

EISA

EMOTIONAL INTELLIGENCE skills assessment: **technical report**

[**Abridged | Derek Mann**]



To accompany the *Emotional Intelligence Skills Assessment (EISA)* by
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Emotional Intelligence Skills Assessment (EISA): Technical Report

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The Emotional Intelligence Skills Assessment (EISA) is a comprehensive system designed to measure and improve Emotional Intelligence (EI) levels in individuals, teams and organizations.

Distinct from cognitive intelligence or IQ, emotional intelligence (sometimes referred to as “street smarts” or “common sense”) is at the root of our ability to understand and manage our emotional lives and react appropriately in social situations. Emotionally intelligent people communicate effectively, form strong relationships, and create powerful coping strategies both at work and in their personal lives.

EI skills are both measurable and elastic--those who lack emotional intelligence can develop it, those who have it can expand it. The Emotional Intelligence Skills Assessment (EISA) identifies areas of strength and potential growth and provides a framework for understanding and improving individual emotional and social functioning. This document is intended to provide you with behind the scenes insights into the theory and development behind the Emotional Intelligence Skills Assessment.

The Assessment The Emotional Intelligence Skills Assessment is a brief yet comprehensive assessment of emotional intelligence. The five factor model includes a 50-item self assessment and a corresponding, matched item, 360° assessment. The EISA utilizes a 5-point Likert scale ranging from “Very Seldom or Not True of Me” to “Very Often True or True of Me” and is generally completed within 10 minutes.

Rationale The evolution of the EISA is deeply rooted in both the cognitive and emotional sciences. Our goal was to develop a model of emotional intelligence that distinctly assesses the critical emotional and social components related to performance excellence.

EISA Development The development of the Emotional Intelligence Skills Assessment involved several methodological steps designed to quantify what are believed to be the emotional intelligence factors related to performance excellence. Stemming from the previous work of BarOn (1997), Mayer, Salovey, and Caruso (1997), and Goleman (1998), the EISA measures the interconnected components of emotional intelligence directly tied to emotional and social functioning.

The general methodological approach included:

- i. Theoretically Derived Factors
- ii. Item development
- iii. Item assignment
- iv. Item analysis & reduction
- v. Exploratory factor analysis & partial confirmatory factor analysis
- vi. Reliability analysis

Greater detail and explanation of each of these steps is provided in the sections to follow.

Norming EISA The development of a normative sample or comparison group is an important component of test development. By obtaining a comparison group, we are attempting to capture what the average respondent “looks like”, thereby creating a baseline for comparison. In turn, all subsequent results can be compared to the established baseline which provides a benchmark for determining whether or not an individual’s results are above average, below average, or average.

The current norms are based on the results of more than 600 participants that can be deemed top performers (i.e., Law Enforcement, Corporate Executives, Athletes, MBA students, and undergraduate students from top institutions).

Table 1.
Number of Participants in Comparison Sample by Age Group.
Age by Gender in the Normative Sample

Age	Male		Female	
	Self	360	Self	360
Under 25	91	4	150	22
25-29	14	20	37	52
30-34	15	45	35	75
35-39	8	51	43	53
40-44	13	64	52	86
45-49	13	59	46	162
50-54	14	65	38	119
55-59	14	110	18	144
Total	182	419	419	713

Means & Standard Deviations

Table 2 provides means and standard deviations for each EISA scale based on the normative sample for the Self and 360 assessments. Higher scores on a particular scale indicate a greater frequency of use and enhanced emotional and social functioning. Conversely, lower scores are indicative of lesser developed skills and warrant a need for development. Table 3 provides means and standard deviations for each group in our comparison group. Table 4 means and standard deviations are broken down by gender.

Table 2.
Raw Scores for the Normative Sample (Self and 360)

Scale	Self		360	
	Mean	SD	Mean	SD
Perceiving	43.14	7.28	49.42	7.31
Managing	33.90	6.13	43.48	5.41
Decision Making	34.14	3.83	36.67	5.14
Achieving	28.46	5.68	38.74	4.56
Influencing	32.01	7.40	43.32	4.99

Table 3.
Raw Scores by Group for the Normative Sample (Self and 360)

Group	Perc	Man	DM	Ach	Inf
Undergraduate Students	45.35 (7.33)	34.41 (5.91)	32.78 (4.09)	29.12 (5.11)	34.47 (6.88)
MBA Students	38.37 (3.03)	31.1 (2.92)	32.60 (3.09)	25.07 (2.60)	27.30 (2.58)
Athletes	38.22 (2.69)	30.22 (2.64)	33.42 (3.28)	24.97 (2.28)	26.50 (2.67)
Corporate	37.80 (2.97)	30.31 (2.22)	33.93 (2.65)	24.81 (1.87)	27.44 (2.61)
Law Enforcement	45.42 (3.97)	35.60 (3.82)	35.37 (3.72)	30.23 (3.28)	33.43 (4.16)

Table 4.
Average EISA Self Raw Scores by Gender

Scale	Males		Females	
	Mean	SD	Mean	SD
Perceiving	40.32	4.84	44.37	7.8
Managing	31.70	4.30	34.85	6.55
Decision Making	33.75	3.31	34.32	4.03
Achieving	25.98	3.83	29.53	6.00
Influencing	28.52	5.56	33.53	7.59

Standard Scoring

Scores on the EISA tend to fall in the range between 2 and 8 (+/- 3 standard deviations from the mean). That is, according to the laws of the normal distribution, it is expected that 99 percent of the population will fall within

plus or minus 3 standard deviations from the mean. As a result, extreme scores are deemed unlikely; consequently most respondents will score around 5. The EISA uses a standard score transformation for presenting results to the user which simplifies interpretation while permitting a meaningful comparison of results across scales.

Several steps were undertaken to achieve a standard score. The first includes calculating a raw score for each scale (i.e., the sum of each item). The higher the score, the better. However, some items have a negative valence and thus must be reverse scored. Raw scores for each scale are based on the sum of each item for each respective scale.

On their own, raw scores fail to provide a yardstick for comparison and render scale to scale comparisons nearly impossible. Because the EISA scales consist of varying number of items per scale, the total number of points per scale varies. If we simply compare the total raw score from two scales, we might get values of 45 and 50. On the surface, we can argue that 50 is a better score, because it is greater than 45. However, let's consider the conclusion we would make if we had additional information.

Perceiving Raw Score = 45	and	Managing Raw Score = 50
Mean = 30		Mean = 60
SD = 5		SD = 10

If we now consider that a score of 45 on Perceiving is considered to be 3 standard deviations above the mean and a score of 50 for Managing is considered to be 1 standard deviation below the mean, we can now see that a score of 45 is in fact better than a score of 50. Therefore, by standardizing scores we are able to make “apples to apples” comparisons.

In sum, by converting raw scores to standard scores, we ensure that each scale of the EISA has the same mean (5) and standard deviation (1). As a result, if a respondent scores a 5 on any of the scales, we can conclude that the respondents score is average relative to the comparison group and should a respondent score a 6 or 4, the respondent is deemed to be 1 standard deviation above and below the mean respectively.

Reliability of the EISA

Reliability is a measure of an instrument's ability to consistently measure a given construct: in this case, the five factors of emotional intelligence. There are two basic types of reliability that any assessment should consider. Internal consistency refers to the degree to which all of the items on a given assessment and scale measure the same construct and test-retest reliability the ability to remain consistent over time.

Table 5 presents the internal consistency coefficients for both the EISA Self

and the EISA-360. The internal consistency of the EISA was measured using the Cronbach alpha. It is generally accepted that alpha scores above .70 represent acceptable reliability. The average Cronbach alpha coefficients for all EISA and EISA-360 scales are well above the acceptable range with values ranging from .76 to .91.

Table 5.
Reliability Coefficient for the EISA (Self and 360)

Scale	Self Mean	360 Mean
Perceiving	.86	.91
Managing	.84	.86
Decision Making	.82	.86
Achieving	.76	.79
Influencing	.85	.82

Test-retest reliability refers to the stability of an assessment over time. The EISA was completed by 63 university students across a 4-6 week period, which was deemed appropriate since it was not too long, so that extraneous factors (e.g., development) would have an impact on retest scores. Yet this period was just long enough to eliminate the potential for results being influenced by memory. The average test-retest reliability was .76 after a 4-6 week interval.

Validation of the EISA

Assessing the validity of an assessment refers to the process of determining how well an assessment measures what it is intended to measure. Validity can be determined in a number of ways including content, face, construct, and factorial validity.

Both content and face validity are an indication of how well the items on each scale are thought to represent the construct of emotional intelligence and how easily understood these items are by each participant. Face validity is often provided by means of direct feedback by content related experts who verify the degree to which the items represent emotional intelligence. Several emotional intelligence experts and leaders in the coaching domain reported that the items on the EISA have excellent content and face validity.

The empirical validation of the EISA was undertaken to determine whether or not the items on the assessment measured a common theme. The results from exploratory and partial confirmatory factor analyses support the theoretically and practically driven five factor model that is the foundation of the EISA.

In an effort to empirically (i.e., objectively) determine the appropriate number of factors necessary to develop the EISA construct, an exploratory factor analysis was conducted. A total of six factors were extracted from the 50

items with an eigenvalue greater than 1.0 accounting for nearly 60% of the variance. Of these six factors, all were meaningful, with the first factor representing a composite scale comprised of 50 items. This is not altogether surprising given that the five factors associated with the EISA are believed to capture the intricacies of emotional intelligence which inherently share some commonalities. As a result, the remaining five factors were concluded to represent the subscales of emotional intelligence and more specifically, the Perceiving, Managing, Decision Making, Achieving, and Influencing scales of the EISA.

In addition to the exploratory factor analysis, a partial confirmatory factor analysis was completed on an independent sample to verify the factor structure of the EISA. This intermediary step to a confirmatory factor analysis provided adequate empirical support of the existing factor structure (NFI = .86, TLI = .91, CFI, .93, RMSEA = .05).

A final step in the validation of the EISA was to determine how well it measures what it is designed to measure. To determine the construct validity of the EISA, data was collected using the “gold standard” of emotional intelligence assessments and the EISA. Correlation analyses indicate positive relationships between the two measures of EI, confirming that the EISA does in fact measure emotional intelligence.

Conclusions

The EISA has evolved from the extensive research underpinning the field of emotional intelligence. The five factor model maintains a solid empirical foundation with practical emotional and social implications on human performance. As a result, the EISA is considered to be a valid and reliable tool used to springboard emotional intelligence development.