StandOut.

Strengths Assessment Technical Summary:
Development and Validation

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May, 2011

Introduction

This Technical Summary provides answers to questions you may have about the stability, reliability, and validity of StandOut. We explain how the research approach and instrument design support our mission to help each person excel through his/her comparative advantage.

The Research Approach

Between 2000 and 2010, we developed and administered a talent inventory to 435,564 participants in order to uncover the most reliable talents found to predict multi-industry job performance for six common job families—Leader, Manager, Professional, Sales, Service and Support. During this period, more than two hundred focus groups and discovery interviews were administered as part of seventy-three validation studies designed to capture the profiles of top performers for each job family.

For the talents to be a valid predictor of success, we first had to ensure they were, statistically speaking, 'reliable.' Coefficient alpha is the most common statistical technique applied to assess the reliability of a unified construct measured by multiple items. Each talent was examined for internal consistency and analyzed using Cronbach's Alpha. Across the samples, alphas for the eighteen talents ranged from .64 to .93, demonstrating acceptably high internal consistency to the industry standard of alpha = .6. While the configuration and weighting of predictive talents varies by job family, Table 1 provides a summary of data from a large study of the eighteen talents most commonly found to have both high reliability and predictive validity across studies.

These eighteen talents are fundamental building blocks at the heart of the strength Roles measured by StandOut.

Table 1: Reliability of Predictive Talents by Strength Role

Talent	Number of Items	Cronbach's Alpha Reliability Coefficient (n=94756)	Strength Role
Problem Solver	6	.76	ADVISOR
Common Sense	8	.69	ADVISOR
Initiator	6	.64	CONNECTOR
Team	9	.76	CONNECTOR
Adaptability	7	.76	CREATOR
Analytical	5	.76	CREATOR
Responsibility	8	.68	EQUALIZER
Structure	8	.79	EQUALIZER
Persistence	5	.69	INFLUENCER
Courage	7	.70	INFLUENCER
Achiever	5	.75	PIONEER
Belief	7	.68	PIONEER
Relator	8	.74	PROVIDER
Service	7	.84	PROVIDER
Positivity	5	.83	STIMULATOR
Intensity	5	.70	STIMULATOR
Developer	9	.76	TEACHER
Individualization	5	.77	TEACHER

$*p < .05, **p < .01$

To supplement patterns that emerged from this quantitative data set, we analyzed qualitative data from interviews with top performers and identified powerful talent combinations credited by the best as their secret to success.

The StandOut Instrument

StandOut is an online assessment of talent —innate patterns of thought, feeling and behavior— measuring nine powerful combinations called "Strength Roles." To measure which strength Roles are most dominant, we selected a test design and an item-type called 'situational judgment.' In the typical situational judgment test (SJT), you are provided with a variety of situations gleaned from critical incidents on the job. In recent years SJT's have increased in their popularity because, of all item-types—from Lickert, to Binary, to Open-ended—they have shown most power as a predictor of subsequent job performance. Indeed, research by McDaniel, Morgeson, Finnegan, Campion and Braverman (2001) accumulated 102 validity coefficients and estimated the mean validity of SJTs to be .34, which as Weekley and Ployhart showed (2005), puts SJT's on a par with cognitive ability tests. In other research, Weekley and Jones (1999) found an SJT to provide incremental validity over cognitive ability and experience.

For StandOut, we designed situations from impact moments in life where a person's pre-existing skills or technical knowledge would have minimal relevance to response options. We created hundreds of situations and talent-based response options, then trialed them in multiple test environments. Iterations of specific "StandOut" life situations and response options were reviewed to isolate distinct personality differences and subsequently tested in an alpha version of StandOut that was administered to 232,000 participants across jobs and industries globally in 2009-2010. The psychometric properties of the assessment were analyzed to refine StandOut's 146 situation and response combinations.

The Sample

The 232,000 global participants who responded to the alpha version of StandOut had the option to report their demographic information. N = 6018 responded to at least one of the three demographic questions. Below is a summary of the demographic distributions.

Table 2: Gender Statistics

	Frequency	Percentage
Male	2568	50.1
Female	2561	49.9
Total	6018	

Table 3: Age Statistics

Statistics	Age
Minimum	17
Maximum	85
Mean	42
Std. Deviation	11

Table 4: Education Statistics

Education Level	Frequency	Percentage
Less than high school	11	.2
High School graduate	169	2.8
Some College	636	10.6
Associate Degree	227	3.8
Bachelor's Degree	2188	36.4
Master's Degree	1235	20.5
Post Graduate Degree	445	7.4
Other	28	.5

The Scoring

In scoring the response options for StandOut, we measured each of the nine strength Roles 12 times across 34 situations. Thirty-two of the situations offered four response options. Two of the situations had weighted computations with all nine strength Roles measured in each. Not all of the response options presented for each scenario were scored in the overall calculations. The scores by strength Role were coded and converted into a t-score calculation to standardize the distribution. The calculations of the scores for each of the response options involved weighting for degree of difficulty for each scenario and dimension reliability for each strength Role.

Table 5: StandOut Situation and Response Set

StandOut Stability and Reliability

Would you expect your StandOut results to change if you take the assessment more than once? If you are curious, we can take a look at the stability and reliability of the assessment. An initial reliability measure of these scores was completed on a random sample of N = 269 participants from the US workforce using Chi-Square and test-retest analysis of mean Role levels. The sample of participants completed the assessment in October of 2010, and then completed the same assessment again in May of 2011. A statistical analysis called the Chi-Square test of Independence was conducted, with a dichotomous variable labeled "Strength Role Match from Time One to Time Two."

In reviewing the top three strength Roles computed from the analysis, 90 percent of the sample had their leading Role in their top three from time one to time two, and 47 percent of the sample had two matches among their top three from time one to time two. All of the nine strength Roles had significant Chi-Square results, indicating that their presence in the top three roles on the initial administration of the assessment was significantly related ($p < .05$) to their presence in the top three roles during the second administration of the assessment.

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Table 6: Chi-Square Test of Independence Results: N = 269

Theme	Chi-Square	Significance
Advisor	5.039	.025
Connector	6.335	.012
Creator	11.245	.001
Equalizer	29.911	.000
Influencer	9.444	.002
Pioneer	25.460	.000
Provider	6.822	.009
Stimulator	28.906	.000
Teacher	20.530	.000

To scrutinize further the consistency of results from time one to time two, statisticians computed a t-test of change for each of the nine strength Roles. There were not significant differences in scores for any of the nine strength Roles from time one to time two ($p < .05$).

The Validity

The validity of an assessment must be evaluated with its intended purpose. The purpose of StandOut exists through its promise to help you pinpoint and channel your unique gifts.

Built upon the principles of positive psychology, its application focuses your time on your strength Role as the path of least resistance to deliver results. Let's dig a little deeper into what StandOut measures, then take a look at how these strength Roles have been validated with top performing leaders, managers and sales associates.

Content Validity: What the StandOut Strengths Assessment Measures

As we explored the data patterns from half a million talent assessments and listened through thousands of interviews to understand what explains success, it became apparent that the eighteen core predictive talents measured combine into common clusters with dominant peaks of frequency and intensity that best explain how someone will tend to think, feel and behave.
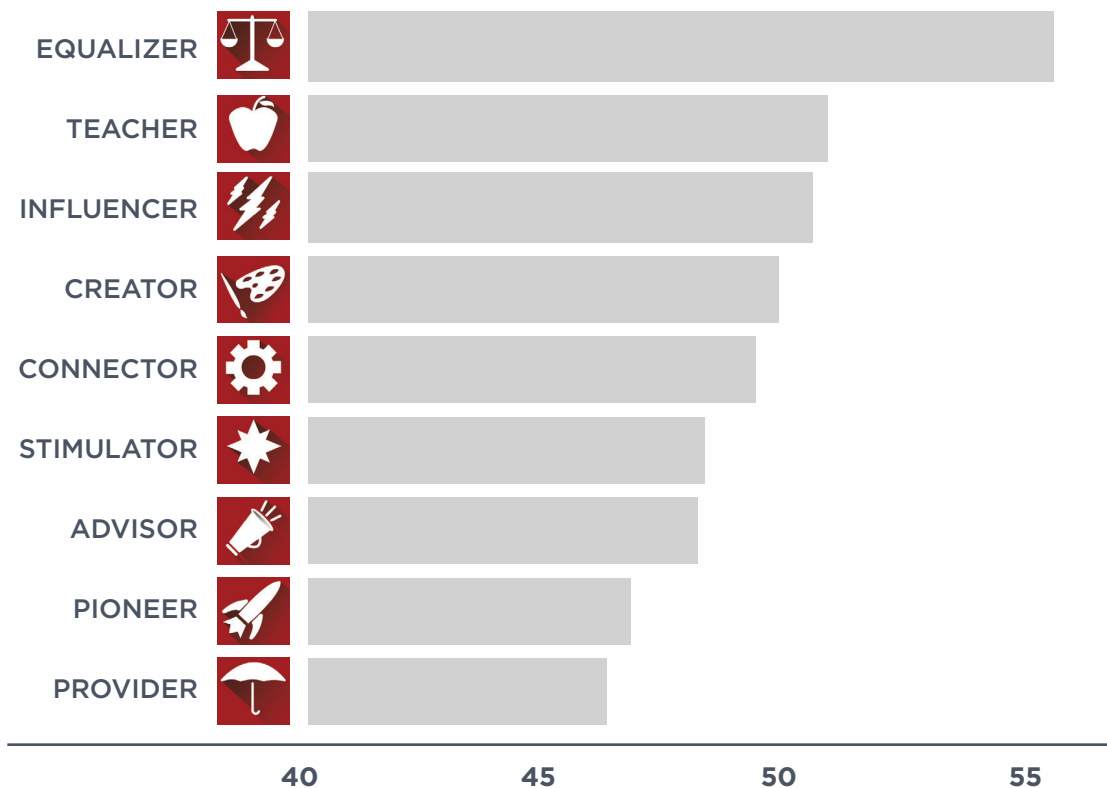
StandOut measures how these talents converge into nine strength Roles, which are powerful, frequently reoccurring patterns that emerged through our research. For example, when you go looking for the answer to a question from my former head of research, you always learn something. While he knows the answer, he cannot just give you the answer. He needs to teach you how to find the answer on your own. He is a learner by nature, who craves knowledge. He starts with where you are at and he develops you to be that much better. At his heart, in the language of StandOut, he is a Teacher. He peaks with intensity across three key talents— curiosity, individualization, and a coaching instinct—which come together to explain the brilliance of a Teacher. In the body of the book, chapter 4 defines the nine StandOut strength Roles.

Face Validity: Strengths Studies with Top Performers

In the study of top performers for a given job, you will find that specific talent clusters emerge to explain success. As part of our research in the validation of StandOut, we sought to understand excellence in practice through the lens of our nine strength Roles. With each sample, we brought prior expectations from our historic experience. In every study, the stories through the data provided rich learning and strong face validity for StandOut.
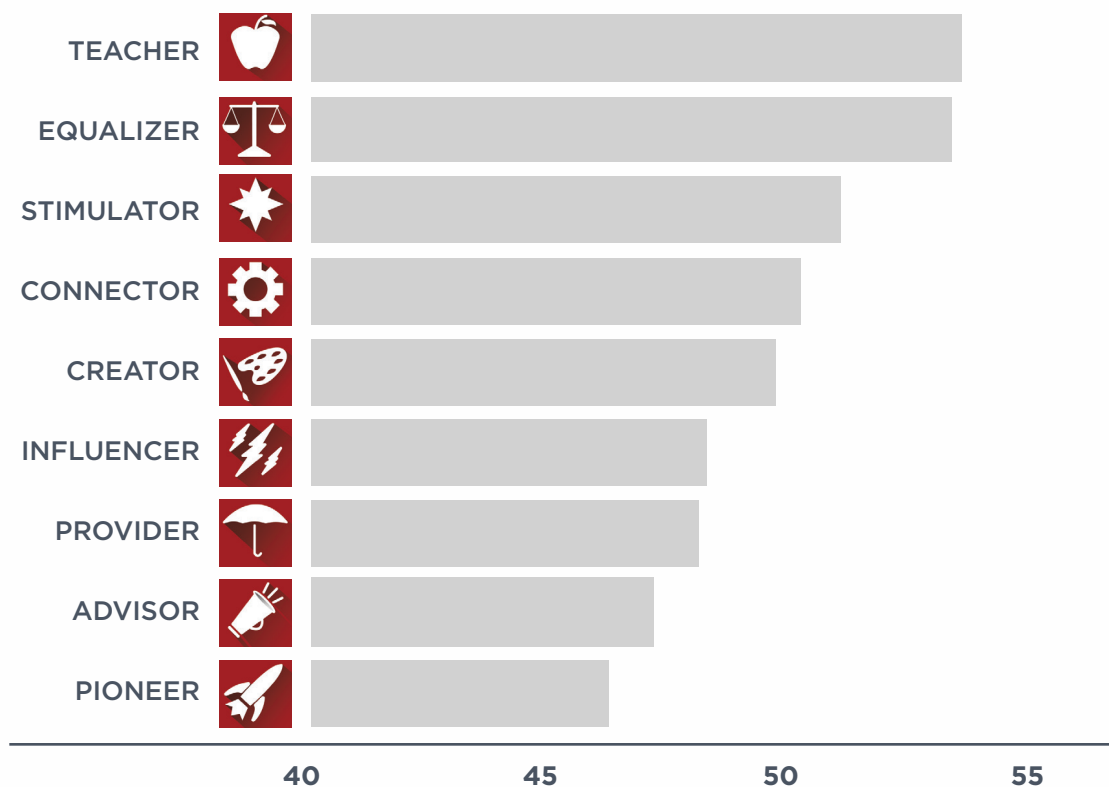
Table 7 provides a summary of composite results from a study of 140 top executives from a national financial institution. The average scores by strength Role are ranked from the highest scoring role to the lowest scoring role. Given the regulated nature of the industry, and the inherent need of Equalizers to create balance and order through doing the right thing, we expected to find Equalizer as a the primary strength Role. And we did.

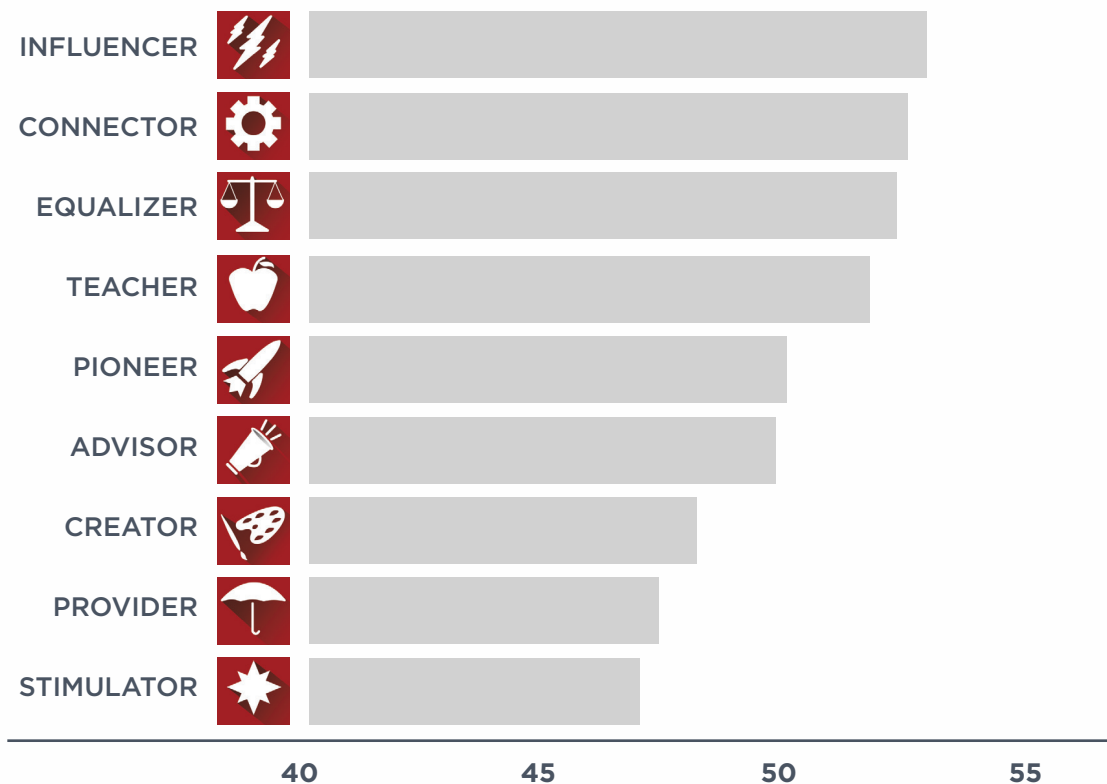*Table 7: Top Executives at National Financial Institution (N = 140):*

Likewise, aggregate data results from the study of 55 top General Managers within a leading international hotel brand revealed three strengths at the top that would be expected given the demands of the job. First and foremost, an abundance of research would support that the best managers teach (Buckingham and Coffman, First, Break All The Rules, Simon & Schuster, 1999,) so it is not surprising that their lead Role is Teacher—they understand the unique strengths of each team member and capitalize on those strengths to turn them into success. To do this, many create a spirited environment, where they honor and celebrate the success of each team member. This is the strengths path of Stimulators, which was ranked at three for the sample. Finally, to run a large hotel, it is critical to create order and structure—you need a clean room ready at the right time. So, it's not surprising that Equalizer is ranked number two.

Table 8: Top General Managers of International Hotel Organization (N = 55):

Forty-five sales organizations participated in a sales study of top talent. Each selected their two highest producers and invited them to participate in StandOut. A sample of N = 82 of the 90 selected as the best completed the assessment. You can probably predict what the aggregate data results revealed. Our anticipated strengths profile was validated with Influencer and Connector at the top and Equalizer a close third. It's not surprising that the persuasion of the Influencer combined with their profound need to create a network—Connector—and make good on their commitments—Equalizer—merge to create the most successful sales representatives.

Table 9: Top Sales Representatives from a National Association (N = 82):

Face validity was also apparent across studies with private school principals, engineers, teachers and humanitarians.

StandOut, by design, fulfills its promise to reveal accurately how your top talents intersect to define your strength Roles. The beauty is that each of us is truly unique. We each offer something of rare and significant value. This value is fully realized only when we take accountability to offer up our most dominant strengths as we serve in work, and in life.

For more information on how to use StandOut in your organization, email standout@tmbc.com.