

Harrison Assessments

Technical Manual

Section II

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2015



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APPENDIX A

Assessment Center Study

Background

This study aims to investigate correspondence between Harrison Assessments traits and Assessment Center dimensions and skills clusters in order to provide evidence of convergent validity.

Procedure

A total of 50 employees from a sugar manufacturing company were selected to serve as the sample of the study. Two were dropped prior to data processing because their consistency scores were below zero, indicating attempts to cheat or second-guess the test. This brought the final sample to 48. All employees were drawn from a pool of candidates for possible promotion to managerial positions. This was originally the primary objective of the Assessment Center, about which all employees were informed. The sample consisted of 24 candidates for Department Head, 12 for Division Manager, 6 for Resident Manager, and 6 for Supervisor. All candidate employees were evaluated through the Assessment Center method in groups of six participants per center.

The following steps were taken for the Assessment Center evaluation:

Based on a job analysis for the said managerial positions conducted by a team of consultantassessors, a list of 13 dimensions making up 5 skills clusters was assembled. The types of exercises for evaluation were chosen according to the list of dimensions. The assigned role group discussion and in-basket exercise were developed especially using source materials from the company. These exercises, in addition to a background interview, were designed to tap corresponding dimensions. Some dimensions were better tapped by a particular exercise. For instance, leadership was best observed in the group discussion. Consequently, not all dimensions were tapped by all exercises.

The employees were grouped into centers with six members each, rated by three assessors who observed two different candidates for each of the 3 exercises. This process took 2 days per center. Afterwards, each assessor wrote a calibration report on the candidates observed and gave a rating per dimension based on behavioral evidence gathered. When all reports were done, assessors then held deliberations and each candidate was assessed based on the reports. Ratings of skills clusters, as well as final overall assessment ratings, were given upon which ranking was based. All ratings were, in effect, reached by consensus. A rating scale of 1 to 5 was used, with the following descriptive anchors:

Poor

1

- 2- Very Inadequate
- 2 Inadequate
- 2+ Needs Major Improvement
- 3- Needs Minor Improvement
- 3 Satisfactory
- 3+ Very Satisfactory
- 4- High
- 4 Very High
- 4+ Almost Outstanding
- 5 Outstanding

Final reports were prepared, incorporating results of psychological tests also taken by the candidates. Individual feedback sessions were then scheduled and conducted. Actual assessment procedures were completed within four years (1996-2000 except 1999).

In 2001, the Harrison Assessments questionnaire was administered to all the Assessment Center participants still working in the company. Using 87 Harrison Assessments traits (all traits except for task preferences, environmental traits, and interests) and all 19 Assessment Center dimensions and skills clusters, a Pearson *r* correlational analysis was conducted. The correlation of Harrison Assessments suitability scores with Assessment Center overall assessment ratings (OAR) was also computed.

Results and Discussion

Of all the computed correlations, 139 were found to be significant (see Table 1). More than half (55%) of 87 Harrison Assessments traits correlated significantly with Assessment Center dimensions and skills clusters. Correlations were at generally moderate levels (see Tables 1-2).

Table 1.	Correlation of Harrison	Assessments	traits v	with	Assessment	Center	dimensions	and	skills
clusters									

Harrison			Assessm	ent Cente	er Dimens	ions and	Skills Clu	sters ^a		
Assessments Traits	MS	PO	MC	OS	ES	AS	PA	J	D	PS
Certain Authoritative Persistent Risking Tempo Frank Diplomatic	335* -392**	-385**	330* 490**	287*		-365*	-425**	-382** -291*		314*
Influencing Assertive Helpful Wants Capable Leader Self-motivated Cause-motivated Self-improvement Warmth/empathy Wants Recognition	-341*	-368*	306*		352* 324* -507** 382*	372**	317*		303* -288* -366* 326*	
Flexible Precise Planning Handles Conflict Enlists Cooperation Enthusiastic Manages Stress Well Organizational Compatibility	-484**	304* -377**	-458**	-304* -302*	-313*	-297*	-379* 338*	-328*	389** 304*	-313*

Harrison			Assessm	nent Cente	er Dimens	ions and	Skills Clu	usters ^a		
Assessments Traits	MS	PO	MC	OS	ES	AS	PA	J	D	PS
Systematic Wants Autonomy Wants Challenge Wants to Lead Effective Enforcing	-289*	324*		353*		289*				.305*
Negotiating Doesn't Need Structure Judgment (strategic) Handles Autonomy		314*							.303*	
Dogmatic						289*				- 407**
Dominating Defensive Evasive		.374**			448*		.302*		.364*	.727
Self-sacrificing Rebellious Autonomy	.321*	.395**				.314*				
Rigidly Meticulous	292 - .520**	397**	580**	- .382**		- .296**	-355*	314*		
Rigidly Organized	- .389**	298**	406**	- .308**		306*				
Permissive Ego Defensive Ego self-critical Forceful Enforcing Pay Minus	.318*				.392* .343* .326*	.293*			.381** .290*	
Motivation				.303*				.334*		

* Correlation is significant at the .05 level (2-tailed).

** Correlation is significant at the .01 level (2-tailed).

Note. Decimal points omitted. Only traits with significant correlations are listed.

^a Assessment Center dimensions: MS = managerial skills; PO = planning & organization; MC = management control; OS = organizational sensitivity; ES = extraorganizational sensitivity; AS = analytical skill; PA = problem analysis; J = judgment; D = decisiveness; PS = personal skills; ST = stress tolerance; E = energy; WS = work standards; IS = interpersonal skills; L = leadership; IS = interpersonal sensitivity; CS = communication skills; OCS = oral communication skills; WCS = written communication skills; OAR = overall assessment rating.

Harrison			Assessme	nt Center D	Dimensions	and Skills	Clusters ^a		
Assessments	ST	Е	WS	IPS	L	IS	CS	OCS	WCS
Traits									
Certain									
Authoritative							.366*	.428**	.318*
Persistent						.420*			
Risking			.338*						
Tempo						304*	356*		
Frank	296*	337*	287*	379**	432**		380*	332*	317*
Diplomatic									
Influencing						320*			
Assertive		317*							
Helpful									
Wants Capable									
Leader									
Self-motivated			-359*						
Cause-motivated									
Self-improvement							316*	403**	
Warmth/empathy				.369**	.297*				
Wants Recognition							.315*	.288*	
Organized								337*	
Flexible									
Precise			380**	324*	291*				
Planning			407**						
Handles Conflict									
Enlists Cooperation		286*							
Enthusiastic			345*						
Manages Stress Well									
Organizational									
Compatibility			075++						
Systematic			375**						
Wants Autonomy									
Wants Challenge								200*	
Ffective Enforcing				202*	200*			.322"	
Negotiating				302	302				
Deesn't Need									
Structure								201*	
ludamont								.291	
(strategic)									
Handles Autonomy								290*	
Dogmatic	- 491**	- 320*		- 290*	- 294*			- 292*	
Dominating		- 292*		.200	.201			.202	
Defensive		0_			.287*		.351*		
Evasive				.350*	.386**				
Self-sacrificing									
Rebellious							.336*		.322*
Autonomy									-
Self-critical					300*		376*	382**	
Rigidly Meticulous			405**						
Rigidly Organized			409**						
Permissive									
Ego Defensive	.307*			.310*	.338*		.466**	.452**	
Ego self-critical					316*				
Forceful Enforcing		.307*							
Pay Minus							.325*		.401**
Motivation									

Leadership	Self-related or Personal characteristics
Authoritative (5)	Certain (1)
Risking (3)	Helpful (2)
Influencing (2)	Warmth/empathy (6)
Assertive (3)	Self-motivated (1)
Wants recognition (2)	Cause-motivated (1)
Handles conflict (1)	Self-improvement (4)
Enlists cooperation (2)	Enthusiastic (1)
Wants challenge (1)	Defensive (4)
Wants to lead (1)	Self-sacrificing (3)
Effective enforcing (4)	Self-critical (4)
Judgment (strategic) (1)	Ego defensive (8)
Dogmatic (7)	Ego self-critical (2)
Dominating (1)	
Rebellious autonomy (2)	
Permissive (3)	Structure & Autonomy
Forceful enforcing (1)	Wants capable leader (1)
	Handles autonomy (1)
Work attitude/standards	Wants autonomy (1)
Persistent (1)	Doesn't need structure (1)
Tempo (2)	Organizational compatibility (1)
Organized (1)	
Flexible (1)	
Precise (10)	Communication
Planning (3)	Frank (13)
Manages stress well (1)	Diplomatic (1)
Systematic (2)	Negotiating (1)
Rigidly meticulous (8)	Evasive (4)
Rigidly organized (6)	
Pay minus motivation (4)	

Table 2. HI traits significantly correlated with Assessment Center dimensions/skills clusters

Note. Numbers in parentheses indicate the number of significant correlations found with Assessment Center dimensions/skills clusters.

Overall, the analysis demonstrates a number of relationships consistent with the assumption of managerial competencies as expressions of underlying traits (as measured by Harrison Assessments).

A close scrutiny of Table 1 shows that some expected same-variable correlations were not found. It is possible that some Harrison Assessments traits were not sufficiently represented or observed during the Assessment Center. Traits like analyzes pitfalls, for example, may have been too specific to have been observed. The Harrison Assessment is a job-oriented questionnaire that measures traits comprehensively, whereas the Assessment Center is a process focused on the behavioral demands of a manager's job. Thus, it is not surprising that there were some non-significant relationships observed.

Several relationships contrary to expectations were obtained. The Harrison Assessments Paradox Theory states that an excess in neutral traits and an imbalance between complementary traits can be just as detrimental as counter-productive traits. Thus, the obtained negative correlations such as those observed between Assessment Center work standards and Harrison Assessment traits of Selfmotivated, Flexible, Precise and Systematic may be pertaining to excessive levels in the Harrison Assessment traits leading to reduced efficiency.

Summary and Conclusion

Findings show that the Harrison Assessment is a potentially useful instrument in measuring traits in that scores in these traits correspond with Assessment Center measures for managerial competencies.

APPENDIX B

Factor Analysis

Overview

Factor analysis of Harrison Assessments trait scores was the 2nd strategy used in this validation study. The hypothesis is that a profiling system like the Harrison Assessment, which purports to measure eastern and western dimensions of personality, should have a good fit with a theoretical framework like the Big 5 Theory of Personality, which also claims to cut across cultural differences pointing out the similarities in personality domains across cultures. The Harrison Assessments trait scores of 873 individuals were thus factor analyzed, exploring 5, 6, 7, and 8 clusterings of the traits.

Figure 1.

Scree Plot of the Data Reduction Done of the Harrison Assessment Trait Scores of 873 Persons



The scree plot suggests that there may be as many as 8 key factors on which the 873 individuals showed significant variation in their scores. Five factors were generated in the rotated component matrix of the factor analysis using principal component analysis extraction method and using varimax rotation with Kaiser normalization. The rotation converged in 13 iterations and yielded these 5 factors. The researchers gave the factor labels to the 5 clusters of traits which loaded significantly on each factor (see next page).

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure	of Sampling Adequacy	0.727208
Bartlett's Test of Sphericity	Approx. Chi-Square	9530.105
	df	946
	Sig.	.000



Rotated Component Matrix

			Component		
	1	2	3	4	5
Wants To Lead	0.733372				-0.35578
Planning	0.639619				
Takes Initiative	0.605885				
Authoritative	0.572205	-0.30519			-0.43016
Analytical	0.554856				
Analyzes Pitfalls	0.511669				
Relaxed	-0.47463				
Wants Challenge	0.426111			0.411026	
Wants Diplomacy	-0.42516				
Tolerance Of Structure	-0.41934		-0.34043		
Wants Stable Career	-0.41789		0.0.0.0		
Helpful		0.75256			
Warmth/Empathy		0 720863			
Cause Motivated		0.630182			
Diplomatic		0 542479			
Enlists Cooperation		0 497352			
Collaborative		0.43658		-0.35937	
Wants High Pay		-0.41149		0.00001	
Wants Recognition		0111110			
Self-Improvement					
Tempo					
Self-Acceptance					
Frank			0.61012		
Assertive			0.572859		
Precise			-0.50813		
Organized			-0.48995		
Certain			0.476831		
Outaoina			0.398831		
Wants Frankness			0.383839		
Wants Autonomy			0.37467		
Influencing			0.315163		
Systematic					
Manages Stress Well				0.569696	
Comfort With Conflict				0.547689	
Optimistic				0.513627	
Persistent	0.38445			0.41503	
Enthusiastic				0.403538	
Wants Capable Leader				-0.30055	
Open/Reflective					0.638677
Creative Thinking	0.347738				0.637266
Flexible				0.351317	0.527959
Intuitive					0.520421
Enforcing					-0.31368
Risking					0.312854

APPENDIX C

Performance Research for International Credit Card Company Help Line Support

Study Purpose

The aim of this research was to analyze the ability of Harrison Suitability Scores to predict performance. The study began August 2010 and was completed October 17, 2010.

Sample

This study was completed at the company's locations in the US. Its business is related to credit cards. The research sample consisted of 81 employees in the Help Line Support position. All of the employees sampled shared the same responsibilities.

Measures

Each employee was rated by the organization according to performance. The ratings were completed by the supervisor according to the following criteria:

- 100 Ideal
- 90 Excellent
- 80 Good
- 75 Average
- 70 Below Average
- 60 Poor

The performance ratings were analyzed against the length of time in the job to determine that the ratings were not biased against individuals who had been in the job for a shorter period of time. The final ratings were then determined and mutually agreed.

The mean performance score was 73.77 with a standard deviation of 10.08.

Harrison Assessment Benchmarking Technology

The Harrison benchmarking technology is a software program that utilizes a proprietary algorithm to identify the suitability traits measured by the Harrison Suitability Assessment that demonstrate a relationship with the overall performance score. It also identifies the relative importance of the trait relationships. The 175 traits considered in the analysis included a full range of suitability factors related to personality, attitudes, motivations, interpersonal skills, task preferences, interests, and work environment preferences. The benchmarking technology generates a Job Success Formula (JSF) which formulates the traits related to success. The traits are formulated by awarding either positive or negative points to different

levels of the traits based on the relative importance of each trait to performance and how each level of each trait impacts performance.

The traits are categorized as essential traits, desirable traits and traits to avoid. Essential traits demonstrate a linear relationship with performance. Desirable traits and traits to avoid demonstrate a nonlinear relationship with performance.

The JSF is used to calculate an overall suitability score based on the trait scores of individuals and how closely their responses align with the JSF. The overall suitability score is a percentage based on the sum of the points earned by the individual divided by the number of points possible in the JSF. The overall suitability score is then interpreted in the following manner:

90-100	Expected to be an excellent performer
80-89	Expected to be a good performer
75-79	Expected to be an average performer
70-74	Expected to be a below average performer
69 or below	Expected to be a poor performer

Results

The employees in the sample group were run against the resulting JSF. The mean suitability score was 73.92 with a standard deviation of 13.77.

Of the 175 Harrison Assessments traits, 48 traits showed a relationship with job performance. Nine of the 48 traits showed a significant linear correlation with performance and thus were included as essential traits. The correlations of the essential traits ranged between 0.206 and 0.117. (All of the 48 traits are included and explained in Appendix A.) The correlations of the essential traits are shown below:

Essential Trait	Mean	StdD	Coefficient	Significance Level
Enthusiastic	7.53	1.76	0.188	0.0930
Wants Stable Career	7.38	2.28	0.206	0.0651
Poised Achievement	6.95	0.80	0.149	0.1856
Analyzes Pitfalls	6.69	1.76	0.128	0.2544
Computers	5.65	1.82	0.117	0.2996
Finance / Business	8.32	1.75	0.165	0.1411
Realistic Optimism	7.51	1.20	0.131	0.2454
Relaxed	5.14	1.97	0.173	0.1219
Takes Initiative	8.39	1.30	0.150	0.1807

n = 81

The overall suitability score automatically generated from the JSF predicted performance at a moderate level.

	Ν	Mean	StdD	Coefficient	Significance Level
Suitability Score	81	73.92	13.77	0.548	0.0000

Conclusion

The results of this study provide insight into the traits that relate to overall performance within the Help Line Support position for the company. The benchmarking technology produced a JSF that provided a detailed analysis of the traits related to job success including the traits that hinder performance.

The results of this validation study demonstrated a statistically significant relationship between the overall suitability scores produced by the JSF and the performance scores. Consequently, the results are useful, especially considering the suitability scores did not take into consideration the eligibility factors (education, skills and experience).

Since this JSF measures suitability only, it is not recommended that the suitability score is used as a cut-off for selection purposes. Rather, it should be used as one factor to be considered along with eligibility factors, skills test results, and interview results.

For development of new employees in this position, the JSF provides an effective means of identifying the specific personal behaviors that impact performance.

APPENDIX D

Performance Research for Storage USA Company Duty Manager

Study Purpose

The aim of this research was to analyze the ability of Harrison Suitability Scores to predict performance. The study began March 28, 2014 and was completed April 21, 2014.

Sample

This study was completed at the company's locations in the US. Its business is related to providing storage space. The research sample consisted of 53 employees in the Duty Manager position. All of the employees sampled were in the same position with the same responsibilities.

Measures

Each employee was rated by the organization according to performance related to sales figures. The ratings were completed by the supervisor according to the following criteria:

Allstar	95%
Тор	85%
Mid	75%
Low	65%
Underperformers	55%

The ratings were also given related to integers in between the above categories.

The performance ratings were analyzed against the length of time in the job to determine that the ratings were not biased against individuals who had been in the job for a shorter period of time. The final ratings were then determined and mutually agreed.

The mean performance score was 71.91 with a standard deviation of 14.99.

Harrison Assessment Benchmarking Technology

The Harrison benchmarking technology is a software program that utilizes a proprietary algorithm to identify the suitability traits measured by the Harrison Suitability Assessment that demonstrate a relationship with the overall performance score. It also identifies the relative importance of the trait relationships. The 175 traits considered in the analysis included a full range of suitability factors related to personality, attitudes, motivations, interpersonal skills, task preferences, interests, and work environment preferences. The benchmarking technology generates a Job Success Formula (JSF) which formulates the traits related to success. The traits are formulated by awarding either positive or negative points to different

levels of the traits based on the relative importance of each trait to performance and how each level of each trait impacts performance.

The traits are categorized as essential traits, desirable traits and traits to avoid. Essential traits demonstrate a linear relationship with performance. Desirable traits and traits to avoid demonstrate a nonlinear relationship with performance.

The JSF is used to calculate an overall suitability score based on the trait scores of individuals and how closely their responses align with the JSF. The overall suitability score is a percentage based on the sum of the points earned by the individual divided by the number of points possible in the JSF. The overall suitability score is then interpreted in the following manner:

90-100	Expected to be an excellent performer
80-89	Expected to be a good performer
75-79	Expected to be an average performer
70-74	Expected to be a below average performer
69 or below	Expected to be a poor performer

Results

The employees in the sample group were run against the resulting JSF. The mean suitability score was 71.61 with a standard deviation of 9.68.

Of the 175 Harrison Assessments traits, 38 traits showed a relationship with job performance. Ten of the 38 traits showed a significant linear correlation with performance and thus were included as essential traits. The correlations of the essential traits ranged between 0.344 and 0.108. (All of the 38 traits are included and explained in Appendix A.) The correlations of the essential traits are shown below:

Essential Trait	Mean	StdD	Coefficient	Significance Level
Relaxed	5.38	1.94	0.344	0.0116
Repetition	3.32	1.25	0.322	0.0187
Outdoors	4.47	1.96	0.241	0.0820
Numerical	6.60	1.77	0.108	0.4399
Helpful	7.16	1.30	0.195	0.1611
Influencing	7.69	1.61	0.135	0.3356
Poised Achievement	7.31	0.94	0.194	0.1627
Enthusiastic	7.95	1.70	0.140	0.3177
Finance / Business	9.36	1.02	0.142	0.3110
Tolerance of	5.00	1.23	0.188	0.1773
Evasiveness				

n = 53

The overall suitability score automatically generated from the JSF predicted performance at a moderate level.

	Ν	Mean	StdD	Coefficient	Significance Level
Suitability Score	53	71.61	9.68	0.633	0.0000

Conclusion

The results of this study provide insight into the traits that relate to overall performance within the Duty Manager position. The benchmarking technology produced a JSF that provided a detailed analysis of the traits related to job success including the traits that hinder performance.

The results of this validation study demonstrated a statistically significant relationship between the overall suitability scores produced by the JSF and the performance scores. Consequently, the results are useful, especially considering the suitability scores did not take into consideration the eligibility factors (education, skills and experience).

Since this JSF measures suitability only, it is not recommended that the suitability score is used as a cut-off for selection purposes. Rather, it should be used as one factor to be considered along with eligibility factors, skills test results, and interview results.

For development of new employees in this position, the JSF provides an effective means of identifying the specific personal behaviors that impact performance.

APPENDIX E

Performance Research for Major Airline Air Pilot

Study Purpose

The aim of this research was to analyze the ability of Harrison Suitability Scores based on a Job Success Formula to predict performance. The study began in March 2013 and was completed May 6, 2014.

Sample

This study was completed at the customer's location in Asia. The research sample consisted of 55 employees in the Air Pilot position. All of the employees sampled were in the same position with the same responsibilities.

Measures

Each employee was rated by the organization according to performance. The ratings were completed by the supervisor according to high, medium and low performance. The specific performance factors were undisclosed by the customer.

The performance ratings were translated in the following manner to fit the Harrison 100 point scale.

- 88 High performers
- 78 Medium performers
- 68 Low performers

The performance ratings were analyzed against the length of time in the job to determine that the ratings were not biased against individuals who had been in the job for a shorter period of time.

The mean performance score was 76.15 with a standard deviation of 10.51.

Harrison Assessment Benchmarking Technology

The Harrison benchmarking technology is a software program that utilizes a proprietary algorithm to identify the suitability traits measured by the Harrison Suitability Assessment that demonstrate a relationship with the overall performance score. It also identifies the relative importance of the trait relationships. The 175 traits considered in the analysis included a full range of suitability factors related to personality, attitudes, motivations, interpersonal skills, task preferences, interests, and work environment preferences. The benchmarking technology generates a Job Success Formula (JSF) which formulates the traits related to success. The traits are formulated by awarding either positive or negative points to different



levels of the traits based on the relative importance of each trait to performance and how each level of each trait impacts performance.

The traits are categorized as essential traits, desirable traits, traits to avoid, and bonus traits. Essential traits demonstrate a linear relationship with performance. Desirable traits, traits to avoid, and bonus traits demonstrate a nonlinear relationship with performance.

The JSF is used to calculate an overall suitability score based on the trait scores of individuals and how closely their responses align with the JSF. The overall suitability score is a percentage based on the sum of the points earned by the individual divided by the number of points possible in the JSF. The overall suitability score is then interpreted in the following manner:

90-100	Expected to be an excellent performer
80-89	Expected to be a good performer
75-79	Expected to be an average performer
70-74	Expected to be a below average performer
69 or below	Expected to be a poor performer

Results

The employees in the sample group were run against the resulting JSF. The mean suitability score was 76.20 with a standard deviation of 8.88.

Of the 175 Harrison Assessments traits, 46 traits showed a relationship with job performance. Ten of the 46 traits showed a significant linear correlation with performance and thus were included as essential traits. The correlations of the essential traits ranged between 0.418 and 0.0874. (All of the 46 traits are included and explained in Appendix A.) The correlations of the essential traits are shown below:

Essential Trait	Mean	StdD	Coefficient	Significance Level
Enlists Cooperation	6.12	1.85	0.418	0.0015
Intuitive	4.46	1.33	0.329	0.0140
Compassionate Enforcing	6.12	1.38	0.289	0.0322
Truth Exploring	5.88	1.16	0.260	0.0550
Certain	5.20	1.87	0.239	0.0785
Optimistic	7.32	1.85	0.192	0.1605
Enforcing	5.90	2.04	0.218	0.1100
Precise	7.85	2.03	0.087	0.5256
Authoritative Collaboration	7.56	1.26	0.213	0.1180
Forthright Diplomacy	6.38	1.43	0.177	0.1962

n = 55

The overall suitability score automatically generated from the JSF predicted performance at a moderate level.

	Ν	Mean	StdD	Coefficient	Significance Level
Suitability Score	55	76.20	8.88	0.689	0.0000

Conclusion

The results of this study provide insight into the traits that relate to overall performance within the Air Pilot position. The benchmarking technology produced a JSF that provided a detailed analysis of the traits related to job success including the traits that hinder performance.

The results of this validation study demonstrated a statistically strong correlation between the overall suitability scores produced by the JSF and the performance scores. Consequently, the results are useful, especially considering the suitability scores did not take into consideration the eligibility factors (education, skills and experience).

Since this JSF measures suitability only, it is not recommended that the suitability score is used as a cut-off for selection purposes. Rather, it should be used as one factor to be considered along with eligibility factors, skills test results, and interview results.

For development of new employees in this position, the JSF provides an effective means of identifying the specific personal behaviors that impact performance.

APPENDIX F

Performance Research for Leading International Paint Company Sales Executive

Study Purpose

The aim of this research was to analyze the ability of Harrison Suitability Scores to predict performance. The study began January 2014 and was completed March 18, 2014.

Sample

This study was completed at the company's offices in Malaysia. Its business is related to commercial paint manufacturing and sales. The research sample consisted of 131 employees in the Sales Executive position from 33 countries in Asia and Europe. All of the employees sampled were in the Sales Executive position with the same responsibilities.

Measures

Each employee was rated by the organization according to performance. The ratings were completed by the supervisor according to sales performance. The organization was asked to provide an integer from 60 to 100 based on the following scale when creating an overall performance rating for each employee.

- 85 Very Good
- 75 Average
- 65 Below Average

The performance ratings were analyzed against the length of time in the job to determine that the ratings were not biased against individuals who had been in the job for a shorter period of time. The final ratings were then determined and mutually agreed.

The mean performance score was 72.98 with a standard deviation of 8.85.

Harrison Assessment Benchmarking Technology

The Harrison benchmarking technology is a software program that utilizes a proprietary algorithm to identify the suitability traits measured by the Harrison Suitability Assessment that demonstrate a relationship with the overall performance score. It also identifies the relative importance of the trait relationships. The 175 traits considered in the analysis included a full range of suitability factors related to personality, attitudes, motivations, interpersonal skills, task preferences, interests, and work environment preferences. The benchmarking technology generates a Job Success Formula (JSF) which formulates the traits related to success. The traits are formulated by awarding either positive or negative points to different

levels of the traits based on the relative importance of each trait to performance and how each level of each trait impacts performance.

The traits are categorized as essential traits, desirable traits and traits to avoid. Essential traits demonstrate a linear relationship with performance. Desirable traits and traits to avoid demonstrate a nonlinear relationship with performance.

The JSF is used to calculate an overall suitability score based on the trait scores of individuals and how closely their responses align with the JSF criteria. The overall suitability score is a percentage based on the sum of the points earned by the individual divided by the number of points possible in the JSF. The overall suitability score is then interpreted in the following manner:

90-100	Expected to be an excellent performer
80-89	Expected to be a good performer
75-79	Expected to be an average performer
70-74	Expected to be a below average performer
69 or below	Expected to be a poor performer

Results

The employees in the sample group were run against the resulting JSF. The mean suitability score was 72.87 with a standard deviation of 15.76.

Of the 175 Harrison Assessments traits, 51 traits showed a relationship with job performance. Ten of the 51 traits showed a significant linear correlation with performance and thus were included as essential traits. The correlations of the essential traits ranged between 0.244 and 0.103. (All of the 51 traits are included and explained in Appendix A.) The correlations of the essential traits are shown below:

Essential Trait	Mean	StdD	Coefficient	Significance Level
Wants Challenge	7.82	1.66	0.244	0.0049
Planning	7.18	1.66	0.142	0.1063
Provides Direction	7.69	1.20	0.159	0.0704
Writing / Language	7.37	1.68	0.126	0.1517
Analyzes Pitfalls	7.27	1.76	0.111	0.2062
Intuitive	5.04	1.70	0.150	0.0870
Analytical	7.23	1.73	0.129	0.1419
Numerical	5.19	1.94	0.110	0.2092
Public Speaking	6.04	2.05	0.103	0.2439
Travel	8.67	1.44	0.144	0.1013
404				

n = 131

The overall suitability score automatically generated from the JSF predicted performance at a moderate level.

	Ν	Mean	StdD	Coefficient	Significance Level
Suitability Score	131	72.87	15.76	0.447	0.0000

Conclusion

The results of this study provide insight into the traits that relate to overall performance within the Sales Executive position for the company. The benchmarking technology produced a JSF that provided a detailed analysis of the traits related to job success including the traits that hinder performance.

The results of this validation study demonstrated a statistically significant relationship between the overall suitability scores produced by the JSF and the performance scores. Consequently, the results are useful, especially considering the suitability scores did not take into consideration the eligibility factors (education, skills and experience).

Since this JSF measures suitability only, it is not recommended that the suitability score is used as a cut-off for selection purposes. Rather, it should be used as one factor to be considered along with eligibility factors, skills test results, and interview results.

For development of new employees in this position, the JSF provides an effective means of identifying the specific personal behaviors that impact performance.

APPENDIX G

Performance Research for Real Estate Sales Manager

Study Purpose

The aim of this research was to analyze the ability of Harrison Suitability Scores based on a Job Success Formula to predict performance. The study began September 2014 and was completed October 21, 2014.

Sample

This study was completed at the company with locations throughout the United States. Its business is related to real estate sales. The research sample consisted of 261 employees currently in the Sales Manager position. All had been in their current position with the company for at least one year. All of the employees sampled were in the same position with the same responsibilities.

Measures

Each employee was rated by the organization according to performance. The ratings were completed by the head of each company (CEO/President) according to the following criteria which was arrived at quite carefully by a sampling of key CEOs of independent real estate companies as facilitated by Harrison agents:

Office Growth and Build the Business (weighted 50% of overall performance score)

People Development (weighted 25% of overall performance score)

Alignment with the Company Culture / Core Values (weighted 25% of overall performance score)

Rating scale used by Sales Managers' supervisors who are CEOs/company Presidents:

- Excellent (EX) give this rating only to Sales Managers in the top 10-20% for each of the 3 KPIs
- Above Average to Average (AV) give this rating to Sales Managers in the 50% -80% range per KPI
- Below Average to Poor (B/P) give this rating to those who are at the 50% or less range per KPI

Each supervisor assigned scores (EX, AV, B/P) to each person in the sample and sent them to the Harrison agent who translated these ratings into scores:

An overall score was calculated for each participant by the Harrison agent according to the weightings outlined above. The agent input the overall score, as well as tenure data, into the Harrison system which was then analyzed.

The performance ratings were analyzed against the length of time in the job to determine that the ratings were not biased against individuals who had been in the job for a shorter period of time. The final ratings were then determined and mutually agreed.

The mean performance score was 77.06 with a standard deviation of 9.66.

Harrison Assessment Benchmarking Technology

The Harrison benchmarking technology is a software program that utilizes a proprietary algorithm to identify the suitability traits measured by the Harrison Suitability Assessment that demonstrate a relationship with the overall performance score. It also identifies the relative importance of the trait relationships. The 175 traits considered in the analysis included a full range of suitability factors related to personality, attitudes, motivations, interpersonal skills, task preferences, interests, and work environment preferences. The benchmarking technology generates a Job Success Formula (JSF) which formulates the traits related to success. The traits are formulated by awarding either positive or negative points to different levels of the traits based on the relative importance of each trait to performance and how each level of each trait impacts performance.

The traits are categorized as essential traits, desirable traits, traits to avoid, and bonus traits. Essential traits demonstrate a linear relationship with performance. Desirable traits, traits to avoid, and bonus traits demonstrate a nonlinear relationship with performance.

The JSF is used to calculate an overall suitability score based on the trait scores of individuals and how closely their responses align with the JSF. The overall suitability score is a percentage based on the sum of the points earned by the individual divided by the number of points possible in the JSF. The overall suitability score is then interpreted in the following manner:

90-100	Expected to be an excellent performer
80-89	Expected to be a good performer
75-79	Expected to be an average performer
70-74	Expected to be a below average performer
69 or below	Expected to be a poor performer

Results

The employees in the sample group were run against the resulting JSF. The mean suitability score was 77.09 with a standard deviation of 10.78.

Of the 175 Harrison Assessments' traits, 44 traits showed a relationship with job performance. Ten of the 44 traits showed a significant linear correlation with performance and thus were included as essential traits. The correlations of the essential traits ranged between 0.165 and 0.0816. (All of the 44 traits are included and explained in Appendix A.) The correlations of the essential traits are shown below:

Essential Trait	Mean	StdD	Coefficient	Significance Level
Wants Challenge	7.51	1.75	0.165	0.0075
Self-Improvement	7.19	1.91	0.143	0.0205
Provides Direction	8.81	0.75	0.150	0.0152
Poised Achievement	7.04	0.91	0.135	0.0288
Receives Correction	7.09	1.63	0.124	0.0451
Systematic	5.41	1.34	0.121	0.0511
Tempo	5.34	1.65	0.081	0.1885
Enthusiastic	7.46	1.90	0.114	0.0669
Influencing	7.04	1.71	0.087	0.1624
Wants to Lead	9.06	1.15	0.089	0.1539

n = 261

The overall suitability score automatically generated from the JSF predicted performance at a moderate level.

	Ν	Mean	StdD	Coefficient	Significance Level
Suitability Score	261	77.09	10.78	0.3456	0.0000

Conclusion

The results of this study provide insight into the traits that relate to overall performance for Real Estate Sales Managers. The benchmarking technology produced a JSF that provided a detailed analysis of the traits related to job success including the traits that hinder performance.

The results of this validation study demonstrated a statistically significant relationship between the overall suitability scores produced by the JSF and the performance scores. Consequently, the results are useful, especially considering the suitability scores did not take into consideration the eligibility factors (education, skills and experience).



Since this JSF measures suitability only, it is not recommended that the suitability score is used as a cut-off for selection purposes. Rather, it should be used as one factor to be considered along with eligibility factors, skills test results, and interview results.

For development of new employees in this position, the JSF provides an effective means of identifying the specific personal behaviors that impact performance.

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