB.

The Koru7 competencies and assessment model worked in the research, but would they work to help real hiring employers make better hiring decisions? We ran a research pilot with Seattle-area employers and active job seekers in Spring 2015. The Koru7 successfully identified both false negatives (high-quality hires who were initially passed over by traditional screening processes) and false positives (candidates who looked good on paper but did not pass phone screens). Identifying these two types of candidates up front has the potential to increase recruiting efficiency and improve the quality fits between job seekers and employers. Koru is building on these early successes by expanding our network of parties interested in measuring and improving job readiness:

**RESEARCHERS:** Our pool of active job seekers is an attractive group for industrial-organizational psychologists and academic researchers alike

**ASSESSMENT PROVIDERS:** Our network of job seekers and employers provides a platform for assessment providers to quickly test their validity and relevance

**COLLEGES AND TRAINING PROGRAMS:** Learning providers are increasingly interested in measuring their students' job readiness to inform how they can better tailor their offerings to best meet their students' needs

**EMPLOYERS:** Innovative employers are deploying sourcing and screening tools that leverage non-cognitive research to improve candidate quality and increase recruiting efficiency.

**STUDENTS:** The underemployment rate for recent grads is greater than 50%.<sup>9</sup> By using our tool, college graduates have a better sense of how job-ready they are and enjoy a smoother application process.

# About the Authors

## JOSH JARRETT

Chief Product Officer &  
Co-Founder



Josh is Co-founder and Chief Learning Officer of Koru, a start-up revolutionizing the college recruiting process through data-driven assessments and learning science. Josh oversees product development and college partnerships for Koru.

Prior to Koru, Josh was Deputy Director of Postsecondary Success at the Bill & Melinda Gates Foundation. Josh led the Next Generation Models portfolio, which increased low-income student success and improved affordability through learning innovations and technologies. Investments areas include interactive courseware and tools, diagnostic assessments, integrated planning and

advising systems, and competency-based learning.

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 start-ups, college presidents, and senior White House and Education Department policy leaders.

Josh is a graduate of Dartmouth College, and he holds a graduate degree in business from the Harvard Business School.

Sarah Croft is the Director of Instructional Design at Koru. She researches and builds data-driven assessments, virtual modules, and in-person sessions to help prepare today's graduates for positions in high-tech innovative companies.

Prior to Koru, Sarah was the Director of Instructional Design at UniversityNow, a social venture whose mission is to ensure that quality higher education is available

to people everywhere. Sarah led a team of designers, editors and media specialists to create hundreds of competency-based courses and assessments for Patten and New Charter University. Sarah also spent five years at Kaplan. At Kaplan Higher Education and Kaplan Tutoring, she developed adaptive products and blended course models that improved student success.

## SARAH CROFT

Director of  
Instructional Design



1 Sullivan, John. (2013, May 20). Why You Can't Get a Job. Recruiting Explained By The Numbers. <http://www.enr.net/2013/05/20/why-you-cant-get-a-job-recruiting-explained-by-the-numbers/> 2 McKinsey & Company. Education to Employment: Designing a System that Works. 2013. <http://mckinseysociety.com/education-to-employment/report/>

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

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 [http://www.nytimes.com/2014/02/23/opinion/sunday/friedman-how-to-get-a-job-at-google.html?\\_r=0](http://www.nytimes.com/2014/02/23/opinion/sunday/friedman-how-to-get-a-job-at-google.html?_r=0)

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

7 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. doi:10.5465/amlc.2013.0098

Optimism: Peterson, C., Park, N., Hall, N., & Seligman, M. P. (2009). Zest and work. *Journal Of Organizational Behavior*, 30(2), 161-172.

Self-Efficacy: SITZMANN, T. & YEO, C. (2013). A Meta-Analytic Investigation of the Within-Person Self-Efficacy Domain: Is Self-Efficacy a Product of Past Performance or a Driver of Future Performance?. *Personnel Psychology*, 66(2), 511-568. doi:10.1111/pspp.12035

Organizational Citizenship: Podsakoff, N. P., Blume, B. D., Whiting, S. W., & Podsakoff, P. M. (2009). Individual- and Organizational-Level Consequences of Organizational Citizenship Behaviors: A Meta-Analysis. *Journal Of Applied Psychology*, 94(1), 122-141.

8 Schmidt, Frank & John Hunter. The Validity and Utility of Selection Methods in Personnel Psychology: Practical and Theoretical Implications of 85 Years of Research Findings. *Psychological Bulletin*, Vol. 124, No. 2, 1998, pp. 262-274.

9 McKinsey & Company. Education to Employment: Designing a System that Works. 2013. <http://mckinseysociety.com/education-to-employment/report/>

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# From Traditional Recruiting to Predictive Hiring

## WHERE ARE YOU?

In summary, recruiting is on the verge of a major breakthrough that combines people analytics with rigorous research on the competencies that predict job success: the Koru7™. We are happy to be engaged in this work with leading employers and colleges. For example, employers can score for competencies like grit in their resume screens or incorporate work sample tests to complement unstructured and/or structured interviews. It is not necessary to implement major new systems and processes to begin to see results.



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**Koru**  
200 First Avenue West  
Suite 240  
Seattle, WA 98119

Email: [info@joinkoru.com](mailto:info@joinkoru.com)  
Website: [www.joinkoru.com](http://www.joinkoru.com)